

ACR 2022

ASSOCIATION FOR CONSUMER RESEARCH

VOLUME I

ADVANCES IN CONSUMER RESEARCH



Editors:

Haipeng (Allan) Chen

Giana Eckhardt

Rebecca Hamilton



ACR 2022 DENVER

Together

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VOLUME L

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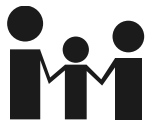


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Haipeng (Allan) Chen, Giana Eckhardt, and Rebecca Hamilton

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Preface

Haipeng (Allan) Chen, University of Kentucky
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Rebecca Hamilton, Georgetown University

The 53rd Annual Conference of the Association for Consumer Research (ACR) was held at Sheraton Downtown in Denver, Colorado from October 20-22, 2022. The theme of this conference was Together. It marked the reconvening of our community in a face-to-face setting after being virtual in both 2020 and 2021, allowing reconnections with friends and colleagues and the opportunity to meet new collaborators and friends. We wanted to celebrate this by facilitating all benefits that can come from a shared, in-person conference experience.

In addition to celebrating being physically together again, our conference theme advocated for coming together across sub-disciplines to address important theoretical and substantive issues. Two such issues, the Post-Pandemic Sharing Economy and the Misinformation Infodemic, were highlighted in our plenary Perspectives and Prospects panels. Multiple methods were showcased in a series of Methods Workshops. For special sessions, competitive sessions, working papers, and roundtables, we particularly welcomed submissions that highlighted connections across theoretical perspectives and methodologies. And, when creating sessions of competitive papers and films, we created sessions around substantive topics rather than common methods, so that some sessions combined papers and films, and many sessions combined CCT work with experimental work.

Finally, we wanted to honor and facilitate connections among our diverse, international association of consumer researchers. We did this by offering a single track throughout the conference online, so that those who could not come to Denver could still participate.

The conference attracted over 1,100 participants from 36 different countries across the globe. We received 854 total submissions and accepted 513, which represents a 60.07% acceptance rate. At this year's conference, 240 competitive papers (acceptance rate of 52%), 51 special sessions (62% acceptance), 200 working papers (68% acceptance), 9 films (82% acceptance), 3 roundtables (75% acceptance), 2 plenary Perspectives and Prospects sessions, and 4 method workshops were presented. We congratulate our two new ACR Fellows, Joel Huber and Wes Hutchinson, who gave addresses at the conference.

We thank our generous sponsors: Sheth Foundation, BEAR - University of Toronto, King's College King's Business School, Georgetown University McDonough School of Business, University of Kentucky Gatton College of Business & Economics, Journal of the Association for Consumer Research, Journal of Consumer Research, SONA Systems, the Marketing Science Institute (MSI), and the American Psychological Association.

Many wonderful people worked tirelessly to help us make this conference possible. We thank our Program Committee, Associate Editors, Competitive Paper Reviewers, Working Paper Reviewers, and Videography Reviewers for carefully reviewing the 854 submissions to the conference. For their enthusiasm, creativity, and organization, we wish to thank Eileen Fischer and Gita Johar (Perspectives and Prospects Session Chairs), Steven Spiller, Uma Karmarkar, and Fleura Bardhi (Methods Workshop Chairs), Finola Kerrigan and Eric Li (Film Festival Chairs), Ana Babic Rosario, Irene Scopeletti and Echo Wen Wan (Working Paper Chairs), Aric Rindfliesch (Networking Lunch Chair), Nicole Mead and Lawrence Williams (Doctoral Symposium Chairs), Luca Cian, Nailya Ordayeva and Alison Xu (Early Career Workshop Chairs), Rebecca Reczek and Markus Giesler (Mid Career Workshop Chairs), Melissa Akaka (Saturday Gala event coordinator), Cristal Russel (wellbeing coordinator), and Kelley Cours Anderson (social media manager).

Special gratitude goes to ACR Executive Director Rajiv Vaidyanathan, our Conference Planners Paula Rigling, and ACR Executive Assistant Amy Ledin. Last but not the least, we wish to sincerely thank Jen Argo, ACR President 2022, for giving us the opportunity to organize the ACR conference and for her guidance during the entire journey.

Here, we present the abstracts from all the sessions, as a record of the vibrant exchange of ideas that took place at the conference. We hope you are inspired to approach your topics of interest in different ways, in the spirit of bringing consumer research subdisciplines together.

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2022 ACR Presidential Address

Jennifer Argo, University of Alberta, Canada

Perspective

Perspective matters. It's all a matter of perspective.

As professors we teach our students that companies need to understand how consumers perceive their product as it may not match the companies intended position; understanding what the consumers see, and not what they look at, is critical for success.

As researchers, many of us have been trained to try and understand our participants prior to data collection by pretesting our materials to ensure they are interpreted as intended.

For those of you who have children, we often encourage our kids when in a disagreement to take the perspective of the other person involved because there is usually more than one side to the same experience.

Finally, I can certainly promise you that the perspective I am seeing right now standing up here is different from the perspective you are seeing from your tables. In order to capture this truly unique perspective I'd like to take a photo. Now, if anyone is curious to see what the next 15 minutes or so looked like through my eyes, I can show you.

Many, if not all of us, regardless of which hat we might be wearing and the context in which we find ourselves, have likely considered the fact that perspective matters. Admittedly, usually when I'm thinking it, I am struggling to understand why my partner can't see it from "my" correct perspective. While I might believe that my perspective is right, it is certainly limited and failing to consider other perspectives is in my humble opinion a missed opportunity.

So today I would like to talk about perspective and how seeing things with a different lens is important. In particular, I will highlight three different instances in which I think perspective matters. In order to bring each instance to life I will illustrate a corresponding personal experience that really taught me the value of considering a different perspective. My hope is that at least one of these ideas will resonate with you and encourage you to think about the notion of perspective.

"Fairy Tales always have a happy ending.' That depends... on whether you are Rumpelstiltskin or the Queen."

— Jane Yolen, Briar Rose

My first example focuses on considering the perspective of other people, trying to understand their point of view and what it would be like in their shoes, and importantly recognizing that this effort is a continuous journey – you can always do better.

We are all different. Diversity is on everyone's mind these days. Some of us are old, young, Black, White, male, female, non-binary, tech savvy, tech ignorant, introverted, extroverted, lovers, fighters, you name it. Whatever defines us makes us individually special or unique, but also different from others.

The recognition that we are not the same is not new. For instance, we can look back to Joe Alba's presidential address when he reminded us that our participants are not always like us and that in fact "approximately half of the population is below average in intelligence".

Importantly, failing to recognize and understand that we are different can have implications. To illustrate, in the book *Invisible Women: Exposing Data Bias in a World Designed for Men* the author, Caroline Criado-Perez, presents evidence that product designers have been using a one-size-fits-all for a plethora of products – wherein the products in the marketplace were designed to fit men even if they are used by women. The author argues that the focus

on males is not meant to be deliberate and malicious, rather it arises because of the "way of thinking" that has driven society for centuries and thus it is really a product of a kind of not thinking. But this not thinking has downstream implications beyond simply poor fitting. Indeed, Dr. Alyson McGregor discusses in her book "Sex Matters..." how the use of male as the focus over the years in medical research can actually endanger women's lives.

So, we KNOW that we are different and thus by extension we have different perspectives, but sometimes it is difficult to remember this, to anticipate these different perspectives, and to respond accordingly.

Recently I had a vivid reminder that I am not always good at seeing the world through someone else's eyes – that I have to keep working on it.

In the spring I experienced the worst moment of my career, I got a rejection. Sure, over the years I have received piles of rejections, each leaving me yelling about how ignorant the reviewers were, unreasonable the AE and unfair the Editor. I don't think anyone likes to learn that their work is not good enough. But this rejection was different.

Briefly, the manuscript in question dealt with consumer groups who have been marginalized by society. I felt, along with my coauthors, that the research in our field has been overwhelmingly based on people who comprise the majority, and that a step, any step towards gaining some insight into less understood groups was a step in the right direction. I believe we had good intentions and yet...

When the reviews came back, one reviewer's report in particular took my breath away. It contained an entire section that was under a subheading that read "PREJUDICIAL PERSPECTIVE AND LANGUAGE" in all caps.

In reading this, I experienced anger at the reviewer, outrage at the Editor, gosh darn it I was angry at the world. I put the review away because thinking about it made me want to cry, to scream. I wanted to write a letter to anyone and everyone who would listen about the injustice I felt both my coauthors and I had experienced.

And then I stopped. Realization flooded over me. The review was not a personal attack but rather a clear message that despite our efforts to be sensitive, we had not gone far enough. Ultimately, we had still crafted the manuscript through the eyes and language of a majority perspective that could offend the very groups we were interested in understanding. So, if my anger and disappointment should have been directed anywhere, it should have been directed to myself.

In hindsight this conclusion seems so obvious (Reviewer 3 would certainly agree), we should have recognized our biases and limitations. We could and should have solicited the help from members of the various groups we were studying by at the very least asking them to give our work a friendly read. However, we thought we had a solid understanding of what it was like to be a member of our focal groups, we had read the literature, we thought we had it under control. We were wrong.

Even though this happened in the early spring, it still bothers me and I continue to think about it. This reaction is not just because I'm Canadian and I feel compelled to apologize to everyone, but rather I really do believe that we didn't deliver, we didn't push enough to truly grasp another person's perspective.

This first example focuses on the fact that not only is it important to take the perspective of others and consider what it is like in their shoes, but also that doing so is hard and is something that needs continuous vigilance. While the instance I discussed that really opened my eyes had me in the role of an author, this is not the only instance when taking the perspective of others is so important. For example, the next time you write a review, I encourage you to read that review out loud and ask yourself how you would feel being the recipient of the words that appear on the page. It is not hard to write critical and overly harsh reactions, we've been trained to identify weakness in work. But I can assure you that it is very HARD for many of us to receive such words. It takes true skill to be able to provide honest feedback in a tactful and empathetic way. As another example, the next time you are providing feedback to a student (undergrad, masters, or PhD) or drilling, I mean politely asking, a presenter questions, consider how the recipient of your thoughts or questions might feel. I'm not convinced that the expression "what doesn't kill us makes us stronger" works for everyone and I am fairly confident that public humiliation can be pretty awful.

Perspective taking is hard. Sometimes we will do a good job and yet other times we will completely miss the mark. If I've learned anything from the experience I recounted, it is that perspective taking is a journey, something we have to continue to work at. If we believe we "totally get it", we completely understand what it is like to be in someone else's shoes, chances are we don't. We always have more to learn.

"The greatest risk to man is not that he aims too high and misses, but that he aims too low and hits."

— **Michaelangelo**

My second example focuses on considering perspectives that take you outside of your comfort zone.

As an academic I feel like I SHOULD be smart. I am in the business of creating and disseminating knowledge, I have reached the pinnacle of education with degrees to prove it, and if I needed a more salient reminder of how smart I SHOULD feel, all I have to do is look at the three Jedi stripes that appear on my convocation gown. Given this, from an ego perspective I find it absolutely terrifying to enter a situation where someone might realize that while I might be sort of smart, that smartness is confined to a very narrow sliver of a large field and that outside that area, I may be the one asking the "stupid" question.

Several years ago, I was invited by Leonard Lee and Jeff Inman to join a group at the Choice Symposium. As someone who does not typically study consumer choice nor do I know much about the consumer journey, the focus of the session, I wasn't sure how I would fit in but I agreed because I hoped they had more confidence in my value to the group than I did. My lack of expertise on the topic became even more apparent on the first day of the symposium when our group sat down to talk and we went around the room indicating our research areas of interest – mine was different and I began to worry about how I could APPEAR smart, without really knowing what we were talking about.

Later that morning we broke into smaller groups each set with a different task. Already stressed and wondering how I could offer insight to the larger group from a theoretical angle, to this day I'm not sure what motivated me but, the group I decided to sit with was comprised of only modelers. I'm not saying there is anything wrong with quant researchers, they are absolutely lovely people many of whom are sitting in this room, but my decision to join their group put me 100% outside my comfort zone. Give me t-tests and ANOVAs, experimental design and I could talk for hours. But, quant?? Ahh! I do not speak quant language at all – it really, truly is all Greek to me!

Thank goodness Don Lehman who was a member of this group knew how to speak my language and had the patience to do so.

Without a doubt that was one of the most intimidating, humbling, yet most rewarding group think sessions I've ever been a part of. Approaching the research question from a quant perspective was SO different - it completely disrupted the way I would have automatically structured the ideas in my mind based on my own training. It forced me to approach and consider the question from a different angle.

From that experience I learned so much more than simply the research task on which we were focused. In particular, I realized that there is a lot to be gained by considering more than one methodological lens. Let me be clear – I am an experimentalist through and through and I am not suggesting that I can or should approach a research question with a quantitative or for that matter a qualitative perspective – these methodologies are not part of my toolbox and training. BUT what I am suggesting is that collaborating with people who use different methodological approaches, or even broader different theoretical frameworks will enrich our understanding of consumer behavior. Since, this experience at the Choice symposium I have been a strong advocate for getting outside of one's comfort zone by talking to people who share an interest in a substantive area but who tackle it from a different lens. Given this, I was delighted when I learned that this year's conference Co-Chairs had decided to create sessions that brought together researchers studying the same phenomena or topic area regardless of their methodological approach. I think this is a fantastic learning opportunity and I hope that when you are in the sessions you appreciate the awesomeness of bringing folks together with different perspectives. I personally have worked on projects that are methodologically outside of my comfort zone, they are hard, but very rewarding. Importantly they can and do get published!

This second example focuses on the importance of getting outside of one's comfort zone by considering different perspectives. While the experience I shared arose primarily due to different methodological lenses, there are certainly other ways we can put ourselves into situations where a different perspective is present and can challenge us. Within our schools, we share our building, floors, and sometimes hallways with academics studying different disciplines within business– think about attending their seminar series, talk to them about research ideas. Within our universities, we share our curiosity and passion for discovery with academics from not just foundational disciplines related to consumer research such as psychology, anthropology, sociology and economics, but also music, engineering, linguistics, the fine arts, computer science, to name a few. We have lots to learn from the researchers in these disciplines, and they from us.

I encourage you to leave your comfort zone and reach out to researchers who have different perspectives from those you are used to. It is true that in doing so there might be a cost: you might feel uncomfortable, you might have to learn a new "language", and yes, you might not be the smartest person in the room. In leaving your comfort zone it might feel like you have entered the Danger Zone, BUT that's good, I firmly believe that doing so will help us grow as that is where the magic happens.

"Happiness can be found, even in the darkest of times, if one only remembers to turn on the light." Dumbledore

My final example focuses on flipping your perspective on its head. In other words, I want to encourage you to do a 180, consider the opposite. Doing so, I believe can open up new opportunities.

A few years ago, I was working on a project that I really loved but which was labour, time, and money intensive as it was done in

a retail context, one person at a time. When we received a revision opportunity that required additional data we decided to be more time and money efficient, and so we moved our study online and then later into a sterile lab where we ran large groups of participants. Months, and several attempts later, we were left with studies that did not work. We had what I thought was “crappy” data. Later in preparation for a presentation I was going to give on the project it occurred to me that MAYBE we had perhaps not been thinking about our data and the results from the right perspective.

In our field I think it is fair to say that we have a fixation on significance. Over the years, I have had many studies that produced null results. When this happened, I used to have a kneejerk like reaction and I would cast my “failed” experiments aside, as in the case of the project I just told you about. But what if I considered the opposite. In particular, what if I thought about those experiments not as failures and thus dead ends, but rather as potential directions for future research?

I would like you to imagine the following situation: You are reading someone else’s work and when you are finished you say to yourself, while I believe the effect, I bet it does not work under condition X. So, curious, you run an experiment and lo and behold you find out that you were right, you have identified a situation in which the previous researcher’s work does not hold. How do you respond? I suspect many of you, like myself, would get excited and proclaim you have identified an important boundary condition. You would then go and run a series of additional studies, write up a paper, and submit your research identifying this boundary condition as the MAIN contribution of the work. Yet, when it comes to our own research, when we find a null effect, we often do not allow for such an interpretation. Instead, we label the study as a failure. Sometimes that is true, but I honestly believe that is not always the case.

I want to refer back to the project I was talking about before. I mentioned that when we had started the data collection for the revision we had moved from running our study one participant at a time to running it in large groups. As someone who has spent a significant portion of my career studying social influences it should have occurred to me that given we were studying a highly social context, participants’ responses might differ if they are in a group as compared to by themselves. Indeed, when we reverted back to our original methodological approach of running one participant at a time, our effects worked as before. This suggests that we might have found a cool boundary condition for our basic effect that we could pursue in future research.

Since this project, I have worked to change the lens through which I see my results. Now, when I have a null effect I pause and consider the possibility that perhaps I have found a boundary condition for an effect I have yet to identify (in the case of a new research project that I have just started), or for an effect that I already know. I would encourage you to see if your null effects have something to teach you. Do a 180 – maybe they don’t represent a loss, rather they might be telling you something interesting you had not previously considered.

This final example focuses on the importance of considering the opposite perspective. That doing a 180 can present new opportunities, it might enhance our creativity. While the instance I highlighted focused on a different interpretation of null effects, I think that considering opposites in other ways can enhance our idea generation – it can push our projects in directions we might not have otherwise pursued. Flip your thoughts: if you were focusing on positive outcomes now consider negative implications, reverse the pattern and make the effect the cause, interview older instead of younger adults, focus on disposal rather than acquisition, consider what happens if you in-

crease as opposed to decrease a given quantity, change whether you are alone or with others. I think you get my point. In short, whatever you are doing, ask yourself what is the opposite, and then test it. I think doing a 180 can open up so many new research directions.

Let me close by saying that I am certainly not an expert at taking different perspectives – I try but I’m obviously not always successful. I’m working on it. Taking a different perspective, or using a different lens is hard. Sometimes, we have to consciously identify our biases, our natural responses in situations, some of which may not be flattering. It can make us feel uncomfortable and can threaten to take our ego down a notch or two. But I certainly think the effort is worth it.

I’ve shared three personal instances in which I learned how much perspective matters: Trying to walk in the shoes of others, failing, and then remembering it is an ongoing process that I must continue to work on, stepping outside of my comfort zone at the potential short term cost of feeling a little less smart in order to reap the long term benefits of learning so much more, and doing a 180 when considering my results and new ideas. I think that a different point of view can be highly beneficial – a different perspective can enhance communication, it can teach us different approaches, and it can spur creativity. At a broader level, remembering that perspective matters can help us show compassion and understanding, build bridges, and present an opportunity where one may not have seemed to otherwise exist. I firmly believe that considering a different point of view can help us grow to be better academics and perhaps to be better people.

Thank you.

2022 ACR Fellows' Address

The Power of a Strong Research Culture

Joel Huber

My talk today is about the value of a strong research culture. What it meant for me and what it can mean for you. An effective culture can bridge theoretical frameworks, combine multiple methods, and span regional differences. It encourages scholars to be part of a vibrant research tradition with strong interpersonal bonds, constructive reviews, and effective collaborative processes. The ultimate goal is to foster sustained individual intellectual growth, and to support outstanding mentorship of students and colleagues.

The Power of a strong research culture

- What is a research culture?
- How did it help me?
- How research culture is changing
- Ways to improve culture

However, a strong research culture is rare and takes effort. That effort is the focus of my talk. Rather than promote my research victories, this talk will focus on the positive research practices that made such an impact on my life. In this talk the medium is the message; culture is the sea in which we swim. It enables us to flourish or drown. I will begin with a brief review of the research culture I experienced, and how it was critical to my own work. Throughout, I will provide suggestions for personal, university, and organizational strategies that have become increasingly important for all of us today.

Psychometrics in the early 70's
Can we apply physics to human preferences?

- How to measure values of objects?
- Choice vs. ratings?
- Metric values from choices .?



Duncan Luce J B Kruskal

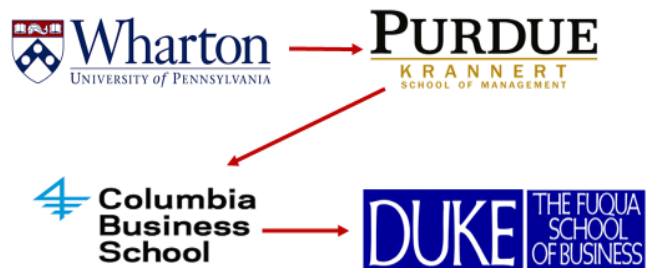
My first love was psychometrics, seeking ways to measure human judgments in mathematical terms. Beautiful minds, elegant ideas like those of L. L. Thurstone and S. S. Stevens. Ken Arrow defined the principal of irrelevant alternatives that was central to Duncan Luce's elegant model of individual choice. The psychometricians searched for ways to estimate ratio scales of value from simple preference judgments. J. B. Kruskal developed a program called MONANOVA, which took rank orders of preferences on items and estimated the optimal rescaling of those orders that best predicted choices.

My thesis under Paul Green tested the ability of psychometric analysis to estimate stable values for a real product, Lipton iced tea, created with different amounts of sugar. It was like a conjoint but instead of reacting to verbal attributes of alternatives, subjects tasted different samples of tea. In keeping with psychometric norms each respondent made over 250 different judgments on 23 tea samples. Thus, there was a great deal of data on each subject.

What did I find? First, Luce's binary choice model did not predict as well as 5-point preference differences. Indicating that there is predictive value in those 5-point ratings. Second, Kruskal's monotone rescaling of these differences increased internal fit, but consistently decreased prediction to holdout pairs. Finally, I found that the different predictive models, such as additive, ideal point, and spatial models, all predicted well but none did consistently better than the others.

What did I learn? I gained from the thesis a sense of excitement from deep explorations into individual choice models. I also learned the benefits of using holdout choices to validate models. While I published a couple of articles from my dissertation, very few people read them. Psychometric theory, if it's any good, tends to be both simple and universal. By contrast, practical consumer prediction is messy. Important insight comes from differences across consumers. From the elegant psychometricians I learned how to measure values, but quickly moved marketing research that focused on individual differences using adaptive computer interviews and multivariate techniques.

Trail of Schools



Graduating from Wharton, my first job was at the Krannert School at Purdue where I learned so much from Frank Bass, Mike Pessemier and Jack Jacoby. Krannert had resources that enabled it to attract a strong faculty and outstanding Ph.D. students. It distributed working papers and provided plentiful conference support. Frank Bass was the editor of the *Journal of Marketing Research* and involved us in reviewing manuscripts at an early stage of our careers.

For me, Purdue was ideal. It brought me close to innovative researchers and showed me how bright Ph.D. students can excel when challenged by emerging questions in the field. The culture simply buzzed with ideas, resulting in a number of papers with the Ph.D. students including John McCann, Dave Reibstein, Abel Jeuland, Dick Wittink, and Don Lehmann.

After three years at Purdue I was blessed by a transformative year at Columbia. There I saw the outstanding leadership of John Howard and Don Lehmann, and worked with Barbara Kahn and Morris Holbrook. A year later John McCann and I joined the marketing group at Duke. Within three years we had successfully recruited two rookies: Julie Edell from Carnegie Mellon and Marion Moore from UCLA and soon thereafter recruited their thesis advisors, Rick Staelin and Jim Bettman, as chaired professors. I have remained at Duke for more than 40 years, with later sabbaticals at Columbia and Wharton.

Here is my favorite image of the Duke marketing group, taken nearly 20 years ago.



What a crew! Of the 17, four have left us: Wagner Kamakura, Kurt Carlson, and then to my right, Darryl Banks, and next to him the indomitable, John Lynch. Ours was a small group working together in both teaching and research. We also did administrative work that helped Fuqua grow. Bill Boulding is now Fuqua's dean. Wilfred Amaldos is our current area coordinator, Rick Staelin, Mary Frances Luce, Jim Bettman, Debu Purohit, Preyas Desai and I served as associate deans. Many of us also served the field as journal editors: Jim Bettman and Mary Frances Luce at JCR; Rick Staelin and Preyas Desai, at *Marketing Science*, Wagner Kamakura and I, at JMR, and recently Chris Moorman at *Journal of Marketing* and Carl Mela at QME.

Speaking of productivity, here is an image showing 28 Duke Ph.D.s. What a super Zoom call they would make!



The research in our area was leveraged by their presence. We worked hard to recruit the best Ph.D.s. to Duke, identifying a few of 100 applicants that applied each year, and inviting then to a weekend at Duke. The Ph.D. teaching was outstanding, led by master men-

tors, Rick Staelin and Jim Bettman. Gavin Fitzsimmons and Tanya Chartrand ran a lab which encouraged students to work together. We expected much from them and did our best to instill in them a culture of cooperation. They work together in a open area the encouraged joint efforts. They serve as hosts for outside speakers and provided summaries of audience reactions to their seminars. The students also set up a supportive internal monthly lunch to present research to each other. Finally, to focus their efforts, we altered the university rule replacing a comprehensive exam that tested many topics learned in classes with a deep review paper exploring a theoretical area that could form the focus of a valuable thesis.

Let's now shift to organizations, especially our own Association for Consumer Research.

ACR's Big Tent



Here you see a poster presentation meeting at an ACR conference. You can sense the enthusiasm and positivity in the room. Much of reviewing for the conference is done by younger scholars reflecting the bottom-up nature of ACR's culture, one that is accepting of so many different ideas, methods and modes of presentations.

Conferences are fun, a chance to see friends, experience outstanding presentations, have spirited conversations and enjoy enthusiastic parties. Of course, there is work; preparing as a reviewer, presenter or discussant, or being part of many task forces. I recall returning in a plane to Indianapolis from an early ACR. I was sitting next to Jack Jacoby, who was on the faculty in cognitive psychology at Purdue. As read my novel, I noticed Jack making extensive notes on what he had seen and penning letters to people he had met. We spoke about what he had learned, and how he had prepared beforehand by setting up meetings. He was like a scout looking for talent at a baseball game, while I was at the same game feeling like a happy but clueless fan. I came to understand how important it is to prepare before, actively engage during, and follow up after each conference.



A different kind of journal

- Focuses on four different topics per year
- Leading scholars edit each issue
- 2 years from announcement to publication
- Editor-in-chief has little power
- Issue editors know the topic

JACR was an important test of ACR's ability to grow and adapt to emerging needs of its members. While I am proud of being its first editor, I am prouder still of the research culture that propelled its

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success. From the start JACR was a different kind of journal. Eleven years ago an ACR steering committee considered various new journals: a journal focused on deep psychological theory, consumer welfare, creativity and aesthetics, as well as various managerial or social problems. Our solution was to have one topic per issue thereby generating four different ones each year. The schedule required publication for each issue two years from its announcement, the first year to recruit submissions and the second year to whip them into shape.



Early challenges

- Recruiting editors
- Encouraging submissions
- Managing the review process
- Support bonding among authors
- Encouraging citations and growth

The first problem was recruiting editors. No one knew whether JACR would work. The first editors were outstanding scholars willing to take the risk: Russ Belk, Linda Price, Angela Lee, David Stuart, and Norbert Schwarz. Their task was to pitch the topic at ACR meetings and on the JACR website. Each editor sent between 20 to 50 personalized emails to potential contributors asking for an abstract, a finished document, or a willingness to review. Because editors were established in their fields, they could shape the articles with support from fewer reviewers. The results for the first two years were predictable. Timing was difficult for all involved. JACR published some articles that were up to the standards of JCR and JCP but not consistently so. However, the process did help authors bond to each other through their joint efforts creating and promoting each issue.

To succeed, JACR pushed a number of innovations that encouraged citations and growth of emerging ideas. The most important motivator was a subscription to JACR along with membership, so that each quarter an issue was mailed to around 1,500 ACR members. Additionally, Chicago Press helped develop a creative cover and encouraged the use of colorful graphics. Further, the press allowed editors to select one article that could be freely accessed in each issue, and provided press releases and free access for articles with unusually heavy downloads.



Current success



Vicki Horwitz: Editor in Chief



James Ellis: Managing Editor



Rajiv Viadyanathan: Executive Director

JACR is now in its 8th year, with 32 completed issues, and 8 more in process. Angela Lee took over from me and now Vicki Morwitz is in charge. Citations, downloads, and request to generate issues are way up. Major gains came when Scopus brought JACR into their system and when Clarivate included it in its Emerging Sources Citation Index.

It is important to give credit to Andy Seagram, Chicago Press Publishing Manager and particularly to James Ellis, JACR's managing editor. James keeps track of the size of each issue and the likelihood that the submissions would be revised on time. He is the one who smooths the paths for authors dealing with editors, reviewers or copy editors. He also displays his artistic side to negotiate the unique set of images.

Finally, finally let's not forget the role of Rajiv Vaidyanathan. He does so many things for ACR including organizing its books and conferences, and was critical for success of JACR. He makes sure that organizational meetings for upcoming JACR issues occur both at the main and local ACR conferences. From the start, he met with me and Angela Lee each year to discuss the journal and get reports from the support staff at Chicago Press. Simply put, JACR would not have been possible without the joint support of the Chicago Press and research culture at ACR, enabling it to expand into new areas of research and reach scholars from different regions with varying backgrounds.

I like to think of the Journal as you would think of a journal you write to record new ideas or proposed ones. The Journal of the Association for Consumer Research serves that organizational purpose, allow us to try our new ideas, train editors and form cohorts. It could not have been done without the support of the ACR board, Chicago Press and the supportive culture of ACR.

Four ways to improve your research culture

- Understand three cultural shifts
- Improve research interactions
- Form research cohorts
- Achieve personal balance

This next section asks what the culture of research can do for you. I'll begin by noting three important evolutionary changes that I believe provide both challenges and opportunities for us.

Three Cultural Shifts

- Increased obsolescence of skills
- Decreased role of the solitary scholar
- Increased role of non-tenure faculty

The first shift arises as the rate of change in our field continues to accelerate. You can be sure within 15 years that new research skills you develop will either be adopted by others, or worse, rendered obsolete. We are moving from a culture with a few dominant theories, a few standard methods, and a few articulated goals to one with multiple theories, incompatible methods, and fractured goals. Put differently, we cannot let up on our need to continuously adapt and learn.

The second change is a shift in the role of the individual in scholarship. Hiring and promotion used to focus on the unique skills and achievements of the solitary scholar, with schools counting articles with sole authorship more than those with coauthors. That has changed for the better. Perhaps schools have come increasingly to realize that the most valuable colleague may not be the one with the best mind, but the one with broadest ability to help others prosper.

The third change is a disturbing rise in non-tenure track faculty in business schools, often replacing scholars with professors-of-the-practice who can provide valuable teaching at a lower cost. Recently, the status and pay of those non-tenure track positions has risen, particularly if they appear on TV, have active blogs or are published in the New York Times. Their greater status has been encouraged by students and the firms who recruit them that desire job related insights. If that trend continues, it suggests that talented individuals may be as satisfied and productive in an enhanced non-tenure track position as those in lifetime tenure.

These three changes define a scary world, one where what you know now will be less valuable in the future, where the individual is not the focus, and the prospect of lifetime tenure may become more scarce and less attractive for our brightest minds.

How do we prepare for those changes? Let's begin by considering .ways to get more out of interactions with others

Effective Research Interactions

- Preparing for interactions
- Official and unofficial meetings

Let's start by thinking about interactions in conferences like this one. Here, we interact joyfully with so many people. Many encounters are random, offering the exciting chance to learn about different ideas or research methods. Too often we are passive about those we meet, rather than setting up meetings and dinners with joint goals. I spoke earlier about the importance of preparation before, work during, and effort after a conference. The same principle goes for all interactions. If a visiting scholar comes to talk at your school, it is important to read the paper ahead so that you can understand and comment appropriately. Prepare for your personal visit, focusing first on the visitor before discussing your individual problems. Then follow-up with a brief email.

Not all meetings are part of a visit or a national conference. An unplanned Duke conference occurred during my second year at Duke that had an outsized influence on my research. Chris Puto, John Payne and I had been testing the asymmetric dominance effect and were amazed and puzzled by early results. In 1981 dean Tom Keller allowed us to coordinate a 3-day off-campus meeting with 25 scholars to discuss the impact of item similarity on choice. Eight papers were presented, each taking an hour with 30 minutes of comment and discussion. Those attending included John Hauser, Amos Tversky, Steve Shugan, Glen Urban, and Bob Meyer. Amos really liked the asymmetric dominance effect, but said it should be called the attraction effect, to evoke the fact that greater similarity among alternatives takes share from the target, the opposite of attraction. John Hauser wrote an elaborate comment showing that the attraction effect is inconsistent with Tversky's Elimination by Aspects and with Luces' Choice Axiom. He also suggested satisficing and tournament explanations. The support these 25 scholars positioned what might have been a narrow theoretical result to one that has since encour-

aged many studies of competitive context in marketing decisions. The lesson is simple. Group think matters, and group think among smart and focused thinkers matters even more.

Research cohorts are vital

Why are cohorts needed?

What makes an effective cohort?

How to nourish and build cohorts?

Now let's consider cohorts. Cohorts are groups of researchers exploring a substantive topic, a developing theory, or a promising methodology. Newly emerging cohorts tend to have fewer members, but they are easy to identify as groups of people who congregate at special sessions and cite each other's work. Cohorts generally lack formal alliances, and indeed there is an appropriate tension among researchers competing to resolve emerging issues.

Personally, I have been involved in different cohorts at various times. As examples, I have been part of substantive cohort that applies survey methodology and economics to understand household recycling, a methodological cohort exploring eye tracking of decisions, and a theoretical cohort making sense of asymmetric dominance.

Why are cohorts important? They matter because they support the publication of articles on a topic, thus helping to establish the credibility of ideas and the authority of their members. Effective cohorts need at least 30 members, assuring sufficient numbers to review and cite the articles from the group.

Joining cohorts is an important component of a research strategy particularly for young scholars. Choose a cohort whose growth fits the skills you have or want to have. Being identified as part of a cohort increases the likelihood of being chosen as a reviewer that enables you to understand and guide the evolution of an emerging field. Perhaps more important, cohort members are likely to write credible letters supporting promotion.

Apart from JACR there are a number of ways to build ties to a cohort. Great value comes from ACR conferences, particularly being part of a special session or a round table. For me, my regular attendances at the Sawtooth Software conference put me in contact with marketing research firms, their corporate clients and a remarkable group of academics. It helped me develop internet-based marketing research skills and have a central role developing conjoint and choice models.

Achieving Personal Balance

- Growth vs. decline
 - Skills
 - Cohorts
 - Topics
- Career vs. self
 - Body and health
 - Friends
 - Family

So far, I have spoken about the power of interpersonal culture in fostering success. Next, consider personal strategies to develop balance between your career and yourself. Within a career, one of the

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most difficult questions we all face is determining where we should put our efforts, determining which projects, which co-authors, which cohorts should consume our time and energy. Matching capability against need is difficult because ideas, methods and researchers go through life cycles which start slowly, then grow stronger, and then as we all do, mature. Coauthors can increase efficiency, giving jobs to those with best skills. The work slows considerably when a co-author or a student is running an elaborate study, and can become overwhelming when the results are not as predicted. It is helpful to have some slack to allow for focused attention when needed.

Now let's consider the even more difficult balance between your career and yourself. Teaching, research, and administrative demands of an academic career limit your ability to keep fit, be healthy, and emotionally refreshed. We all need time for exercise, greater control over what we consume, and the support of good friends. Good friends are critical for walks, sports, and delightful evenings. The benefit is even greater if your activities are with colleagues, co-authors or Ph.D. students. Having a walk or exercise buddy increases the likelihood of carrying it out. Having a group of friends who regularly go out to dinner together or go to a movie has the same positive effect. Both healthy behavior and friendships are virtuous habits that are fortified when they are a regular part of your schedule and your social network.

Finally, let's turn to families. Greater mobility has scattered many of us from our parents, siblings, and even our children who leave home. That splintering of families is especially common among academics. Occasional weddings and funerals are fine, but

provide limited ways to really bring people together. Stay in touch with family with phone calls, holiday cards, Facebook or a personal website. Encourage your families to visit your home or travel with you. Part of the solution is to incorporate families into the university fabric. Get to know their spouses, children and even parents, providing for them the same kind of accepting bonds that unite actual families.

Preparing for this talk I examined my publications searching for the intellectual breakthroughs I could share. The more I thought about my achievements, the more I realized the critical value of the people and the culture around me, of being blessed by people who could see more clearly, those who had the skills I lacked, and those with the energy I needed. Finally, the cultures of the marketing groups at Penn, Purdue, Columbia and Duke, and my associations of ACR, ACP and Sawtooth have made clear to me the value of getting together in open discussions that allow us to laugh with and learn from each other.

My final message is to urge you to support and treasure your interactions with each other. If there is a weakness in the people in our field today, it is a reluctance to build lasting interactions that support the research culture. Search out groups, meetings, and friends who share ideas with wisdom and joy. Go forth, my fellow researchers, work together, and prosper.

Competitive Papers—Full

Consumer Cynicism Through the Lens of Bourdieu

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INTRODUCTION

Over time, consumers have become increasingly distrustful of the businesses and the marketplace. Many researchers have focused on various negative attitudes a consumer develops towards a firm or the marketplace to study this trend. Consumer cynicism (CC) that a consumer might harbour for the marketplace actors is one of the emerging areas of study in this domain (Helm, Moulard and Richins, 2015).

CC is conceptualized as a negative attitude that a consumer develops toward a firm (Chylinski and Chu, 2010) or the whole marketplace (Helm, Moulard, and Richins, 2015) due to the attribution of some hidden motives behind its actions. Due to the severity of the consequences of a cynical consumer's behavioural outcomes, it becomes imperative to understand the concept of CC, its driving factors, and its resulting behaviours.

RESEARCH GAP

To date, researchers have studied CC as either a personality trait or an individual's attitude. Both conceptualizations have given more importance to the individual, i.e., the subject, rather than the surrounding circumstances, i.e., the object of the study. This indicates a subject-object dichotomy prevalent in the literature. Though both subject and object are essential aspects and can be studied individually, scholars have called for an integrated approach to understanding any phenomenon in its entirety (Overton, 1997).

RESEARCH OBJECTIVE

We take the help of Bourdieu's concepts of habitus, field and capital (Bourdieu, 1987) to study CC in an integrated subject-object approach. Fields are social arenas that specify precise guidelines of conduct that require an individual to acquire specific skills to traverse the same (Holt 1997). The individuals gain these skills as various economic, social, and cultural capital to compete for status within fields (Holt 1997). Automatic internalization of the interaction between the capital and the field dynamics results in habituated tendencies and generative predispositions in an individual, defined as habitus by Bourdieu (Saatcioglu and Ozanne, 2013; Wacquant, 2016).

We propose that an individual's habitus, which evolves continually due to various life experiences, will determine the type of inter-field movement a person resorts to when moving between the social and consumption fields. The inter-field movement (Coskuner-Balli and Thompson, 2013) is also predicted to be determined by the person's cultural capital. Cultural capital combines "tastes, skills, knowledge, and practices" that distinguish individuals from others (Holt, 1998). Individuals are classified as high cultural capital (HCC) or low cultural capital (LCC) person based on the amount of cultural capital they possess (Holt, 1998; Saatcioglu and Ozanne, 2013).

As already established in the existing literature, inferring negative motives behind someone's actions is the defining characteristic of a cynical person. 'Negative Inferred Motive' (NIM) is conceptualized as the belief that a firm will try to take leverage of the customer and increase its earnings (Balaji et al., 2018). Unless someone

suspects negative motives behind the market player's actions, they won't turn cynical towards it (Indibara and Varshney, 2020). Hence, we posit that individuals develop CC when they infer negative motives while undergoing adverse inter-field movement experiences.

Borrowing from the extant literature (Helm 2004; Chylinski and Chu, 2010; Odou and Pechpeyrou, 2011 and Helm, Moulard and Richins, 2015), four different types of behaviour are predicted as a consequence of CC – defensive, offensive, subversive and withdrawal. While defensive behaviour leads a person to protect themselves from the marketplace, offensive behaviour results in the consumer trying to take advantage of the firm by displaying opportunism. Subversive behaviour motivates the person to treat firms and the market with sarcasm, thus creating negative word-of-mouth communication for others. And withdrawal behaviour results in complete withdrawal from the marketplace (Odou and Pechpeyrou, 2011).

METHODOLOGY

A mixed-method approach was adopted to understand the effect of habitus on CC and its consequent behaviours. Two studies, one qualitative and the other quantitative, were conducted for the same.

Study 1

The qualitative study using fourteen in-depth interviews was conducted to understand the phenomenon. The interviewees were purposely sampled to target consumers falling under LCC and HCC groups to better understand the distinct behaviours an individual displays according to their social upbringing. The approach was exploratory, with questions on respondents' upbringing and their social and consumption experiences. The interviews were conducted in English, Hindi and Odiya, averaging 75 minutes. All interviews were digitally recorded and transcribed to ensure trustworthiness, and guidelines were followed as suggested for in-depth interviews (Strauss and Corbin, 1990; Fournier, 1998). Collectively, 195 consumption stories were generated for analysis.

The life incidents were first arranged chronologically for each respondent to understand how childhood experiences get manifested in habitus, which then determines subsequent consumption decisions. Open, axial and selective coding was done in phases focusing on increasing levels of analysis, similar to the process recommended by McCracken (1988). Individual mind maps were also created for each respondent. The second level of interpretation involved cross-person analysis, which was to discover patterns across consumption episodes and individuals. The consolidated framework was proposed after analyzing all fourteen interviews and mind maps, as shown in Figure 1.

FINDINGS (STUDY 1)

It was found that an individual's childhood experiences and the resulting habitus significantly impact their adulthood consumption patterns. Depending on the childhood notions of justice and social comparisons, respondents displayed varying levels of social aspirations. The successful or unsuccessful achievement of the social growth and the reasons attributed for the same determine the type of movement between the social and the consumption field (hori-

zontal, upward or downward) that a person usually resorts to. The eight types of inter-field movements based on a person's social field habitus (HCC or LCC) and the type of consumption they resort to (HCC or LCC) are represented in Table 1.

If individuals cannot fulfil their desired social aspirations, they attribute the failure to society or their fate. Respondents who attributed their present LCC state to Karma or fate went for a status-quo consumption per their LCC habitus (voluntary horizontal inter-field movement). They seldom purchased anything aspirational. If these individuals were forced to overspend on their self-consumption (involuntary upward movement), they developed NIM and CC towards the particular market player and resorted to defensive behaviour due to the feeling of powerlessness.

But people who blamed society for their thwarted social growth continuously aimed to fulfil their aspirations in the consumption field, displaying a voluntary upward inter-field movement. If their upward movement in the consumption field was blocked, they inferred negative motives behind the market player's actions, turned cynical and displayed offensive behaviour towards the market player.

Suppose the individuals were not blocked in the social field while trying to fulfil their aspirations and could achieve their desired HCC social position. In that case, they tend to display voluntary simplicity (voluntary downward movement) and withdrawal behaviour in the marketplace.

In contrast, the individuals who were never blocked in the social field but are yet to fulfil their social aspirations see the consumption field as a signalling strategy for their achieved HCC status. Most of the time, they display a status-quo HCC consumption (voluntary horizontal movement), symbolizing their social growth. If these respondents faced any negative experience in the marketplace, they resorted to subversive behaviours.

Thus, it was found that an individual's voluntary or involuntary inter-field movement, upward, downward or horizontal, determines whether successful incorporation of consumption experience will occur or not in the person's habitus. And suppose the negative consumption experience led to inferring negative motives behind the market player's actions. In that case, CC is developed, resulting in four types of behaviour: defensive, offensive, withdrawal, and subversive.

Study 2

The second study was a scenario-based experiment designed to test the findings of Study 1 in two stages. The online surveys of both stages were shared with the students, alumni, and faculty members of two premier management institutions in India. The offline survey was conducted through personal face-to-face interaction with low-income employees of three organizations in India. A convenience sampling method was used, and the respondents were selected due to their accessibility to the researcher.

Stage 1

The first stage was a survey to capture the respondents' demographic information. The socio-economic classification (SEC), both childhood and present-day, was done for the respondents following the latest Indian SEC classification criteria depending on the education of the family's primary earner and the consumer durables that the family possesses.

The cultural capital of the respondents was calculated using the formula:

$$\text{Cultural Capital} = (\text{Respondent's Education} + \text{Respondent's Occupation}) + (\text{Father's Education} + \text{Father's Occupation})/2 + (\text{Mother's Education} + \text{Mother's Occupation})/2$$

The respondents were categorized into two groups – high and low based on the median values of the cultural capital, childhood SEC and current SEC scores. Those individuals who belonged to at least two high groups among the three median split categorizations were considered the HCC individuals. Others, who had all the low categorizations in the three cases or had only one high score and two low categorizations, were considered LCC individuals for further analysis.

The respondents were also asked to choose between a high-priced branded t-shirt (HCC product) and a low-priced unbranded t-shirt (LCC product) to understand their default consumption choice. Of the 545 responses collected in the first stage, 384 respondents chose the LCC product, and 161 chose the branded HCC product.

The respondents' inherent CC level was also captured, along with the above information. The scale developed by Helm, Moulard and Richins (2015) was used to operationalize the CC construct.

Stage 2

The second stage was a factorial design survey-based experiment. The 545 respondents were assigned to four experimental scenarios (two voluntary consumption groups treated as the control groups and two involuntary consumption groups treated as the manipulation groups). In the two voluntary consumption scenarios, the respondents were allowed to freely consume their desired cultural capital product – high or low as chosen in the first stage. In the two involuntary scenarios, respondents were asked to assume that they would consume their unpreferred consumption choice.

Out of the 161 individuals who had chosen the HCC product in the first stage, 80 were assigned to the involuntary LCC consumption scenario (Scenario 1), and 81 were assigned to the voluntary HCC consumption scenario (Control Group 1). Similarly, out of the 384 respondents who had chosen the LCC product in the first stage, 192 were assigned to the involuntary HCC consumption scenario (Scenario 2). The rest, 192, were assigned to the voluntary LCC consumption scenario (Control Group 2). Based on the social field HCC or LCC classification and the consumption choice assigned in the experiment, eight inter-field movements are captured, as shown in Table 1.

The second stage survey was sent to the 545 respondents after one month to reduce the recollection bias they might display due to the repetitive nature of the CC scale. Out of the 545 respondents who had filled the questionnaire in the first stage, 505 respondents reverted in the second stage of the study, indicating a response rate of 92.66%. 78 of these responses were from scenario 1 respondents, 79 from control group 1, 175 from scenario 2 and 173 from control group 2.

NIM (Joireman et al., 2013) and CC (Helm, Moulard and Richins, 2015) were measured with the help of established scales. Further, we developed a scale to measure the individual's behavioural intention (BI) and the same was tested for reliability and validity. Four categories of consequent behaviour proposed in the study were defensive, offensive, withdrawal and subversive. Statements that captured these behaviours were selected from the literature, and the BI questionnaire consisted of 21 questions.

Findings (Study 2)

Using a one-way ANOVA test, we found that the participants' NIM, CC, defensive, offensive, withdrawal, and subversive BI significantly vary across the eight consumption groups. Individuals who consumed a product of their choice (voluntary movement) inferred significantly lower negative motives behind the firm's actions and displayed a significantly lower level of CC and defensive, offensive,

withdrawal and subversive BI than participants who had to consume a product unwillingly (involuntary movement).

The data analysis indicates that the LCC individuals displayed a significantly higher level of NIM, CC, and defensive, offensive, withdrawal and subversive BI when experiencing the adverse scenario despite having a significantly lower CC than the HCC persons before the experiment. This indicates that the LCC individuals have a higher sensitivity toward the negative experiences in the marketplace. LCC individuals whose desired HCC consumption was thwarted in the experiment and who were forced to consume the LCC product unwillingly displayed the highest NIM, CC and defensive, offensive, withdrawal and subversive BI among the eight groups.

Regression analysis was done to test the effect of NIM on CC and of CC on four BIs. NIM was established as a significant predictor of CC, the beta value was 0.558, and the model R-square value was 0.393. CC was found to impact the four BIs significantly in the case of involuntary consumption scenarios. The beta values for defensive, offensive, withdrawal and subversive BI were 0.464, 0.589, 0.11 and 0.484, respectively. The above findings prove the causative effect of NIM on CC and CC on the four BIs in involuntary consumption situations as a support for our hypotheses.

IMPLICATIONS

Our study contributes to the stream of research that analyses consumption as a practice using Bourdieu's concepts of field, capital and habitus. CC, to date, studied as an individual's personality or attitude was looked at from a socio-cultural perspective. This helped us transcend the subject-object dichotomy that exists in the literature.

Gaining insight into how the childhood habitus and subsequent life experiences shape the consumption pattern of individuals and how the inter-field movement between the social and consumption fields results in CC will help the marketers take care of their actions that result in an involuntary downward, upward or horizontal movement.

For example, the focus should be on bridging the gap between the two fields, i.e., the firms should try to provide product and pricing options that match the mental schemas and habitus of the HCC and LCC individuals. However, at the same time, care should be taken about providing aspirational products to LCC consumers and low-priced options to HCC voluntary simplifiers.

Since CC can result in severe negative consequences (Helm, 2006; Chylinski and Chu, 2010; Odou and Pechpeyrou, 2011; Helm, Moulard and Richins, 2015), identifying instances when defensive, offensive, withdrawal and subversive behaviours get triggered will help the firms control the adverse impact of negative behaviours to a great extent.

LIMITATIONS AND FUTURE RESEARCH

Restrictions can be imposed on the findings because of the sample characteristics because the study was done in India. Cross-cultural research is suggested to test how developed economies differ from emerging markets in this context.

The conditions under which the four types of BI get converted into actual behaviour need to be studied, focusing on the role and importance of an individual's perception of 'powerlessness' in the marketplace.

Though manipulating the price and brand of the product was found to have a significant effect on the experimental groups, future studies should consider additional variables like individuals' consumption baskets and usage habits while studying the impact of the inter-field movement on CC and consequent behaviours.

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FIGURE 1. CONSOLIDATED FRAMEWORK

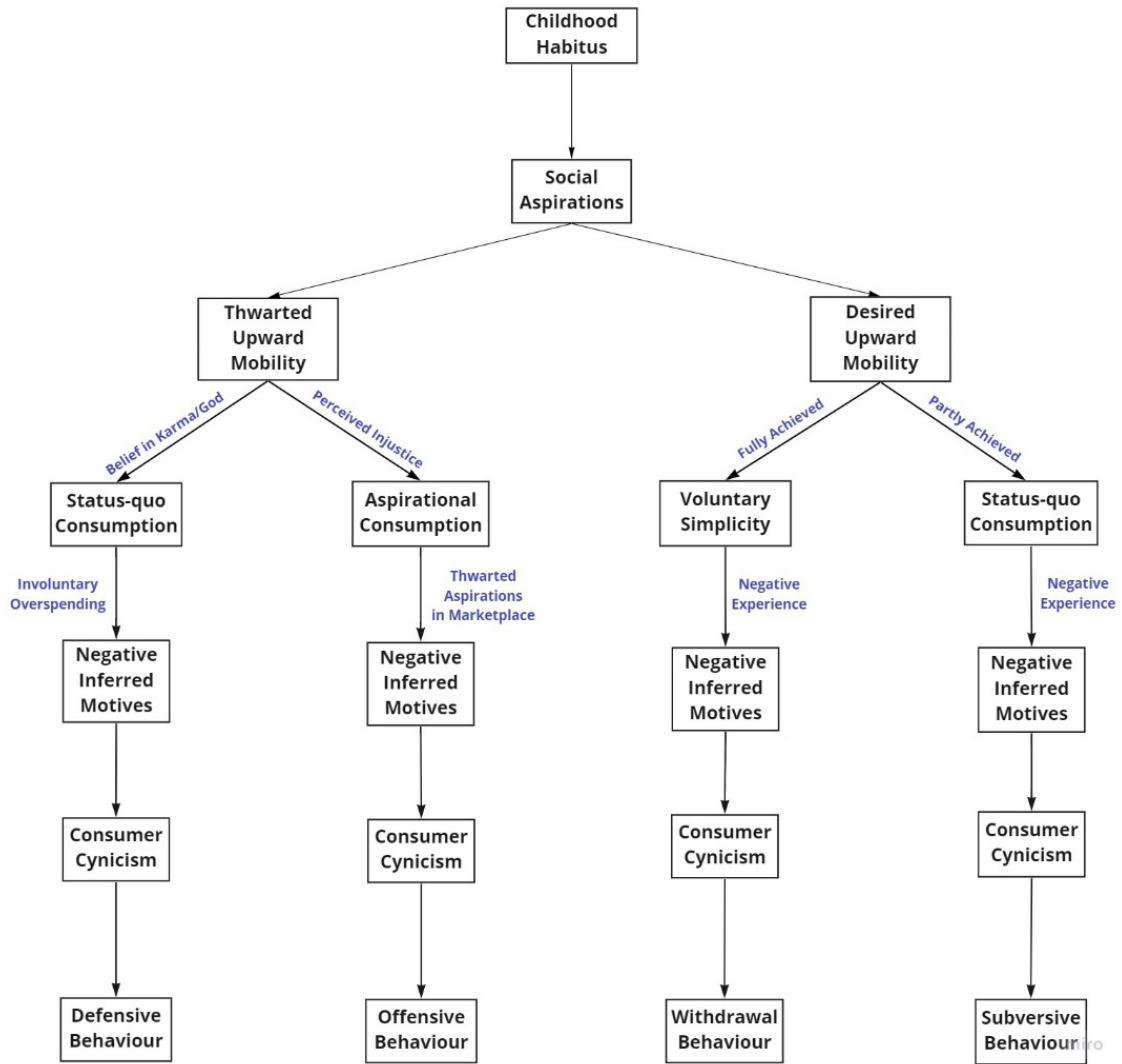


TABLE 1. TYPES OF INTER-FIELD MOVEMENT

	CONSUMPTION FIELD (HCC)	CONSUMPTION FIELD (LCC)
SOCIAL FIELD (HCC)	Horizontal movement (Involuntary or Voluntary)	Downward movement (Involuntary or Voluntary)
SOCIAL FIELD (LCC)	Upward movement (Involuntary or Voluntary)	Horizontal movement (Involuntary or Voluntary)

The Material Possessions Stereotype

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INTRODUCTION

A few years ago, I had to present my work in front of an audience. I recall ending my talk by saying, “when you ask children to draw and describe pictures of physically attractive and less attractive individuals, children perceive attractive individuals to own more quantity of things than less attractive individuals”. During the question-and-answer session, an audience member had the following to say to me. “Does it happen the other way round? That is if you were to ask children to draw and describe a person based upon the number of possessions – e.g., lots of things versus few things – would children then say people who own many possessions are more beautiful than people who own fewer things”. The motivation for this article comes from that specific feedback that I received many years back. The present research proposes a conceptual framework to understand the material possessions stereotype in children using perspectives from the status signaling dimensions of distance (Bellezza 2021), the sociocultural theory (Vygotsky 1978), and the halo effect (Thorndike 1920).

THE MATERIAL POSSESSIONS STEREOTYPE

In this article, the material possessions stereotype has been defined in the following manner. The stereotype occurs when a person, let's call them X (the one stereotyping) forms certain judgements about an unacquainted person, say Y (the one who is being stereotyped) based on the material things X observes Y consuming. The material possessions stereotype like any other negative stereotype can be an inaccurate judgement of an individual. For example, X may consider Y who is not rich to be wealthy because they notice Y wearing designer clothing and driving a luxury automobile. At the same time, in a different context, X can also wrongly mistake Y who is a wealthy person to be not affluent because they witness Y taking public transport or shopping at an inexpensive store. The material possessions stereotype is different from Veblen's (1899) conspicuous consumption in a subtle but significant way. According to the conspicuous consumption theory, Y uses specific material possessions to signal their identity or status to others who may be either acquainted or unacquainted with Y. The material possessions stereotype, on the other hand, is a stereotype wherein others form opinions about Y whom they do not know personally based on the consumption patterns that they see Y displaying.

The present research examines the material possessions stereotype in children because (1) children have been understudied within the consumer behavior literature compared to adults; and (2) children are vulnerable consumers who are still in their developmental stages and do not yet possess the cognitive abilities to discern between what is right or wrong. Therefore, understanding the material possessions stereotype in children is crucial for their future well-being.

STATUS SIGNALING BEHAVIOR IN CHILDREN

Children, like adults, use objects to signal their status and identity to others (Chaplin and John 2005; 2007). Status signaling behaviors are normally found to be higher in children who are exposed to advertising messages than those who are not (Goldberg, Gorn, Peracchio, and Bamossy 2003). Children who give importance to material things are also typically seen to nag their parents to buy them stuff and throw tantrums when their parents do not adhere to their purchase requests than others (Goldberg et al 2003).

Research shows that when children do not own expensive material things e.g., branded/status-related goods, they are often ridiculed by their peers at school (Wooten 2006). Studies in the extant literature have mostly focused on the relationships children have with material possessions and how these relationships impact children's well-being either positively or negatively (e.g., Chaplin and John 2005, 2007; Goldberg et al 2003; Kasser 2005; Wooten 2006). The present research does not examine the relationships children have with material possessions. Rather, this study examines how a child perceives an individual based on the material possessions that they see the specific individual consuming.

Prior research, that is closest to the present work, is a study that was conducted by Chan (2006) who explored children's perceptions of others who owned one particular possession, namely, toys. Chan's (2006) findings reveal that children consider individuals with expensive toys to have higher status among peers compared to those with fewer toys. The present research is different from Chan's (2006) research in the following ways. Chan (2006) explored children's perception of other children who owned lots of new and expensive toys versus those who did not have many toys. The present research takes a broader perspective on the subject matter compared to Chan (2006). That is, in this research children are not just confined to defining others based on one single possession, namely, toys. But the current study considers how different types of possessions can influence children's perception of others. Also, in this study, I have not defined material possessions for the children, instead, children have defined material possessions on their own.

METHOD

Drawing Method: To explore the material possessions stereotype in children, drawings were considered as an ideal method. This is because psychologists have argued that through drawing one can dive deeply into a child's mind and understand their inner most thoughts which children otherwise find hard to articulate (Cherney, Seiwert, Dickey, and Flichtbeil 2006).

Participants: 55 children (47% females, *Age* = 8.96), in the 6–12-year-old age range, were recruited from a large public school. Most participants belonged to lower to middle-income families. The study was ethically approved and required permissions were taken from concerned authorities before starting this research.

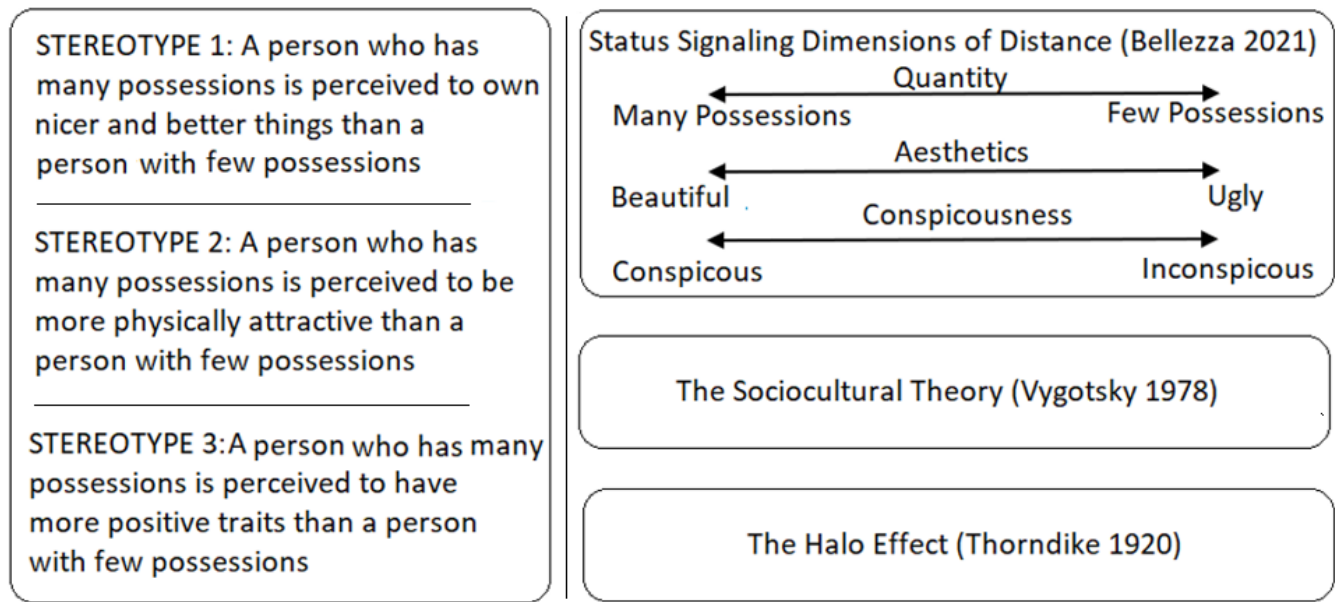
Procedure: The steps followed in this study have been adapted from Chan (2006) and Thomas (2021). The participants were seated in a classroom. Two participants shared a table. They were then given a sheet of A3 size paper, a box of twelve color pencils, and asked to draw two pictures. The first picture was that of a girl/boy who had lots of things and the second picture was that of a girl/boy who had few things. After the drawing activity was completed, the participants were asked to describe the characters present in their pictures. The entire task took approximately around 60 minutes. The participants were asked to keep the box of color pencils as an incentive for taking part in the study.

Analysis: A total of 110 drawings (i.e., each child drew two pictures) and descriptive words were analyzed. The analysis was a back-and-forth process and was done using Braun and Clark's (2006 p 87) thematic analysis guidelines that consisted of “(1) familiarizing the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing the report”.

FINDINGS AND DISCUSSION

The findings are interpreted through the lens of the status signaling dimensions of distance (Bellezza 2021), the sociocultural theory (Vygotsky 1978), and the halo effect (Thorndike 1920).

Figure 1. The Material Possessions Stereotype Framework



FRAMEWORK TO UNDERSTAND THE MATERIAL POSSESSIONS STEREOTYPE

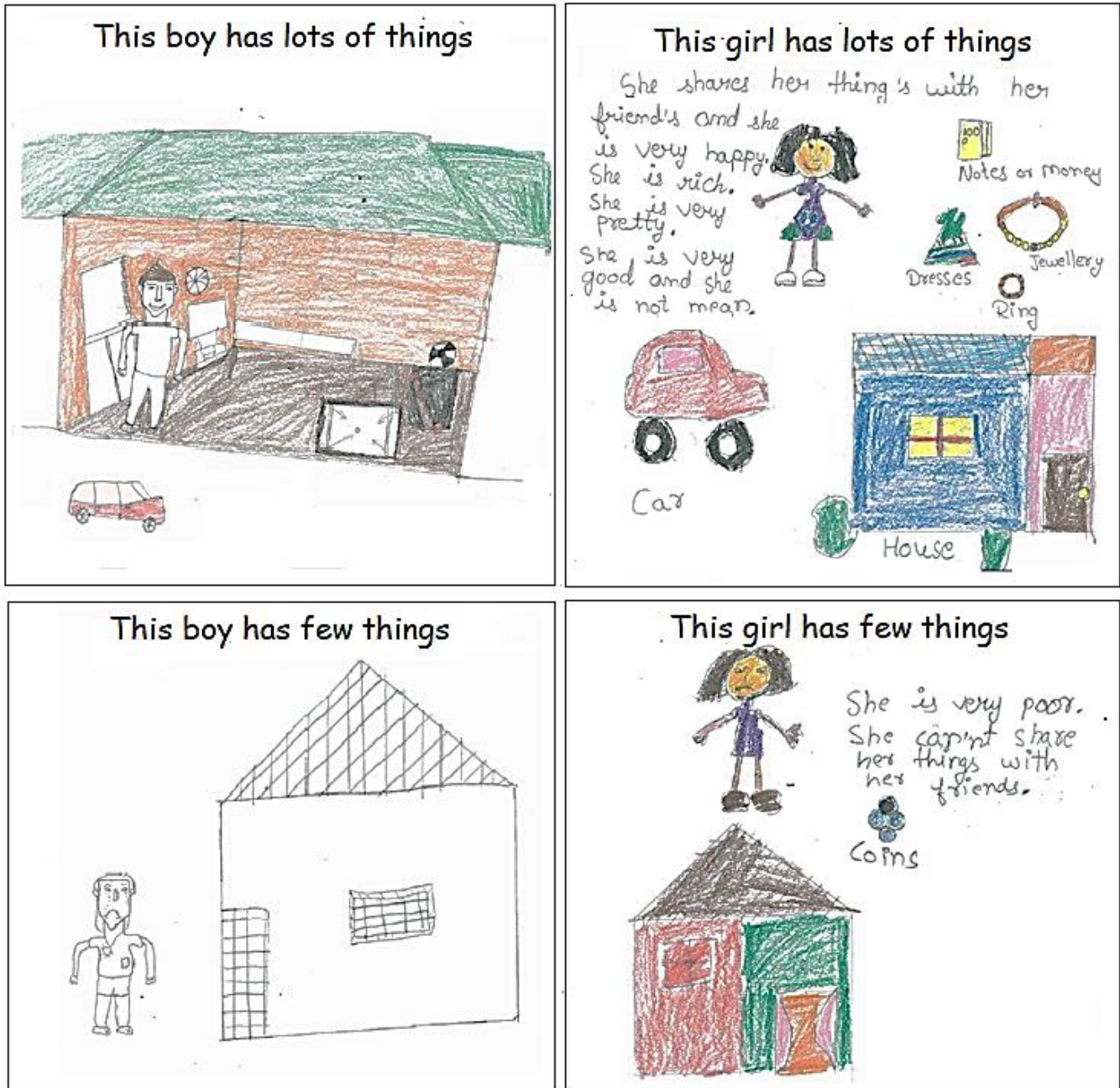
STEREOTYPE 1: A person who has many possessions is perceived to own nicer and better things than a person with few possessions

To explain this stereotype, Bellezza’s (2021) status signaling dimensions of distance namely quantity, aesthetics, and conspicuousness have been adapted in this research. Quantity is defined in terms of the number of possessions i.e., many versus few that children have assigned to the characters in their respective pictures. Aesthetics is exemplified by how beautiful or ugly the drawings of the possessions appear in the child’s picture. Conspicuousness is concerned with the visibility features e.g., generosity in the usage of colors, patterns, and designs to enhance the visual effects present in the drawings. For example, in Figure 2, a 10-year-old girl and boy have used colors to depict aesthetics and conspicuousness and to highlight the differences that exist between the characters in their pictures. The drawings reveal that children associate things like money, a big house, cars, expensive clothes, shoes, accessories, closets/wardrobes, television, computers, phones, and toys with the person who has lots of possessions. In contrast, a person with few possessions is described as being poor and owning things such as coins, a small house, broken toys, torn clothes, and plain shoes (see Figures 2 and 3).

During face-to-face conversations with the participants, it was found that if someone is imagined having lots of things, the objects that they own or consume are also perceived to be better and nicer than that of an imagined person who has lesser things. These finding may have emerged because of the importance society places on the quantity of material possessions a person owns. Children are picking up cues from the environment as a result of social learning (Bandura1971). Children then internalize these cues and use the knowledge gained to form stereotypes. For instance, children learn at a young age that those who belong to poorer families or marginalized communities have limited resources compared to others. And

so, when you ask a child to imagine an individual with few possessions the stereotypical knowledge that they have learned is what comes out (see Figures 2 and 3). The findings show that the material possessions stereotype is so strongly engraved in a child’s mind that they are unable to think that the person with few possessions may actually be wealthy and own goods that are beautiful, nice, precious, or exclusive (e.g., minimalists).

Figure 2. Drawings done by children aged 10



STEREOTYPE 2: A person who has many possessions is perceived to be more physically attractive than a person with few possessions

The drawings exemplify (see figure 3) how the contemporary culture has influenced children's perceptions of material possessions and beauty ideals. Digital and traditional media outlets bombard us with images of perfect-looking people living the material-good-life (Dittmar 2007). Research shows that constant exposure to such images results in us internalizing body ideals and linking material possessions with happiness, success, and fame (Ashikali and Dittmar 2012). How we define material objects and beauty standards are therefore highly influenced by what is learned from social agents such as the mass media, peers, parents, and the cultures that are prevalent in the world at large. This reverberates with sociocultural theory (Vygotsky 1978) i.e., how social learning

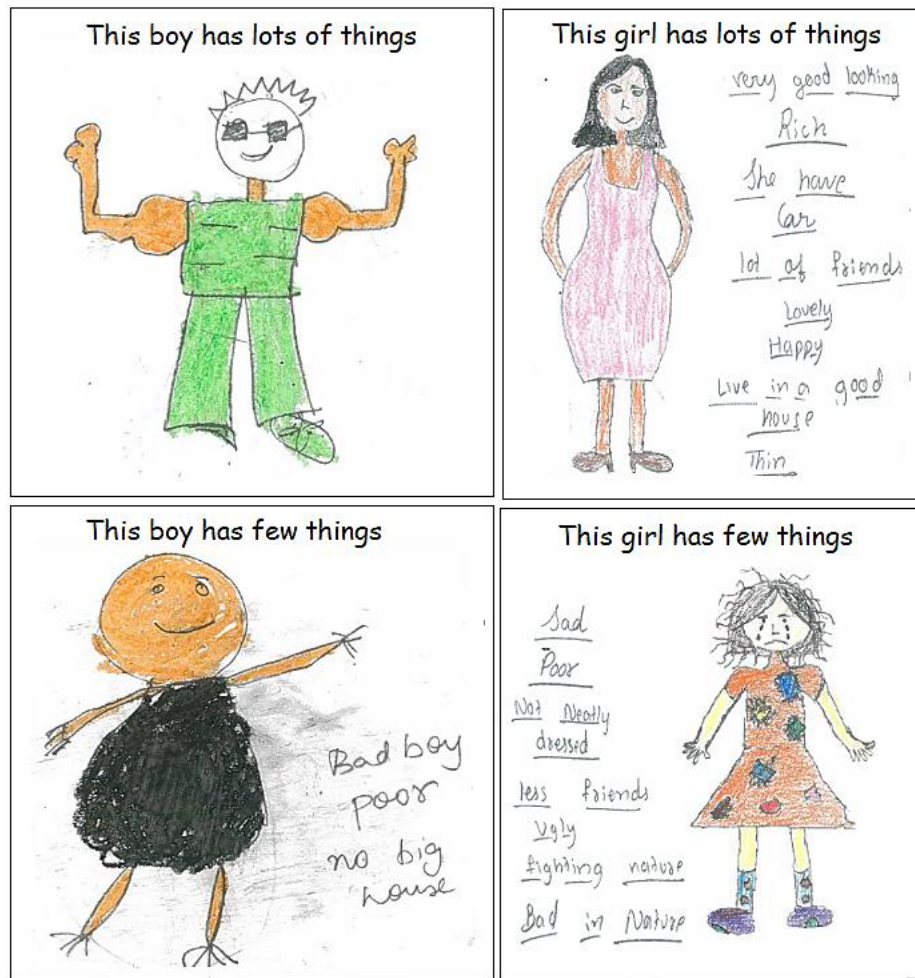
impacts society and how society then contributes to an individual's development.

The findings clearly show how society has made children think of beauty ideals and material possessions in the most obvious manner. For instance (see figure 3), a 12-year-old girl has drawn the picture of the girl with lots of things to be more adult looking i.e., her waist is relatively smaller compared to her hips. The character has skinny arms and legs and is shown wearing a body-hugging dress that is paired with high heeled shoes. On the other hand, the 12-year-old girl has drawn the picture of the girl with a few things to appear more like a child who has messy hair, tears, and is sketched wearing a dress with patches and flat plain shoes. As you can see,

the 12-year-old girl has overtly linked physical attractiveness and happiness (smiley face versus sad face) to quantity of possessions. Likewise, a 7-year-old boy has drawn the picture of the boy with

lots of things to have an adult-like looking muscular body whereas the picture of the boy with few things is portrayed to have a non-human-like shape.

Figure 3. Drawing done by a 7-year-old boy and a 12-year-old girl



STEREOTYPE 3: A person who has many possessions is perceived to have more positive traits than a person with few possessions

The findings reveal children associating positive traits with the picture of the person with many possessions and negative traits with the picture of the person with lesser possessions. For example, the words used to describe the girl/boy with lots of things were “smart”, “not mean”, “kind”, “good”, “helpful”, “popular”, “happy”, “shares things”, and “clean”. In contrast, the girl/boy with few things was described as “stupid”, “unhappy”, “mean”, “rude”, “bully”, “bad”, “does not share things”, and “dirty”. A reason for this type of cognitive bias can be attributed to the halo effect (Thorndike 1920). Halo effect is an error in reasoning, wherein a person’s character is assessed based on a single trait (e.g., physical attractiveness) that they possess. This effect is also known as the beautiful-is-good stereotype (Dion, Berscheid, and Walster 1972). That is, if an individual is seen to be physically attractive, they are also perceived to have more positive traits than an individual who is normal-looking or unattractive (Griffin and Langlois 2006). In the context of the present research, the halo effect led children to think of the individual who

owned many things to have more favorable traits than the individual who owned fewer things.

CONCLUSION

The present research identified three main stereotypes relating to material possessions. The first stereotype is that a person who has many possessions is perceived to own nicer and better things than a person with few possessions. The second stereotype is that a person who has many possessions is perceived to be more physically attractive than a person with few possessions. And the third stereotype is that a person who has many possessions is perceived to have more positive traits than a person with few possessions.

Practical Implications: An important message this article would like to convey is that every person deserves to be treated properly with respect despite what they own or how they appear. Public policymakers, educational institutions, teachers, and parents have a significant role to play in identifying stereotypes in children and rectifying them as early as possible. One way to do this is by

making children aware and teaching them not to hold any prejudice or bias related negative attitudes against any individual or a group based on what they see on the exterior.

Future Research Arenas: Certain cultures put greater emphasis on the concept of minimalism. And so, it would be interesting to see how children raised in minimalist homes would perform on the drawing and description task. In the present research, children drew pictures of individuals who were the same gender as their own. Future research can look at considering cross-gender pairing to study material possessions and traits related stereotypes i.e., boys draw and describe girls and vice-versa. Future research can also consider examining gender-neutral scenarios. For example, instead of using the phrase “draw this boy or girl”, the phrase “draw this person” can be used.

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Brand Nomadicity: Redefining Consumer-Brand Relationships in Liquid Modernity

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INTRODUCTION

Societal changes have ushered in an era of liquidity (Bauman 2000) where consumer culture underlies a nomadic logic. With its hypermobile and hyperconnected nature, postmodernity lauds consumption as detached from traditional markers of solidity—endurance, ownership, and materialization (Bardhi and Eckhardt 2017). Accordingly, consumers embrace liquid relationships to the material world (Bardhi, Eckhardt, and Arnould 2012) as they strategically enable their navigation in uncertainty. Research challenging the linking value ascribed to products and services (Cova 1997) has even foregrounded the rationale of publicity (Arvidsson and Caliandro 2016) and visibility (Eckhardt and Bardhi 2020) permeating consumption. Drawing a more colorful picture of liquid consumer culture, recent studies have pointed to the centrality of solid structures (e.g., Caldwell and Henry 2020), such as in the form of anchors conveying both social and material stability (Aufschnaiter, Schwarz, and Hemetsberger 2021). Reminiscent of Bauman's (2000, ix) claim that "the quest for the solidity of things and states [...] triggered, kept in motion, and guided their liquefaction," these scholars have implied conceptualizing consumption as occurring at the interplay between liquidity and solidity.

In this light, we aim to provide a more nuanced account of the roles brands as solid anchors assume to nurture consumer life in liquid modernity. Research has noticed the altering relationships to brands in consumption contexts (Wegerer 2018) and foregrounded that technological advancements call for "the 'blurring' and 'broadening' of branding boundaries" (Swaminathan et al. 2020, 25) requiring a reassessment of branding research from the perspectives of firms, consumers, and society. Brands are shifting away from single ownership to shared ownership, as heightened access to information and people is allowing more stakeholders to cocreate brand meanings and experiences alongside traditional brand owners and managers. Moreover, hyperconnectivity has allowed existing brands to expand their geographic reach and societal roles, while new types of branded entities (ideas, people, places, and organizational brands). However, while these insights have hinted at the detachment of consumers from branded objects, Bardhi and Eckhardt (2017, 591) emphasize the lack of "empirical research on the nature of relationships to brands and brand communities from a liquid perspective." To cater to this gap in extant scholarship on liquid versus solid consumption, we employed a netnographic approach. We used content analysis of Twitter data revolving around Moleskine—a brand representing "around the world, a symbol of contemporary nomadism" (Moleskine booklet information). This study ultimately introduces the concept of brand nomadicity, illuminating how consumers relate to brands while experiencing uncertainty.

THEORY

Consumer-Brand Relationships

Since Fournier's (1998) pioneering work on consumer-brand relationships, relational approaches to branding have contributed to our understanding of how and why people connect to brands in ways similar to their social relationships (e.g., Alvarez, Brick, and Fournier 2021; Fournier and Alvarez 2012). These strong connections to branded objects are intertwined with consumers' development of a sense of selfhood (MacInnis and Folkes 2017) and com-

munal belonging (Muniz and O'Guinn 2001), providing security, stability, and continuity (Fournier 1998; Muniz and O'Guinn 2001). More recently, major shifts such as the omnipresence of digital technologies and platforms (Caliandro and Anselmi 2021) challenge the continuing importance of consumer-brand relationships. Liquid perspectives have suggested that as "[c]onsumers may not want committed relationships or emotional attachments" (Bardhi and Eckhardt 2017, 590), brands become an easily disposable tool. Research has questioned the role of brands in sustainably forming identity projects or establishing enduring interpersonal relationships (Caliandro and Anselmi 2021). Still, evidence has suggested that in liquid times—when society no longer provides frames of reference—strong consumer-brand relationships become even more essential sources of solidity (Biraghi 2017; Minina and Holmqvist 2021). Similarly, Epp, Schau, and Price (2014) highlight how brands remain relevant in liquid contexts if they become integral to consumers' new practices. Therefore, current conceptualizations vary from *liquid brands* (Hewer 2020) continuously adapting to ever-changing demands to *grounding brands* (Eichinger, Schreier, and van Osselaer 2021) offering connectivity to places, people, or their past.

Materializing Brands

The digitization of (nearly) every sphere of our life—be it possessions (Belk 2013), social connections (Borgerson and Miller 2016), or identity projects (Schau and Gilly 2003)—questions the prevailing role of the material. Concomitantly, research risks taking for granted material aspects and, thus, neglecting their capacity to shape consumer culture (Mardon and Belk 2018; Miller 2010). Attending to the concept of materiality (Borgerson 2013; Miller 1987), which foregrounds the co-constitutive interactions between subjects and objects, allows analyzing relationships between consumers and their brands. Through continuous co-creation processes, consumers and brands "are made into entities that perform certain roles" (Borgerson 2013, 128). Several studies have demonstrated the fruitfulness of investigating consumers' interactions with branded objects from a materiality perspective. For example, in their analysis of a plastic shoe brand, Ferreira and Scaraboto (2016) point out how the brand's material substances, design, and marketing efforts either open or limit the space to engage with consumption objects. As detailed accounts of brand roles in hypermobility and hyperconnectivity are still lacking (Bardhi and Eckhardt 2017; Swaminathan et al. 2020) requiring a reassessment of branding research from the perspectives of firms, consumers, and society. Brands are shifting away from single ownership to shared ownership, as heightened access to information and people is allowing more stakeholders to cocreate brand meanings and experiences alongside traditional brand owners and managers. Moreover, hyperconnectivity has allowed existing brands to expand their geographic reach and societal roles, while new types of branded entities (ideas, people, places, and organizational brands, we applied the concept of materiality to understand brands and "the powerful aesthetic, affective, and embodied encounters they create" (Rokka 2021, 118) more holistically.

METHODOLOGY

To acknowledge the room digital affordances provide for contemporary consumer-brand relationships (Swaminathan et al. 2020), this exploratory study built upon Kozinet's (2020) netnographic ap-

proach. We examined the roles and qualities of branded objects in liquid modernity by drawing attention to Moleskine due to its philosophy of catering to liquid existences: This brand “encompasses a family of nomadic objects dedicated to our mobile identities, versatile tools for both everyday and extraordinary journeys” (Moleskine LinkedIn profile). Over four months, starting in October 2021, we engaged with written and visual content demonstrating consumers’ interaction with Moleskine on Twitter, Facebook, and Instagram. This allowed us to obtain a first glance into how relationships between liquid consumers and brands come into being, are nourished over time, and occasionally fade away. We subsequently conducted a qualitative content analysis of textual data published by Moleskine consumers on Twitter—a platform suited to delve into digital narratives that center around perceptions of a brand (Aufschnaiter 2020). The Netlytic application (“Moleskine” as a keyword) granted us access to a pool of 649 tweets, which consumers posted from November to December 2021. We interpreted inductively, following categorization, abstraction, and iteration (Spiggle 1994).

FINDINGS

Our findings show that to master uncertainty, consumers embrace relationships to brands that go beyond sheerly fulfilling either liquid or solid demands. Since societal sources of security and continuity fade (Bauman 2000), consumption occupies the middle ground between the poles of liquidity and solidity. This study conceptualizes brands as concurrently constituting liquid motors and solid anchors to cater to the needs of consumers in hypermobility and hyperconnectivity. As such, branded objects, on the one hand, *lend wings* by displaying boundless availability and mirroring ephemeral and non-materialized qualities of liquidity based on access (Bardhi and Eckhardt 2017). On the other hand, branded objects *provide roots*, giving back access to sources of stability by incorporating qualities of solidity—endurance, ownership, and materialization (Bardhi and Eckhardt 2017). While the brand qualities of liquid motors and solid anchors act like two gear wheels turning in opposing directions with minimal interplay only, the movement of one ultimately contributes to the continuation of the respective other. Considering this, our findings foreground a concept—brand nomadicity—to address the entanglement between liquidity and solidity within contemporary consumer-brand relationships (figure 1).

Borrowing the nomadicity notion from computer scientists (Kakihara and Sørensen 2001; Kleinrock 1996) who argue for a wider interpretation of mobility in the digital era, we introduce the brand nomadicity concept to detail how consumers play with the spatiality, temporality, and contextuality of brands in liquid modernity. Since branded objects draw from qualities of liquidity and solidity simultaneously, they provide opportunities for living in the here or alternative realities and reflecting upon the past, indulging in the present, or fantasizing about the future. Through their offline and online manifestations, brands may re-shape the contextual nature of interactions. Similar to Kakihara and Sørensen (2001, 33), who find the nomadicity notion to account for “new configurations of social-technical relationships,” we use it to explain consumers’ relationships to objects—such as brands—in hypermobility and hyperconnectivity. Our analysis unveils four roles that branded objects assume when embedded in nomadicity and drawing from both liquid and solid qualities: creator, communicator, connector, and companion (table 1).

The brand as a *creator* crystallizes in references revolving around the various processes of creative artwork immersion that go beyond promising a calming pastime. Providing space for craftsmanship, Moleskine fosters activities “to which the consumer typically brings skill, knowledge, judgment[,] and passion while being mo-

tivated by a desire for self-expression” (Campbell 2005, 23). This role becomes paramount when branded objects not only foster practices of indulgence by supporting mental regeneration or emotional treatment but also act as a contributor in framing, manifesting, and reconfiguring identity projects. Consumers also pursue relationships to Moleskine as a creator brand due to its power to evoke flow-like experiences (Csikszentmihalyi 2017), allowing spiritual growth and care. While being limited by material affordances such as the fixated page size and numbers, the expressive components of the brand unlock consumers’ creative self-production in unlimited ways.

Turning into a vehicle for representations in front of others, the brand’s role as a *communicator* mediates formations between consumers and a public audience (Arvidsson and Caliandro 2016). As such, Moleskine is embedded in values of sophistication and cosmopolitanism, which results in pursuits of displaying consumption and affiliation to the branded object. The communicator role puts the signaling power of objects to the fore in that it showcases the consumer-brand relationship as a cultural signifier of the creative class. Similarly, Moleskine provokes practices for showing off intellectual superiority and educational status. Consumers in today’s attention economy also perform what reminds of Abidin’s (2016) visibility labor through exploiting the capacity of interactions with (branded) content to expose themselves. As a communicator, Moleskine produces consumer-perceived luxury products that are, rather than being exclusively cherished for intrinsic validation, symbols of differentiation.

Foregrounding the linking value of branded objects as they “express and mediate the relationship to other people” (Miller 1998, 46), the brand as a *connector* enables meaningful connections. These social connections manifest in consumers forming communities or tribes (Cova 1997; Muniz and O’Guinn 2001) around Moleskine as they engage in virtual conversations and articulate their sense of belonging to fellow brand users while distancing from others. Consumers use branded objects to materialize connections to particular people, conveying the social nature of consumption and revealing that brands contribute not only to establishing but also to nurturing sociality and expressing hedonic attachment. Consumers engage in gift-giving practices and, thus, materialize experiences and feelings involving others. However, the brand also facilitates connections to additional branded objects since consumers oftentimes apply particular objects like Kaweco pens in combination with Moleskine products.

The brand as a *companion* manifests in consumers’ references to Moleskine as a relationship partner, highlighting the importance of branded objects in and of themselves (Fournier 1998) as opposed to their role in mediating and expressing social connections. Consumers describe how they continuously take along and use the brand. More than that, they express a deep sense of belonging to Moleskine objects they possess or have access to. Practices such as personalizing, grooming, or fearing the loss of these objects reveal that consumers incorporate the brand into their extended self (Belk 1988). Anthropomorphizing practices (Aggarwal and McGill 2012) further substantiate the companion role, as consumers attribute human-like characteristics to branded objects in ways being rather common among humans. Overall, consumers’ references to Moleskine as a cherished relationship partner over an extended time suggest that the brand even surrogates hard-to-achieve stable social connections.

Across all roles, the brand provides consumers with distinct qualities which ensure continuous consumer-brand relationships in hypermobility and hyperconnectivity. Our findings reveal that despite the *ephemerality* of consumer-brand interactions on social media, certain connections between consumers and the self, the pub-

lic, other human and non-human actors, as well as the brand itself assume *enduring* value. Moleskine illustrates how consumers draw on *access-based* and *dematerialized* modes of interacting with the brand through digital media while at the same time appreciating *ownership* of *material* objects central to their practices. Rather than solely encouraging imaginative plays in the mind, the brand roles inspire consumers to embody their ideas as expressed by textual and visual artifacts. Ultimately, exploring the interplay of the brand as liquid motor and solid anchor brings to light how Moleskine manages to provide consumers with needed functionalities and emotional links as well as the freedom to unfold and the structure to ground themselves.

DISCUSSION

This study puts forward the concept of brand nomadicity to open the dialogue on how consumer-brand relationships develop in times that Bauman (2000) aptly terms liquid modernity. Our theoretical contribution to scholarship on branding and materiality is twofold: First, we shed light on the entanglement between liquidity and solidity—being traditionally labeled as the conceptual extreme poles along a consumption spectrum (Bardhi and Eckhardt 2017). Doing so allows us to propel the notion that rather than emerging in a co-existent and continuous manner, liquid and solid aspects argue for a symbiotic interplay. Therefore, this study concurs with Bauman's (2000 ix) idea to “view those two conditions as a couple locked, inseparably, by a dialectical bond,” which describes liquidity and solidity as mutually reinforcing. Second, we pick up the thread of Aufschnaiter et al.'s (2021) research on material anchors trans-

mitting stability and security in that our study stresses the materialization of brands that support consumers navigating the liquid-solid interplay. We understand branded objects as creatively uniting not only material but also social anchors, illustrating how different roles and qualities grant mobility and connectivity alike across temporal, spatial, and contextual axes in the offline and online world. With that, we add to previous work (Mardon and Belk 2018; Miller 2010), underlining the power of materiality in forming consumer culture.

Overall, this study introduces the concept of brand nomadicity to provide a first account of the nomadic logic dominating branded objects that cater to consumers in hypermobility and hyperconnectivity by embodying liquid motors and solid anchors alike. Playing with the boundaries of branding, the concept reconciles the paradox that brands either manifest as adaptations to the unpredictable nature of today's world (*liquid brands*; Hewer 2020) or contain solid facets linking to places, people, and bygone times (*grounding brands*; Eichinger et al. 2021). We apply the notion of nomadicity (Kleinrock 1996) to the consumer research realm and hope to spur debate on the necessity of reflecting openly upon the spatial, temporal, and contextual mobility of brands in uncertainty.

An avenue for subsequent studies could be to examine consumer-brand relationships longitudinally to better comprehend the transitional points invigorating the different brand roles and qualities liquid consumers strive for. Since our concept only revolves around the Moleskine brand, future research efforts could also be directed toward detailing more cases to reveal navigations between liquidity and solidity from a multifaceted angle.

TABLE 1
FINDINGS

ROLES	PRACTICES	ILLUSTRATIVE TWEETS	QUALITIES LIQUID MOTOR & SOLID ANCHOR Inspired by Bardhi and Eckhardt (2017)
BRAND AS A CREATOR Relationship: Consumer → Brand → Self	Indulging Oneself	T#537: #Birthday noir: Tomorrow is my birthday, Sunday, December 5, 2021. And today I got myself an early present: a 2022 @Moleskine daily planner. Hell #YES! https://instagram.com/p/CXDmSAIvKj_/	Ephemeral consumer-brand interactions on social media & enduring connections to others and other brands Emphasis on <i>use-value</i> and <i>access</i> to the brand & <i>attachment</i> to and <i>ownership</i> of branded objects Centrality of <i>dematerialized</i> modes of relating with the brand & <i>material</i> affordances of branded objects
	Building Identities	T#22: Almost 20 years of @moleskine notebooks. Cataloguing my growth as a person. Recording who I really am. Speaking to future readers. #NFTcreator #Writer #Artist #HumanBeing #HumanDoing	
	Experiencing Flow	T#80: [camera emoji] This is your sign of manifestations [cyclone emoji] Spirit wants to communicate so it can grand you its gifts and make way for your blessings. Get a journal, or simply listen. It's always trying to reach out.. [speaking head emoji] ~ Sailor Moon Journal by @moleskine ~... https://t.co/Oiq0CW1qgN	
BRAND AS A COMMUNICATOR Relationship: Consumer → Brand → Public	Providing Intellect	T#544: Considering doing a bit where I go to bars and play a character—eg. guy who brought his Moleskine to the bar because he wants everyone to know he's a writer	
	Signaling Status	T#1: I used to save my money to buy moleskine sketchbook and never used that because i didnt like its paper and just realized the size was small and bought because my cool seniors used that and i thought i would be cool like them too	
	Performing Visibility Labor	T#528: #graphite #portrait on #moleskine #paper photo ref. by Alexandr Ivanov on @pixabay https://t.co/8dV75zyHls	
BRAND AS A CONNECTOR Relationship: Consumer → Brand → Others and Other Brands	Expressing Communal Belonging	T#153: Today I learned both Bengals coach Zac Taylor and I exclusively use Moleskine notebooks and Pilot Pens. .07. Never related more to a person in my life. Via The Athletic: https://t.co/HKaovyrMxL https://t.co/RNY1nFvoL0	
	Materializing Social Connections	T#255: @snoozeoof thank you so much for the moleskine, it has reignited my journal writing [smiling face with hearts emoji] T#640: Love letters to my kids in my @Moleskine Sketchbook - (2011). A decade of scribbles. https://t.co/3ids1ckXJx	
	Connecting to Other Brands	T#414: some movies make you want to grab your moleskine and a pen and start recalling your most formative childhood memories and that is LICORICE PIZZA for me baby	
BRAND AS A COMPANION Relationship: Consumer → Brand	Continuously Using	T#404: @coldbrewedtool Truth. Moleskine got me through my Master's degree. Hell, I've got one in my work bag right now. Along with a good Kaweco fountain pen. Great for my carpal tunnel.	
	Incorporating the Brand	T#455: when I stop having thoughts then I'll stop buying journals (if they don't have a moleskine store in hell) https://t.co/zkLCpjWgUd T#137: I've lost my moleskine diary and tbh I feel like I've lost an arm???	
	Anthropomorphizing the Brand	T#506: Like a security blanket ... Happy to be reacquainted with the @moleskine journal I was working in as the pandemic and remote work took over my life in March 2020. Retrieved from the office on Friday. @hathitrust @mnylc @NNIPHQ @netinclusion @SPARC_NA @LibraryFreedom ... https://t.co/Pi3InKPHMa	

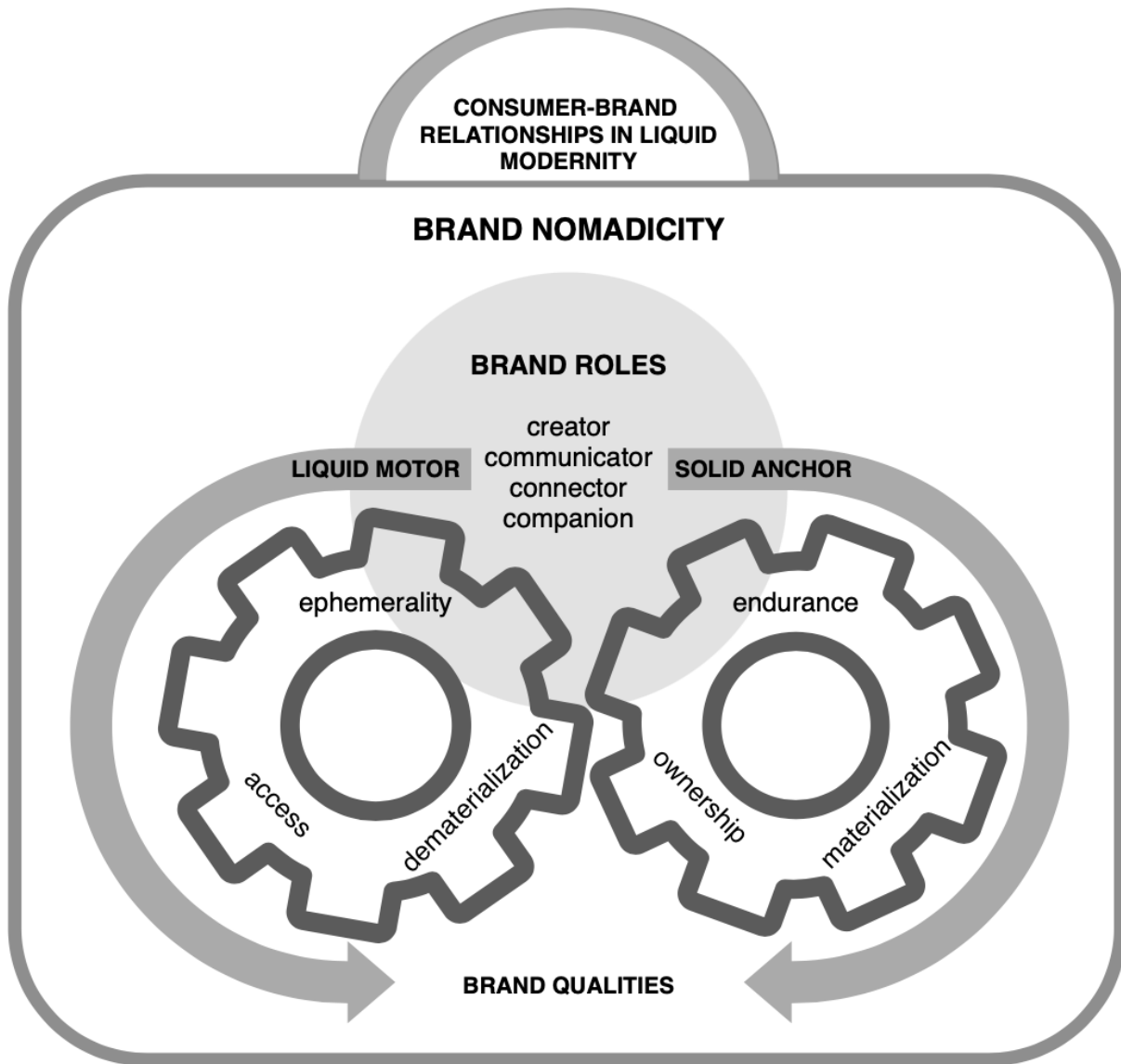


FIGURE 1
THE CONCEPT OF BRAND NOMADICITY

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Ugly is the New Pretty: Motivations Behind the Acceptance of Ugly Fashion Trends

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INTRODUCTION

Have you watched supermodels walk down the runway in designer clothing? If yes, then have you ever wondered, who in their right state of mind would buy and wear such hideous-looking ridiculously-expensive clothes in real life? When popular fashion designers are posed with the same question, they often respond by saying, “my designs and clothes are only meant for those who can appreciate art and creativity in its purest form”. Yet it is not quite a convincing answer to an overly conservative aunt who insists that clothes need to be pretty and not the opposite. However, her nephew/niece contradicts the opinion by saying that there is no such thing as what you call ugly. Rather what one person perceives as being soreness to sight is viewed to be a masterpiece in another’s eyes. The aunt, however, ignores her nephew/niece’s viewpoint and continues to adamantly stick to her own. Although the conversation between the conservative aunt and her nephew/niece is a hypothetical situation. It seems like the beautiful versus ugly debate has been going on forever. In fact, ancient philosophers, and poets, e.g., Aristotle, Plato, Plotinus, Theocritus Idylls have never come to a consensus on the subject matter (Langlois et al. 2000).

While we know that beauty has managed to get a lot of positive attention in history, ugly, in comparison, has not. However, recently, this specific trend appears to be changing especially within the fashion industry. The digital and print media, in particular, have reported that ugly fashion is becoming ubiquitous, and that people are acknowledging ugly as the new pretty (Vogue 2020). For instance, consumers are associating style and coolness with clothing items that are oversized, ill-fitted, unmatched, and loud, e.g., bright color and jarring prints (The Hollywood Reporter 2017). But why is this change happening? The present research contributes to the extant literature by providing a theoretical framework to answer this question. The primary objective of the current work is to explore why people are now all of a sudden gravitating towards ugly fashion which was not the case or scene years ago.

WHAT IS UGLY?

Some of the synonyms used for the word ugly are awful, bad-looking, beastly, disfigured, disgusting, evil, foul, gross, horrid, horrendous, monstrous, repulsive, and violent (thesaurus.com 2022). The simplified definition of ugly in the extant literature is that “ugliness is everything that beauty is not” (Chinchilla 2012, p. 323). Kant called wars and destruction ugly (Gladkova and Romero-Trillo 2021). Plotinus equated ugly to a body rolling in mud (Henderson 2015). Ugliness has also been compared to a weed in a garden that should be removed and not find its place in architecture, artworks, landscapes, and even in human beings (Forsey and Aagaard-Mogensen 2019). Why is ugly despised so much? A common belief acknowledged by philosophers is that ugly negates, depreciates, and destroys beauty (Henderson 2015). Rosenkranz (1853) put it this way; we often see or refer to something as being ugly only because its counterpart beauty exists.

NOTIONS OF UGLY IN THE CONSUMPTION CONTEXT

In the consumption related context, the stereotype is that ugly individuals are perceived to own more cheap material possessions than expensive ones (Thomas 2020). When young children are asked

to describe the types of things that they think a less attractive person could possibly own, their responses include words and phrases such as broken toys, torn clothing, spiders, lizards, bugs, pictures of demons, and garbage (Thomas 2021). Lately, however, the idea of seeing ugly as being bad is changing particularly in the context of food consumption (e.g., Lombart et al. 2019; Mookerjee et al. 2021; Yuan, Yi, Williams, and Park 2019). Scholars found that when humans are educated about the high nutritional values of ugly-looking fruits and vegetables they become more receptive and acceptive towards ugly produce (Qi, Penn, Li, and Roe 2022; Yuan et al. 2019). But can the same rationale work in other contexts such as fashion?

Prior research tells us why people are open to consuming ugly food items (e.g., Mookerjee et al. 2021). However, the extant literature does not provide us with clear reasons as to why people are keen on following ugly fashion trends. According to societal standards, the norm is that clothing and other related items are supposed to be not obnoxious but rather the contrary. When a societal rule is broken even if the rule is unwritten or unrecorded, the ramifications that follow are often in the form of judgments or punishments (Cialdini and Trost 1998). For example, an individual is susceptible to be ridiculed by others for their ugly clothing choices. Despite the criticisms, people are still gravitating towards the consumption of ugly fashion. The objective of this article is to investigate why this happens.

METHOD

Digital resources are considered to be great data sources for conducting consumer research (Kozinets 1998, 2002). And so, in the current study, to understand the rise of ugly fashion trends, articles published in fashion, entertainment, lifestyle, educational, and news websites were analyzed. These articles included perspectives from consumers, journalists, freelance writers, bloggers, fashion experts, celebrities, influencers, and social elites. Articles that appeared during 2017-2021 were chosen, in particular, because it corresponds to the timeframe when ugly fashion became a trend among the common man (see Table 1).

Discourse analysis was conducted on 70 articles. Discourse is “a specific ensemble of ideas, concepts and categorizations that are produced, reproduced, and transformed in a particular set of practices and through which meaning is given to physical and social realities” (Hajer 1995, p.44). In discourse analysis, written texts are analyzed to understand different meanings and perspectives on a specific subject matter (Johnstone 2017). The overall process followed to conduct the discourse analysis is summarized in Figure 1.

Figure 1. The Data Collection and Analysis Process

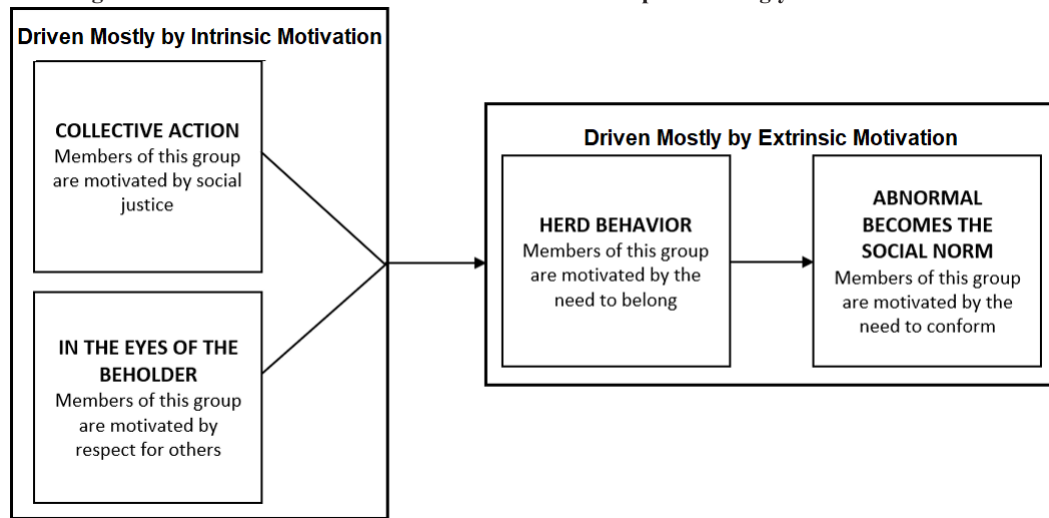
Phase 1	Phase 2	Phase 3	Phase 4
<p>- Internet search engines were used to look for articles published in fashion, entertainment, lifestyle, educational, and news websites.</p> <p>- The keywords entered into the search engines were texts/phrases such as "ugly trends", "ugly fashion", "ugly chic", "ugly luxury", "ugly designer brands", "celebrities into ugly fashion", "ugly is cool", "ugly is pretty", "ugly style", "ugly is elegant", and "ugly is popular"</p>	<p>- To make the data collection and analysis process more manageable, only those articles that appeared on the first ten pages of the search results published between 2017 and 2021 were taken into account for analysis.</p> <p>- A total of 100 articles were downloaded based on the title. Out of which 30 articles were removed because these articles were irrelevant to the topic or if they were relevant, they had the year, date, or author-related information missing. Finally, 70 articles that met the required criterion were chosen for the study.</p>	<p>- The initial analysis consisted of reading and re-reading the first 30 articles that appeared on the search results page.</p> <p>- Initial thoughts and ideas were put down and codes were generated.</p> <p>- The coded data was then collated and categorised into potential themes.</p>	<p>- The same steps were followed for the next 25 articles. The saturation point was reached after analyzing 55 articles.</p> <p>- To make sure the analysis was accurate, and that the themes were telling the right story 15 more articles were analyzed.</p> <p>- In total, 70 articles were analyzed (see Table 1). The analysis was a back-and-forth process done until the themes were clearly defined, and the storyline was well-organized about the data and topic.</p>

Table 1. Articles Used in the Study

No/Year	Publication Source	Name of the Article
2017		
1	Cleverish	The Rise of Ugly Fashion and Why You Should Get on Board
2	Fashionista	Why Everyone is Into Ugly Fashion: An Explainer
3	Fashion and Style Police	Why Ugly Fashion is Big Business
4	Financial Times	Why is Fashion So Ugly?
5	GQ	The Biggest Trend in Sneakers Is Ugly
6	Guestlist	It's So Ugly We Love It
7	Quartz	Beauty Got So Basic that the Only Place for Fashion to Go was Ugly
8	Repeller	Why Ugly Sneakers Are Back: A Theory
9	Sydney Morning Herald	This Year's Met Gala Theme Might Cement the Rise of 'Almost Ugly' Fashion
10	The Business of Fashion	Ugly 'Dad' Sneakers Luring Luxury
11	The Business of Fashion	Ugly Fashion Is Big Business
12	The Hollywood Reporter	Tracking the Rebirth of Ugly Chic in the Instagram Age
13	Varsity	The Beauty of Ugly Fashion
14	Vogue	The Art of Embracing Ugly Shoes
2018		
15	Bloomberg	Why Prada Can Charge \$1,700 for Bananas on Your Shirt
16	Business Insider	Shoppers are Dropping Hundreds of Dollars on Things that Used to be Considered too Ugly
17	CR Fashion Book	Why Everyone is Embracing Ugly Fashion Trends
18	Deccan Chronicle	Ugly is the New Cool
19	Dscene	What is Ugly Fashion and Why is it Trending?
20	Edited	Footwear Trends and An Ode to Ugly Fashion
21	First Class	What's the Deal with the 'Ugly Fashion' Trend this Year?
22	Irish Examiner	The Rise and Rise of Ugly Fashion
23	Linkfluence	Fashion Trend Analysis: How the Dad Shoes Trend Dominates Social-Media
24	Magpie	The Surprising Rise of Ugly Fashion
25	Quartz	The Rise of "Ugly" Fashion Proves Confidence is the Best Look
26	Style Democracy	We Are Obsessed with Ugly Fashion – This Is Why
27	The Avenue	Why I Wear Ugly Clothes
28	The Fashion Spot	5 Fashion Items That Were Ugly Until Celebs Wore Them
29	The Globe and Mail	It's Awful, I Love It
30	The Paris Review	Ugliness Is Underrated: Ugly Fashion
31	The Telegraph	Style Trends: This Year, Fashion Wants to be Ugly
32	The Washington Post	Fanny Packs. Prairie Dresses. Luxury Shower Shoes: Is Fashion Trolling Us or What
33	Vogue	Change is Afoot: Decoding Fall's 'Ugly' Shoes Trend
34	Yplus	Why Ugly Is the Trend That Won't Die
2019		
35	CNN	Ugly Fashion is Here to Stay: 6 of Our Favorite Trends
36	Latestly	Ugly Fashion Trends
37	LinkedIn	Fashion is Sometimes So Ugly, it Becomes Beautiful!
38	Sydney Morning Herald	Is the Ugly Shoe Trend Making Us Dress Better?
39	Special Broadcasting Service	The Privilege of Buying 'Ugly' Fashion
40	Yplus	How Ugly Became Cool: An Infographic Spotlight
2020		
41	Betches	The Ugly Trends That Will Dominate Instagram This Year
42	Glamour	19 Best 'Ugly' Shoes of 2020, From Dad Sneakers to Chunky Loafers
43	Hole	Exploring the "Ugly" Clothes Phenomenon and Anti-Fashion Movement
44	Lemon Trend	Style Report: The Ugly Sneakers
45	Popsugar	How to Wear 9 Polarizing Fashion Trends, According to Stylists
46	Slate	Sorry, Crocs Are Cool Now
47	The COMM	Think Piece: Why Do We Like Ugly Clothes?
48	Vogue	Fashion's Obsession with the Ugly Shoe Isn't Walking Out of Our Lives Anytime Soon
49	Vogue	Ugly is the New Pretty
50	Who What Wear	Meet the "Ugly" Trends That Will Dominate 2021
51	Who What Wear	"Ugly" Fashion Isn't Just a Passing Trend
2021		
52	ABC Everyday	Why I Hope the Ugly Footwear Trend is Here to Stay
53	All 4 Women	Ugly Fashion Trends that are Everywhere Right Now
54	Bustle	10 'Ugly' '90s Fashion Trends Making a Comeback
55	BuzzFeed	Crocs Are Ugly!!!
56	Fashion Week Online	9 Ugly Fashion Trends People Love to Google (and How to Style Them)
57	First Class	What is Up with the World's Obsession with Weird (ugly) Shoes?
58	Forbes	The Rise of Ugly Fashion Continues with Men's Jean Shorts
59	Glamour (UK)	The Fashion World is Obsessed with 'Ugly Shoes' Again!
60	Grok	Why Do We Love Ugly Clothes?
61	Hello-Giggles	Gen Z Can Make Anything Look Cool—Here's a Fashion Lesson
62	IFA Paris	Ugly Christmas Sweaters – When Ugly Becomes Trendy in Fashion
63	Independent Online	7 'Ugly' Fashion Trends We Love
64	Lifestyle Asia	Why Men's Jean Shorts are Considered "Ugly" Now but It's Okay
65	NSS Magazine	Why are Designer Shoes are Becoming so "Ugly"?
66	Refinery29	Why Are We So Obsessed With "Ugly" Shoes?
67	She Finds	4 'Ugly' Trends You're About to See Everywhere for Fall—They're Actually So Chic!
68	The Wall Street Journal	How Ugly Shoes Won (and Why They Keep Getting Uglier)
69	Viva Glam Magazine	Not So Classy Fashion Trends That Are Becoming Everyone's Favorite
70	Vogue	Are Earthy Sandals the New Ugly Shoe Trend?

FINDINGS AND DISCUSSION

Figure 2. Motivations involved in the Creation and Acceptance of Ugly Fashion Trends



Discourse analysis resulted in the formation of the framework presented in Figure 2. Human behavior is driven by intrinsic and extrinsic motivations (Self-Determination Theory; Ryan and Deci 2002). Intrinsic motivation is when people engage in behaviors solely for internal rewards (e.g., growth, inner satisfaction) whereas extrinsic motivation is driven by external rewards (e.g., praise from others, popularity). The findings show that members of the collective action and in the eyes of the beholder groups embrace ugly fashion for internal rewards. In contrast, the herd followers and those that adhere to social norms get into the ugly fashion trends because of external rewards. These motivations are discussed in detail below.

Collective Action

Members of this group are motivated by social justice. Collective action is often a response to injustice, inequality, or a condition of disadvantage (Van Zomeren, Postmes, and Spears 2008). Wright, Taylor, and Moghaddam (1990) state that “a group member engages in collective action any time that he or she is acting as a representative of the group and where the action is directed at improving the conditions of the group as a whole” (p. 995). In the context of the present research, when the outgroup – the ugly/low-status group – is discriminated or treated unfairly; the outgroup members experience emotions like anger and sadness, which then propels them to take action to bring about the required social change (Social Identity Theory; Tajfel and Turner 2004). For example:

“What’s behind the staying power of ugly fashion? Some say it’s a reaction to decades of oversexualized women’s clothing, from high heels to bustiers and formfitting styles. Or in an era of Instagram influencers and selfies, it’s just another way to stand out in the feed or make a statement about nonconformity. It may be practical – some ugly fashions are pretty comfy – or a sign of a growing collective confidence with women wearing what they want. Whatever the cause, this fashion shift is giving women license to express individuality once deemed “unfashionable” – Kami Phillips, September 12th, 2019, CNN

Collective action redefines the low-status group and gives them a whole new identity. For instance, people are rejecting perfection and accepting imperfections. Some call ugly fashion a revolution or revolt against society’s unrealistic beauty standards. Ugly fashion

promotes inclusivity and diversity which makes people feel real and seen. Hence, people now want to be a part of the underrated group. This is exemplified in the following quote:

“The world at large is adopting the principle of embracing people who may otherwise be discriminated or marginalized by their differences or disabilities... In fashion, this can be likened to clothing and accessories typically worn by the “uncool kids” (think fanny packs and bucket hats) ...plus-sized (yay to more oversized clothing!) ... and even the poor (ripped clothing, anyone?) ... Inclusivity has become the new pop culture and the fundamental ethos in today’s world. Ugly fashion is just one evidence of that” – Natalie Khoo, May 30th, 2018, First Class

In the Eyes of the Beholder

Members of this group are motivated by respect for others. This group may not necessarily take part in a social protest. However, they do not tolerate any form of injustice or discrimination against others. The group strongly believes that change happens at an individual level. That is, each individual’s actions or choices impact society as a whole. In the context of the present research, the ideology of this group is that they see beauty in everything. They do not like to call anything ugly. These people argue that style is a personal statement and that one can express their identity in whatever way one wishes to. This group endorses the concept of feeling comfortable in one’s skin. The following quote captures these thoughts:

“What does “ugly” even really mean? We all have our own personal styles, and just because something is viewed as ugly by many doesn’t mean there aren’t people who think it is amazing. People choose to wear “ugly” clothes all of the time, whether they themselves agree that they are ugly or they see them as a genuine fashion statement...Those who embrace and express their true selves and true style, and choose to wear what they love, despite the opinions of others--and isn’t that what fashion is really about? Since we all have our own tastes, nothing can really be “ugly” – Maddie Casey, July 16th, 2018, The Avenue

Herd Behavior or The Bandwagon Effect

Members of this group are motivated by the need to belong. When prominent individuals, e.g., celebrities, the elite, influencers in society become a part of the collective action or in the eyes of the beholder group, people who admire these individuals decide to join the respective groups as well. This results in herd behavior (Banerjee 1992; Raafat, Chater, and Frith 2009; Shiller 1995) or what scholars refer to as the bandwagon effect (Leibenstein 1950).

Herd behavior or the bandwagon effect involves imitating or copying what everyone else is doing. In other words, I go where everyone else goes regardless of what I think. People tend to mimic the behaviors of others at both conscious and nonconscious levels (Bargh, Chen, and Burrows 1996; Chartrand and Bargh 1999; Van Baaren, Holland, Kawakami, and Van Knippenberg 2004). People also compare themselves with others whom they think are either similar or better than them (Social Comparison Theory; Festinger 1954). When popular celebrities, influencers, and the elites start promoting ugly fashion; their fans observe the behavior and immediately begin to do the same. Thus, ugly fashion suddenly becomes a cool trend that everyone is into. This is typified in the following quotes:

“Enter the ‘ugly’ trends that may have once been unflattering, but are now hot hot hot (thanks to our favorite A-listers)” – Brooke Hardington, August 29th, 2021, She Finds

“Celebrities have the kind of influence that turns totally unfashionable items fashionable. Whether it’s their innate sense of style or a really good stylist, they help us see the potential of a certain fashion item and how we can style it ourselves... Whenever celebs post outfit of the day (OOTDs) on Instagram featuring something we initially thought was hideous, our opinion immediately changes, and we proceed to imagine how the outfit would look on us. It’s like stars are saying, “Don’t knock it until you style it.” – Bluesky Quianzon, August 6th, 2018, The Fashion Spot

Abnormal Becomes the Social Norm

Members of this group are motivated by the need to conform. Herd behavior or the bandwagon effect results in the majority accepting the unusual trend. Members of this group realize that – non-confirming behaviors are rewarding (Bellezza, Gino, and Keinan 2014) – i.e., wearing clothing that was once despised can actually lead to others seeing them as being trendy, authentic, and cool. At this stage abnormal becomes the new normal. And so, the fourth reason behind the growth of ugly fashion can be credited to the change in social norms.

Social norms determine how people are supposed to behave or not behave in the world (Cialdini, Kallgren, and Reno 1991; Cialdini et al. 2006; Cialdini and Goldstein 2004; Cialdini and Trost 1998). Social norms change when society’s perception of a certain subject matter changes (Cialdini et al. 2006). For example, in the first half of the nineteenth century, the social norm was for women to wear tightly-laced corsets, dresses, and other clothing items that displayed high levels of femininity (Crane 1999). Women who broke this norm by wearing masculine garments, e.g., trousers or pant suits were labeled as defiant and arrogant (Crane 1999). However, in the second half of the nineteenth century as a result of the feminist and women empowerment movements, the attires that were once forbidden is no longer rejected by society. Today trousers/pants are a staple piece in a woman’s closet. People are hoping for the same change to take place concerning ugly fashion. People believe that if ugly trends be-

come popular or ubiquitous, then what was once perceived as abnormal becomes the social norm.

“Aesthetics be damned. Discerning eyes will adjust to the aesthetics; they always do. It takes time and patience, but now shredded jeans look normal and so do oversize silhouettes” – Robin Givhan, July 19th, 2018, The Washington Post

“There is something organic about ugly fashion. It springs up, like weeds growing in sidewalk cracks, and spreads outward until it’s consumed the entire parking lot—or, at least, until it begins to look less ugly, until our eyes become used to the eyesores” – Katy Kelleher October 30th, 2018, The Paris Review

FINAL THOUGHTS

The current research identifies the factors that influence people’s approval of ugly fashion trends. As noted in the beginning of this paper, philosophers believe that ugly negates beauty and that ugly exists only because beauty does. The collective action and eyes of the beholder groups aim to go against these historical and cultural notions of beauty in order to bring about diversity, equality, and inclusion within society. The motivation of the collective action and eyes of the beholder groups are intrinsic because they chose to embrace ugly fashion despite being prone to receiving negative responses/judgements from society. The motivation of the members of the other two groups – i.e. people who follow the herd and adhere to norms – are extrinsic because the intentions for adopting ugly fashion trends is clearly based on social acceptance.

In conclusion, yes! once ugly fashion becomes normalized, it is not likely to be viewed as pathbreaking as it once was. It can also be posited that ugly becomes the new beautiful. What happens next? Well, something that is deviant from the norm will be identified as the new unacceptable and the process of turning the ugly duckling into a beautiful swan is repeated.

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The “Supportive Consumption” Movement in Japan: Consumers’ Age and Distance of Beneficiaries in Ethical Consumption

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INTRODUCTION

The COVID-19 pandemic has impacted consumer behaviors enormously (Kirk and Rifkin 2020; Sheth 2020). One of the emerging movements observed in Japan is a form of ethical consumption called *ouen shohi* (supportive consumption; SC hereafter), which is defined as “consumption activities in which products and other items are purchased to support people, companies, and communities” (Kobayashi 2020). The SC movement has its origins in the 2011 Tohoku earthquake and tsunami crisis (Hidaka, Stanislawski, Mizukoshi, and Ohira 2021; Mizukoshi and Hidaka 2021). The term SC became so popular after the pandemic that it was selected as one of the Nikkei Marketing Journal (NMJ)’s hit products/trends of 2020 (Nikkei Marketing Journal 2020a, 2020b). Through the diffusion process of the word, the term SC has changed to mean helping those nearby in addition to others far away (e.g., the victims of the earthquake and tsunami), according to the text analysis of newspaper coverage of SC (Matsui, Masuda, and Tsumura 2020). Therefore, the term, which was coined approximately ten years ago, now implies support to both those near and far: some support restaurants and shops in their neighborhood by purchasing their take-out dishes and merchandise; NMJ reported that “the sentiment of not wanting to see the loss of a safe, favorite place to go has enlivened ‘supportive consumption’” (Nikkei Marketing Journal 2020b). Others support farmers and fishermen/women in distant places by purchasing their produce, as reported by NMJ: “supporting producers and others hit by the new Coronavirus” (Nikkei Marketing Journal 2020a).

The present study involves an exploratory survey regarding this relatively new ethical consumption phenomenon and contributes to the theories on whether consumers support those far away or near them. Previous studies have revealed various factors that motivate consumers to help distant others (Cavanaugh, Bettman, and Luce 2015; Wang, Kirmani, and Li 2021; Winterich, Mittal, and Ross 2009). We expect to provide novel evidence to update the discussion on beneficiaries’ distance. We surveyed consumers’ experience with SC and conducted quantitative analysis as well as interpretive and automated textual analysis.

We do not position this context as unique in Japanese or Eastern cultures; rather, this helping movement can be recognized as a representation of both Eastern and Western cultures, because Japanese society is in the middle of a transition to Westernization. It was said that giving behavior in Japan was less active compared to that in other developed countries (Ouchi 2004). However, the major natural disasters constantly experienced in Japan over the last two decades resulted in institutional development in the nonprofit sector, and there is currently a growing momentum to help others in various ways (Okuyama and Yamauchi 2015). For example, young people in Japan have little experience in consuming ethically compared to the elderly (Consumer Affairs Agency 2020), but they are actively involved in SC (NHK 2021).

Therefore, this exploratory study sheds light on the age of ethical consumers. One of the current study’s findings is supported by previous research: the younger generation are more self-interested, and the older generation are more altruistic (Gilg, Barr, and Ford 2005; Granzin and Olsen 1991; Roberts 1996). More importantly, the analysis shows that the former tend to support those in their immedi-

ate neighborhood, and the latter also grow to help those in distant places. The study also suggests that older ethical consumers have a broader perspective than do younger consumers. The results of our analysis contribute to the theory of ethical consumption and the distance of beneficiaries by showing the dimensional importance of the age of consumers.

Distance of Beneficiaries and Ethical Consumers’ Age

Previous studies have demonstrated that consumers are more inclined to help those nearby than those far away (Cavanaugh et al. 2015; Wang et al. 2021; Winterich et al. 2009). However, various factors motivate them to support distant others, such as feminine and moral identity (Winterich et al. 2009), a feeling of love (Cavanaugh et al. 2015), and residential mobility (Wang et al. 2021). CRM researchers are also interested in the impact of the geographic proximity of the cause on consumers’ attitudes toward CRM firms, and the findings reveal that consumers think the local causes are more important than the national and global causes (Grau and Folse 2007; Varadarajan and Menon 1988).

The context on which we focus suggests that age can also be a booster of supportive behavior toward distant others. The influence of the factor of consumers’ age has not always received sufficient attention in studies concerning ethical consumption, while there has been a fair amount of research on organizational age and their intention to give to charity (Bekkers and Wiepking 2011). Some exceptional studies show that the age of consumers explains differences in ethical consumption. Older generations are more likely to donate and prefer reusable products (Granzin and Olsen 1991), to buy somewhat more responsibly (Roberts 1996), and to be more committed environmentalists (Gilg et al. 2005) when compared to younger generations. Contrary to these findings, the research on volunteering shows that younger generations are more likely than older generations to perceive career benefits and a sense of accomplishment in volunteering (Briggs, Peterson, and Gregory 2009). However, this finding suggests that the younger generation are more self-interested than the older generation. In addition to these studies on ethical consumption, the meta-analyses of psychological studies reveal that the elderly are altruistic (Sparrow et al. 2021). However, much remains unclarified about the relationship between distance from the person being helped and the age of the supporter.

METHODOLOGY AND DATA

We conducted an explanatory questionnaire survey with consumers who had experienced SC, following which we carried out quantitative analysis and interpretive and automated textual analysis of the survey results. To understand the context better when designing the questionnaire, we scrutinized 120 newspaper articles on this topic by searching using the keyword *ouen shohi* (supportive consumption) in Nikkei Telecom between January 2011 and September 2020.

The dependent variable in the quantitative analysis was the motivation for SC. We adopted the SHIFT framework, which is a comprehensive framework for conceptualizing sustainable consumer behavior change (White, Habib, and Hardisty 2019). The acronym SHIFT reflects the five factors that encourage more sustainable

consumer behaviors: "Social influence," "Habit formation," "Individual self," "Feelings and cognition," and "Tangibility" (White et al. 2019). A total of 19 items from the five factors were replaced with questions that fit the context of SC based on our review of the newspaper articles (see Table 1). For example, the item Self Efficacy, which is one of the important factors when it comes to doing good (Västfjäll, Slovic, Mayorga, and Peters 2014), is defined as "beliefs that the individual can engage in the required action and that carrying out the behavior will have the intended impact" (White et al. 2019, p. 28). It was replaced with the statement "Because I thought that my supportive consumption would definitely help those in need." The respondents were asked to specify the extent to which they agreed with each statement on a five-point Likert scale.

Through the exploratory analysis, attitude toward SC and age were ultimately selected as independent variables. We used the Helping Attitude Scale (HAS) to assess the attitude; this is a 20-item measure of broader helping attitudes regarding helping beliefs, feelings, and behaviors (Nickell 1998). These questions are also accompanied by a five-point Likert scale. Following the previous study that used HAS (Kwak and Kwon 2016), we divided the respondents into two groups by median value of the score. We labeled them as High or Low, respectively. The respondents were also categorized, based on their age, into three groups to show the big picture of the influence of age on SC: Young for those in their 30s or younger, Middle for those in their 40s to 50s, and Old for those in their 60s or older.

This survey was conducted online in February 2021 among people aged 15 and older residing in Japan. From a panel of 4,000 consumers, equally allocated by gender and age, we obtained 1,235 samples who had experienced at least one SC and agreed to join the survey. We then excluded invalid respondents such as those who selected the same options for all the questions, including reverse score items, and those who gave unmeaningful answers to the free-answer question. The final screened data set comprised 777 samples (mean age of 42.7 years, 406 females and 371 males).

In addition to the multiple-choice questions on the SHIFT and the HAS scales, the free-answer question "What is your most memorable story about SC?" was also asked.

FINDINGS

Quantitative Analysis: Motivation for SC

With regard to analysis, the applicable items from the 19 SHIFT items were categorized as altruistic or self-interest motivations (Table 1). The former were "Self-concept" (S9), "Self-consistency" (S10), and "Self-efficiency" (S12), while the latter were "Social desirability" (S3), "Incentive" (S7), "Self-interest" (S11), "Negative emotion" (S13), "Positive emotion" (S14), and "Framing" (S17).

We first conducted ANOVA to identify differences in the motivation for SC between the High and Low HAS score groups. The significant motivation was altruistic. The altruistic variable ($\alpha=.628$) was more significant in the High group ($M_{\text{high}}=3.54$ $SD=.648$) than in the Low group ($M_{\text{low}}=3.02$ $SD=.706$; $F(1, 775)=114.216$, $p<.001$). However, the self-interest variable ($\alpha=.757$) was not more significant for the High group ($M_{\text{high}}=2.86$ $SD=.762$) than for the Low group ($M_{\text{low}}=2.79$ $SD=.686$; $F(1, 775)=1.656$, $n.s.$). These results are natural because High is altruistic enough to have a strong motivation for SC.

Second, we conducted ANOVA to identify differences in the motivation for SC by age group. In the case of altruistic motives, the younger generation ($M_{\text{young}}=3.22$ $SD=.841$) were characterized by lower scores than the older generation ($M_{\text{middle}}=3.28$ $SD=.647$; $M_{\text{old}}=3.42$ $SD=.539$; $F(2, 774)=2.720$, $p=.067$). On the other hand, for self-interest motives, the younger generation ($M_{\text{young}}=2.99$ $SD=.739$)

scored higher than the older generation ($M_{\text{middle}}=2.69$ $SD=.705$; $M_{\text{old}}=2.73$ $SD=.618$; $F(2, 774)=16.566$, $p<.001$).

The analysis showed that the younger generation had a stronger self-interest motivation than the older generation. They were more likely to engage in SC because of the "Social desirability" (S3) to impress others and show that they are good people ($F(2, 771)=9.053$, $p<.001$). They also engaged in SC because of "Incentives" (S7), such as rewards, discounts, and prizes ($F(2, 771)=25.395$, $p<.001$). It was also evident that they performed SC because they felt "Negative emotion" (S13), such as guilt for not providing support ($F(2, 771)=4.531$, $p=.011$). Furthermore, they performed SC due to "Framing" (S17), when they learnt that, if they did not offer support, they would not be able to obtain that product or service in the future ($F(2, 771)=5.510$, $p=.004$). These were all self-interest motives, with higher results for the younger generation than for the older generation.

The younger generation also engaged in SC for reasons other than self-interest and altruism. "Social identities" (S2) was a factor that prompted the respondents to engage in SC when they knew their close friends and others did as well ($F(2, 771)=6.973$, $p=.001$). "Labeling" (S16) was also a reason for SC when the label "supportive consumption" was used in the description of the product ($F(2, 771)=6.242$, $p=.002$). Younger consumers responded more to the influence of others and the label SC than did older generations.

TABLE 1

Motivation	SHIFT	The Results of ANOVA						Main Effect		
		HAS-Low			HAS-High			HAS	age groups	interaction
		Young	Middle	Old	Young	Middle	Old			
S1 Social norms	S:Social Influence	2.69	2.76	3.03	3.19	3.23	3.33	26.882 ***	2.334	0.375
<i>Because there is an atmosphere that one should support others through supportive consumption.</i>		(0.96)	(0.91)	(0.81)	(0.98)	(1.00)	(0.84)			
S2 Social identities	S:Social Influence	2.82	2.56	2.64	3.08	2.77	2.63	2.933 **	6.973 ***	0.578
<i>Because close friends and others around me do supportive consumption.</i>		(1.04)	(1.02)	(0.99)	(1.14)	(1.08)	(0.99)			
S3 Social desirability : self-interest	S:Social Influence	2.61	2.30	2.42	2.56	2.17	2.19	2.178	9.053 ***	0.235
<i>To impress others that I am a good person who does supportive consumption.</i>		(1.12)	(1.03)	(1.05)	(1.23)	(1.07)	(0.78)			
S4 Implementation intentions	H:Habit Formation	3.07	3.35	3.14	3.85	3.92	3.76	75.153 ***	3.784 **	1.354
<i>Because I felt it was worthwhile to do supportive consumption.</i>		(1.02)	(0.88)	(0.83)	(0.89)	(0.71)	(0.80)			
S5 Making it easy	H:Habit Formation	3.41	3.44	3.47	4.05	3.98	3.84	52.101 ***	0.261	1.032
<i>It was an easy way to do supportive consumption.</i>		(0.99)	(0.94)	(0.74)	(0.61)	(0.75)	(0.63)			
S6 Prompts	H:Habit Formation	3.03	3.20	3.25	3.65	3.63	3.59	31.627 ***	0.568	1.230
<i>Because I was exposed to information on how to do supportive consumption.</i>		(1.02)	(1.00)	(0.77)	(0.98)	(0.89)	(0.85)			
S7 Incentives : self-interest	H:Habit Formation	3.12	2.77	2.56	3.24	2.51	2.44	0.772	25.395 ***	2.467
<i>Because I received rewards, discounts, and prizes for my supportive consumption.</i>		(1.13)	(1.09)	(0.81)	(1.13)	(1.17)	(0.98)			
S8 Feedback	H:Habit Formation	2.94	2.78	2.94	3.20	3.12	3.14	9.956 ***	1.279	0.226
<i>Because I was able to get information about the positive outcome of my supportive consumption.</i>		(0.97)	(0.87)	(0.67)	(1.11)	(1.10)	(0.74)			
S9 Self-concept : altruistic	I:Individual Self	2.89	2.75	3.00	3.27	3.01	3.08	7.769 ***	3.421 *	0.916
<i>Because I want to be a good person for society through supportive consumption.</i>		(1.03)	(0.95)	(0.83)	(1.04)	(1.06)	(0.79)			
S10 Self-consistency :altruistic	I:Individual Self	2.93	3.03	3.31	3.64	3.64	3.78	58.391 ***	2.953	0.715
<i>Because I have been helping people in the past and I want to support them again this time.</i>		(1.05)	(0.80)	(0.79)	(0.97)	(0.89)	(0.61)			
S11 Self-interest : self-interest	I:Individual Self	3.17	3.08	3.19	3.61	3.16	3.30	5.173 **	5.439 **	2.671
<i>Because there were benefits to me from supporting consumption (such as being able to buy good products at a lower price, or receiving a donation tax credit).</i>		(1.10)	(0.99)	(0.89)	(1.08)	(1.11)	(0.98)			
S12 Self-efficacy : altruistic	I:Individual Self	3.11	3.34	3.25	3.74	3.96	3.79	65.853 ***	5.778 **	0.089
<i>Because I thought that my supportive consumption would definitely help those in need.</i>		(1.06)	(0.77)	(0.65)	(0.93)	(0.67)	(0.65)			
S13 Negative emotions : self-intere	F:Feelings and Cognition	2.74	2.50	2.69	2.89	2.64	2.65	0.862	4.531 *	0.338
<i>Because I feel guilty that I can't help those in need if I don't do supportive consumption.</i>		(1.04)	(0.99)	(0.95)	(1.20)	(1.09)	(0.77)			
S14 Positive emotions : self-intere	F:Feelings and Cognition	2.82	2.67	2.97	3.31	2.96	3.00	9.641 ***	5.522 **	2.146
<i>Because I feel the joy and pride that comes with supportive consumption.</i>		(1.01)	(0.93)	(0.74)	(1.07)	(1.05)	(0.95)			
S15 Information, learning, and knowledge	F:Feelings and Cognition	3.14	3.14	3.39	3.69	3.79	3.75	41.104 ***	0.945	0.888
<i>Because I learned from media reports and other sources that there are people who can be helped by supportive consumption.</i>		(1.02)	(0.95)	(0.87)	(0.98)	(0.85)	(0.76)			
S16 Labeling	F:Feelings and Cognition	2.85	2.63	2.89	3.32	2.97	2.97	10.750 ***	6.242 **	1.294
<i>Because the term "supportive consumption" was used in the description of the items to be purchased and the project to which they were donating.</i>		(1.06)	(0.95)	(0.75)	(1.11)	(1.14)	(0.93)			
S17 Framing : self-interest	F:Feelings and Cognition	2.93	2.79	2.81	3.10	2.73	2.65	0.023	5.510 **	1.360
<i>Because I learned that if I did not support consumption, I would not be able to obtain that product, service, etc. in the future.</i>		(1.12)	(0.95)	(0.86)	(1.19)	(1.13)	(1.02)			
S18 Matching temporal focus	T:Tangibility	3.09	3.21	3.33	3.75	3.79	3.71	49.760 ***	0.958	0.929
<i>Because I thought that by supporting consumption, society would be better off in the future than it is today.</i>		(1.00)	(0.85)	(0.72)	(0.94)	(0.87)	(0.58)			
S19 Concrete communications	T:Tangibility	2.99	2.84	2.97	3.36	3.14	3.17	10.893 ***	2.795	0.257
<i>Because there was a concrete explanation of the benefits of supportive consumption to me and to others.</i>		(1.05)	(0.91)	(0.65)	(1.08)	(1.10)	(0.93)			

Upper section: average, lower section: standard deviation
 n=777 *p<.05 **p<.01 ***p<.001

Interpretive and Automated Text Analysis: Stories of SC

In order to assess the answers to the free-answer question regarding stories of SC, we applied a mixed method. We first conducted interpretive analysis; three co-authors from different genders and generations coded, interpreted, and discussed the text data

(Belk, Fischer, and Kozinets, 2013). Automated text analysis was then applied with the KH Coder – the most widely used freeware for morphological analysis and text mining of the Japanese language (Higuchi 2014).

The top ten most frequent words in the answers were “purchase” (268 times), “think” (144 times), “buy” (136 times), “support” (116 times), “Corona” (105 times), “restaurant” (90 times), “supportive consumption” (85 times), “store” (84 times), “product” (81 times), and “vegetable” (81 times). These major keywords reflect the characteristics of the SC movement.

We conducted correspondence analysis to understand how the different categories of respondents based on HAS and age answered the question. For this purpose, we created six categories of respondents by combining the two categories of HAS (High and Low) and the three age categories (Young, Middle, and Old). Each of the six categories was labeled as in Figure 1: for example, L_Y refers to the Young with a Low HAS score. The keywords closest to each group were their expressions in their responses.

The analysis showed that the young generation tend to support relatively local businesses, while the older generation tend to help those in the distance.

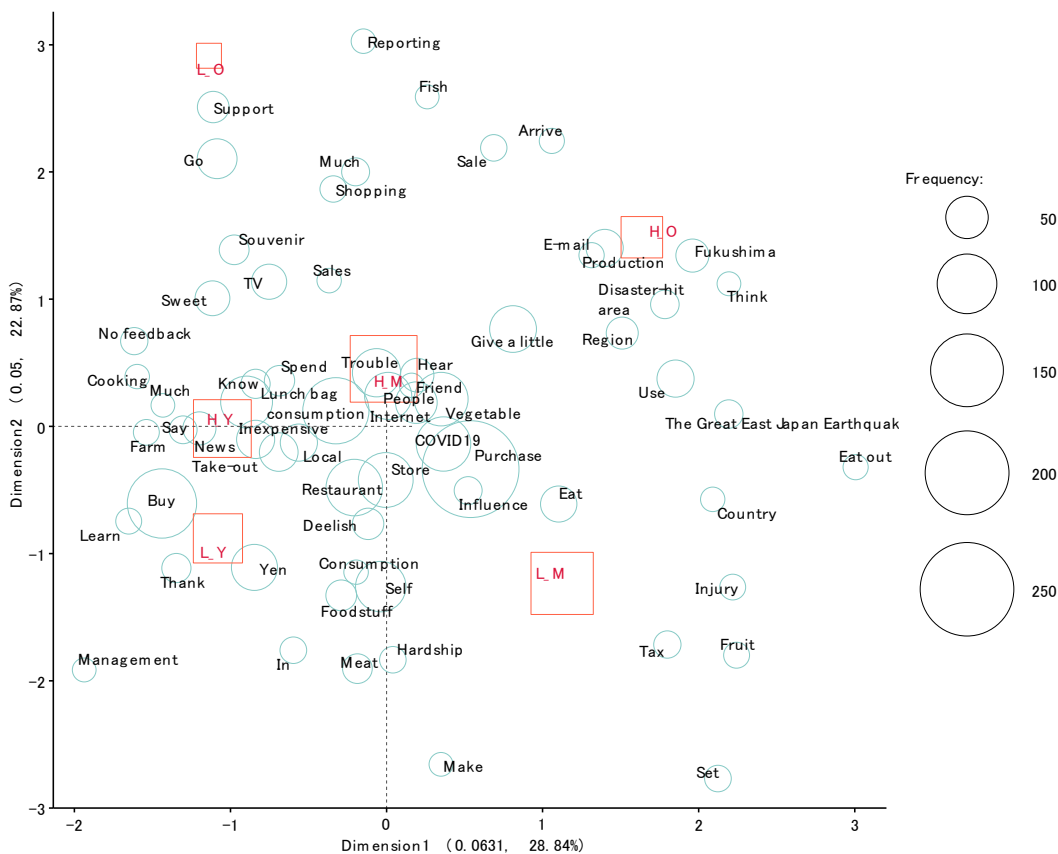
The keywords “Take-out,” “Lunch bag,” “Local,” and “Friend” were positioned around the area where H_Y, H_M, and L_Y were located (Figure 1). These positionings suggested that the younger generation tend to support local business and their acquaintances. One of the L_Y answered that “A person I know runs a restaurant business, so I bought a lunch box to help him/her as much as possible.” Similar answers were found in the young and middle age groups: “I heard that a local Chinese restaurant was in danger of closing, so I continued to buy dinner for one person from the early days of their take-out service” (H_Y), and “My favorite restaurant was hit hard by the coronavirus and was on the verge of extinction, so I ate the most expensive course meal out of a desire to support the

restaurant.” (H_M). Some of these consumers, however, also supported distant others. For example, one of the H_M answered that “Because I learned that the producers of the foods I usually buy were affected by the earthquake and typhoon. I bought seafood and fruits several times.”

On the other hand, the keywords “Disaster-hit area,” “Fukushima,” “The Great East Japan Earthquake,” and “Region” were positioned around the area where H_O was located (Figure 1). The results show two different and overlapping perspectives shared among the older generation. First, the first three keywords suggested that they have their gaze on victims who are far away rather than those who are closer to them. For example, one of the H_O respondents stated that “After the Great East Japan Earthquake, harmful rumors spread about Fukushima due to radiation leaks, so I bought Fukushima produce every month. The inspection results of the agricultural products were fed back to me.” Second, the contrast whereby “Region” was positioned around the older generation and “Local” was positioned nearby the younger generation suggested that the older respondents have a broader perspective and worldview than do the younger ones. One of the H_O group answered, “When I saw a news report that apples in Aomori Prefecture were being left unharvested because there were not enough buyers, I wanted to support them as much as possible, so I informed everyone in the community association, and we made a joint purchase. I became friends with the local people in the association, and we decided to purchase apples every year. I think it helped a little.” This respondent works with others in his local communities to support those in the distance. Such a broad perspective and scope of action, which includes the distant and the near, is difficult to find among the younger generations.

FIGURE 1

Correspondence Analysis of Free-Response Question: Your Story of SC



DISCUSSION

The results suggest that another dimension should be incorporated into the theoretical framework on ethical consumption and beneficiaries' distance: age. To summarize the above findings, the younger generation consumers support from a self-interested motive perspective. They tend to support those in their immediate neighborhood, while the older generation help those in distant places as well as those nearby. The findings further suggest that older ethical consumers have a broader perspective on society than do their younger counterparts. These findings on SC contribute to the theoretical development of consumers' charitable behaviors and CRM. The extraordinary situations created by COVID-19 overturned the assumption of the extant research; as shown in our case, not only beneficiaries but also supporters became victims, being, for example, deprived of their freedom of movement, and so charitable behaviors in such situations should be treated as a multifaceted phenomenon (Nowakowska 2021).

Because the SC movement in Japan is a relatively new phenomenon, we employed the explanatory approach to gain first-hand insights into the various aspects of the movement using quantitative and text-analysis methods. However, this study has three limitations to overcome. First, in our qualitative analysis, we showed only a correlation of the motivation for SC between the High and Low HAS score groups and age groups, and we need to illustrate their causality. Second, we adopted only three age categories to gauge the big picture of age differences, and we need to conduct our analysis using ages as a continuous variable. Third, although we treated this single context as a representation of both Eastern and Western cultures, we need to observe other contexts to achieve a comparative analysis, such as differences between the East and the West. Based on such extended observation, further theorization on the relationship between ethical consumers and the recipient of their support will be needed.

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Consumer Noncompliance in Compliance-Dependent Services

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INTRODUCTION

Service researchers and practitioners often face the challenge of gaining consumer compliance necessary for the provider to complete the service delivery process and for the customer to achieve their goal (e.g., become debt free, improve physical fitness, etc.). While consumers may recognize the value of compliance (Bowman and Seetharaman 2004), noncompliance with a recommended protocol can be more likely than compliance for certain long-term services (Celsi et al. 2017), particularly for compliance-dependent services (CDS). CDS are long-term services in which the customer participates in co-creation during the face-to-face provider-customer exchange and must continue to carry out their role for an extended amount of time once away from the provider to realize the desired outcome (e.g., weight loss or completing undergraduate education) (Dellande and Nyer 2013). However, even in life-and-death situations, noncompliance may be as high as 80% (Hausman 2001).

Noncompliance to recommended protocols in certain CDS may lead to consequential, less-than-ideal outcomes (e.g., a poor running automobile), whereas noncompliance in other types of CDS (e.g., substance abuse) may lead to detrimental, harmful outcomes (Trujillo Torres and Dellande 2015). The present investigation focuses on service provisions with noncompliant outcomes that are consequential but not detrimental, such as in the case of auto maintenance.

Consideration of how consumers neutralize their noncompliant behavior advances our understanding of why consumers fail to follow the recommended protocol prescribed by the service provider. Specifically, the present research details 14 key neutralization (i.e., rationalization) themes that arose from a qualitative study of non-compliant participants, which contrasts with extant research that has primarily examined noncompliance as an outcome of the provider's characteristics or attributes (e.g., provider expertise or attitudinal homophily) (Dellande, Gilly, and Graham 2004). The insights gained from this investigation may be instructive as researchers and practitioners design more effective service delivery processes for CDS.

Neutralization Theory

The theoretical framework used in this investigation into non-compliance stems from neutralization theory, which provides a conceptualization of the way individuals rationalize or justify their behavior. Neutralization theory has been applied to the consumer behavior context (Brunner 2014; Gruber and Schlegelmilch 2014; McGregor 2008; Sharma 2020), whereby researchers have considered neutralization of fraudulent consumer behavior for liberal return policies (Rosenbaum and Kuntze 2003) and for personality-based antecedents for consumer misbehavior (Harris and Dumas 2009), including consumer alienation, Machiavellianism, sensation seeking, aggressiveness, and self-esteem (Daunt and Harris 2011).

We find neutralization theory to be a useful framework for understanding consumer noncompliance behavior, as noncompliance can be reasonably classified as a form of misbehavior (i.e., not fol-

lowing a recommended protocol). The present research takes the perspective of the consumer to investigate the ways individuals neutralize their noncompliant behavior in the context of a consequential CDS.

METHODOLOGY

Through qualitative methods, we elicit the rationale—as conceptualized through the framework of neutralization theory—consumers give for their noncompliance. The consequential (but not detrimental) example of auto maintenance is a fitting context that provides a domain for an investigation into noncompliance, as the use of a vehicle is a wide-spread practice throughout the world, yet many individuals do not follow a recommended auto maintenance protocol (e.g., regularly rotating tires, changing oil and filter, etc.) (Malaj 2016). The Pew Research Center found that 89% of Italians, 88% of Americans, and 83% of South Koreans own at least one car (Poushter 2015). Given the near-ubiquitous use of personal vehicles for transportation purposes in many countries, auto maintenance is an applicable and practical CDS for which to explore consumer non-compliance.

Participants and Methods

A qualitative instrument was distributed through Amazon's Mechanical Turk (MTurk); women comprised roughly 40% of the 43 participants ($M_{age}=25-34$, $M_{income}=\$26,501-\$65,300$, $M_{price\ of\ daily\ car}=\$0-\$10,000$). The qualification for participating in the study was that the respondent owns an automobile but does not follow a regular auto maintenance routine (examples of auto maintenance protocols were given, such as regularly checking tire pressure). We used a projective technique found in past consumer behavior research (Marshall and Rossman 2014), as the context represented instances in which consumers may have difficulty expressing their feelings (e.g., in the case of noncompliance) (Hofstede et al. 2007). Two scenarios were administered: First, the participants were shown an image of a woman standing next to a broken-down car and were asked to construct a story based on the image provided. Next, the participants were given a secondary projective scenario, without an image, based on the description of a man who needed to get to work but whose car is experiencing mechanical issues. Participants were asked to construct a story for both scenarios. Justification for the choice of the stimuli comes from the desire, within-subject, to provide both visual and written projective scenarios, in addition to including both male and female stimuli (the inclusion of which, explored later, in itself resulted in a neutralization theme). Respondents were required to write at length (over 1,000 characters).

Following the recommendation for thematic analysis (Colaizzi 1978), special attention was given to the rationale behind reasons for noncompliance or the projected context onto the hypothetical situations that led to noncompliance. Ultimately, 14 major themes emerged from the projected descriptions from the 43 participants (see Table).

Table

The 14 Themes of Neutralization of Noncompliant Behavior

Code Number and Title	Description	Examples
1. Lack of financial resources	Noncompliance behavior due to lack of money to engage in prescribed regimen	1. "She didn't have a lot of money to take care of everything properly" (Participant 1) 2. "She can't afford any extra expenses right now..." (Participant 16) 3. "...she doesn't have enough funds at the moment..." (Participant 7)
2. Bad timing	Observation that noncompliance consequences occur at inconvenient times	1. "...as she was late for a meeting." (Participant 41) 2. "She will be late for her interview." (Participant 40) 3. "Sally knew she would be late for her big presentation." (Participant 15)
3. Possible prevention	There is personal agency in taking responsibility for the consequence	1. "If you do not pay attention to vehicle maintenance your vehicle is at higher risk for major faults developing in the engine and other components." (Participant 25) 2. "This is a type of situation that could have been easily prevented if the women had done regular inspections and service for her Car [sic]..." (Participant 30) 3. "All of this could have been avoided had Becky learned some basic car knowledge and upkeep." (Participant 34)
4. Random event	Regardless of maintenance, the consequence would have occurred	1. "It's not possible to know whether routine maintenance would have helped her avoid this situation." (Participant 18) 2. "...most likely the maintenance wouldn't have found this problem anyway." (Participant 42) 3. "However, it is also possible that some other issue has occurred that may have been a breakdown not caught by preventative maintenance." (Participant 23)
5. Transportation alternatives	Alternatives, such as a taxi, friend, or ride-share service, are readily available	1. "She called her sister to pick her up." (Participant 4) 2. "Then he will have to take a taxi to school..." (Participant 5) 3. "...so I picture him getting an Uber..." (Participant 6)
6. Available information	Information from Google or YouTube are easily obtainable	1. "He was able to check the transmission fluid after watching a youtube [sic] video..." (Participant 22) 2. "...Thomas looks up 'car won't start' videos on Youtube..." (Participant 33) 3. "...does a google search for what causes a car to not start." (Participant 43)
7. Impede quality of life	Noncompliance consequences significantly disrupt life	1. "Becky removed the radiator cap only to sustain severe burns to her left hand." (Participant 34) 2. "He is going to have to cancel some plans later that day and maybe even later that week if he has no car." (Participant 6) 3. "He still lives at home [and] has some stress issues..." (Participant 34)
8. Reliance on insurance companies	Companies, such as AAA, are always there to help	1. "...she realized that she had AAA...[and] dialed the number that was on the card." (Participant 4) 2. "...she called AAA and have [sic] them details of her location." (Participant 14) 3. "...she then called AAA (thank goodness she renewed that membership!) to tow her car" (Participant 21)
9. Gendered asymmetric expectations	Different compliance behavior and levels of knowledge based on gender	1. "...I know women are not that savvy in car maintenance..." (Participant 2) 2. "...she has no idea what to do, being a woman and all." (Participant 37) 3. "This would most likely be a man because she thinks they are the most knowledgeable about cars." (Participant 39)
10. Resolution of changed behavior	A promise to comply to the regimen in the future	1. "...she wouldn't let it happen again." (Participant 8) 2. "Tom vows to never ignore any warning lights again..." (Participant 21) 3. "Thomas learned a lesson the hard way and will absolutely pay attention to the car's check engine light in the future." (Participant 14)
11. Lack of knowledge	Noncompliance due to not knowing how to perform the prescribed regimen	1. "...he realizes that he really doesn't understand any of the components or even know what to look for." (Participant 19) 2. "Thomas can pretend that he can try to find the culprit under the hood, but he really has no idea what to do." (Participant 21) 3. "He doesn't have the first idea about cars at all." (Participant 40)
12. Financial damage	Noncompliance leading to costly consequences	1. "...she was looking at big repair bill [sic]." (Participant 26) 2. "The cost might exceed the value of the car." (Participant 28) 3. "He couldn't really afford this and was forced to move back with his parents." (Participant 34)
13. Emotional distress	Noncompliance leading to stress	1. "...was panicking thinking her car was on fire." (Participant 31) 2. "Feeling enraged, frustraed [sic] and yet utterly defeated..." (Participant 33) 3. At the shop she gets the bill and cries." (Participant 38)
14. Reliance on auto shop/mechanic	Auto shops or mechanics always available for help	1. "Next she needs to call her mechanic..." (Participant 43) 2. "...so he has to trust the mechanic and they might even rip him off and there's nothing that he can do." (Participant 6) 3. "...so he calls a mechanic to see if he can give him a jump..." (Participant 7)

As seen in the Table, each code is accompanied with an operationalization that provides the definitional requisite for the theme.

Results and Discussion

We propose 14 key themes through thematic analysis that differ from how noncompliance has previously been conceptualized in the literature. Through allowing the participants to write at length about different auto maintenance scenarios—and using neutralization theory as the basis for the analysis—major themes pervasive in the data were identified, capturing the most prevalent rationales for noncompliance. Below are the five (of the 14; see Table) most prominent themes from the analysis.

Possible Prevention. By and large, the most common theme in the writing samples were mentions that the hypothetical situations proposed could have been prevented. To note, these responses were from consumers who do *not* follow the recommended protocol for auto maintenance. Nonetheless, the majority of the respondents explained that auto maintenance works to prevent possible issues. There was a willingness to admit the need for maintenance, and yet the cognitive acknowledgement does not transfer into behavior. Thus, noncompliance does not stem from ignorance: If so, the respondents would likely not so readily admit that prevention is even a possibility. On the other hand, a small minority of respondents did feel this way. For example, Theme 4 (random event) stands in direct opposition to possible prevention. As Participant 18 explains, “It’s not possible to know whether routine maintenance would have helped her avoid this situation.” This reluctance to connect maintenance and successful outcomes may be the most obvious explanation for noncompliance. A consumer who does not believe that the prescribed protocol would benefit them will naturally avoid completing the regimen. This, however, does not capture what the data reveal. Instead, noncompliant consumers are, on average, not unaware of the potential benefits of the protocol. Rather, they fail to comply despite knowing that an unfortunate event may result from their inaction. Some consumers, however, neutralize their noncompliant behavior by suggesting that compliance does not lead to goal fulfillment as a method of justification; others use different neutralization techniques explored below.

Transportation Alternatives. With the proliferation of rideshare companies such as Uber or Lyft (Dudley, Banister, and Schwanen 2017), what appears is a general feeling that this alternative provides an easy and accessible option that removes the necessity for auto maintenance. The presence of readily available alternatives provides an example of another neutralization technique that consumers use. There is always a backup plan and therefore compliance is not necessary. In an era without these services, one can surmise that there may have been a greater emphasis placed on maintaining one’s car, as that car represented the only readily available option for transportation other than public transportation. Now, with access to transportation through one’s smartphone, auto trouble simply could mean deferring to rideshare companies to get around. More broadly speaking, noncompliance may be a viable option for consumers if there exists an alternative that is readily available. In other cases of readily available alternatives, gastric bypass surgery may stand in as an easier alternative for weight loss, and e-cigarettes may be an alternative for smoking cessation. These alternatives are not without drawbacks: Taking an Uber may be expensive, weight loss surgery has many health complications (Podnos et al. 2003), and e-cigarettes still may be harmful (King et al. 2020). However, the existence of an alternative removes the absolute necessity for protocol adherence and instead yields opportunities for noncompliance.

Lack of Knowledge. In past compliance research, it has been demonstrated that an important determinant for compliance is the

service provider’s knowledge and expertise (Dellande et al. 2004). However, compliance may also depend on the consumer’s level of knowledge. One rationale for noncompliance is that the consumer did not know what to do, who to go to, or when to go for help. While a knowledgeable consumer may know when a car gives off an indication (through sounds, on-screen computers, etc.) that the car needs maintenance or inspection by a professional, an unknowledgeable consumer may simply not be able to recognize these signals. This may lead to noncompliance out of ignorance. It is important to note, however, that this is not the same as not knowing that compliance can lead to prevention. Instead, this theme specifically describes when consumers do not know the recommended protocol or when the protocol should be followed. These consumers, on the other hand, may still acknowledge that compliance can be a preventative measure. In this context, an ignorance neutralization is used to justify noncompliance.

Financial Damage and Emotional Distress. A major result of noncompliance, according to the respondents, is the financial damages incurred from the cost of repairing the car. Some note that these financial damages may exceed the cost of following the protocol (i.e., regular maintenance). It is interesting to note that financial damages were only one of the reported consequences of noncompliance. The other was emotional distress. These together were the expected outcome of not following the protocol. For the consumer, noncompliance could result in a large bill or increased stress. Likewise, these constructs are not mutually exclusive. It was noted that stress can arise from financial damages but also that financial damage could arise from stress; nevertheless, noncompliance prevailed.

Asymmetric Gendered Expectations. The most surprising theme that came from the data was misogynistic comments that peppered the writing samples. Some writing samples expounded women were, in some sense, given a pass for noncompliance in auto maintenance, citing different gendered expectations between men and women for the assumed knowledge or interest in cars. There is an equal need for transportation for men and women. In this sense, both men and women should have equal need in maintaining a working car. However, some respondents discounted the fact that women can also follow a recommended protocol of auto maintenance. Other contexts of compliance may also be influenced by these gendered expectations. For an example in which men may get a pass for noncompliance is in the context of weight loss, in which there is more societal pressure for women to be slim (Stice, Trost, and Chase 2003). These societal expectations do not obfuscate the fact that men still incur many health complications from being overweight, including liver or heart disease. As such, one neutralization technique is to absolve one’s responsibility to comply by pointing out supposed gender differences.

General Discussion and Limitations

We investigated how consumers neutralize their own noncompliant behavior in the context of a CDS (auto maintenance). Five primary ways unique to how consumers neutralize noncompliance were identified: (1) *transportation alternatives*—participants state that there is always a backup plan and therefore compliance is not necessary, (2) *possible prevention*—participants admitted to the need for auto maintenance, and yet the acknowledgement does not lead to behavior, (3) *lack of knowledge*—such that the consumer did not know what to do, who to go to, or when to go for help, (4) *financial damage and emotional distress*—study participants noted that stress can arise from financial damages but also that financial damage could arise from stress; nevertheless, noncompliance prevailed, and (5) *asymmetric gendered expectations*—some participants indicated that women were given a pass for noncompliance in auto

maintenance, citing different gendered expectations between men and women.

Consideration of noncompliance from the perspective of the consumer allows both researchers and practitioners to move beyond the focus on provider characteristics (e.g., provider expertise or attitudinal homophily) (Dellande et al. 2004); instead, the service delivery process can address consumers' neutralization of noncompliance. Specifically, whereas past research may suggest that consumer compliance should be gained through increasing the level of expertise exhibited by the service providers (e.g., through employee education programs), our research findings offer alternative managerial implications, such as engaging in degendered marketing communications that emphasize the need for *all* consumers to, for instance, check their tire pressure (i.e., not just men). Furthermore, firms can acknowledge alternatives to their services but express the financial costs that are incurred from these alternatives (e.g., auto repair centers can emphasize the cost of using a ride-share service if one's car is malfunctioning).

One limitation of the study includes investigating only a single type of CDS. Future research could examine other contexts, such as smoking cessation, weight loss, education, or dental care. In addition, future research could investigate the stress consumers experience associated with being noncompliant, particularly due to resource constraints, like the time limitation of a manager or financial constraint of a low-wage worker. Yet still, the importance of material value may play a role in noncompliance. For example, the cost of a consumer's car may predict noncompliance, where someone who can afford a luxury car may not be as adversely impacted by noncompliance with the auto maintenance protocol, as they may have more than one functioning car. Alternatively, consumers with an expensive car may be more compliant given that the financial costs from noncompliance are higher for luxury cars.

This study is also limited by the lack of comprehensive psychometric measurements of the consumers to explore what personality attributes or characteristics are most associated with noncompliance. Indeed, perhaps certain personality traits can predict noncompliance, in which case, these personalities may benefit from alternatives to uninterrupted long-term compliance. As Jiang, Dellande, and Canniff (2020) determined, consumers can take a break from compliance and still be successful at goal completion. In fact, counterintuitively, service providers might plan for potential acts of noncompliance in their service delivery process. In sum, the findings of how consumers neutralize their noncompliant behavior in which the outcome of noncompliance is merely less than ideal, such as in automotive care, may prove useful to providers of CDS.

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Myth

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INTRODUCTION

Myths, symbols and signs embedded in modern life that naturalise hidden ideologies and implicit meanings that affect our thought and behaviour (Barthes 2009), entered the field of marketing and consumer research with Levy's (1981) inaugural paper. Myth today is an integral part of marketing theory and practice. Advertisers draw on myths to smooth over cultural contradictions and anxieties and make consumers feel better about their identities (Holt 2004). But, as Thompson (2004, p. 162) writes, "mythologies are not just for advertising anymore."

One could think of myth as a deeply held belief that is shared by a group of people (Levy 1981). Myths are often described as commonly told tales that hold a social group together (Hirschman 2000; Luedicke, Giesler, and Thompson 2010; Stern 1995). These stories (e.g. royals have blue blood) are passed down through millennia, inspiring writers and artists as versatile as Shakespeare and Walt Disney. As Stern (1995, p. 183) points out, myths "are as old as humanity, yet constantly renewed to fit contemporary life." Myths are central to all cultures across history, and are deeply embedded in the cultural DNA of the West (see, for example, Fry 2017). Consumers invoke myths as a response to the vast levels of disenchantment that saturate modern life (Brown, Kozinets, and Sherry 2003). Alongside cultural narratives and ideologies, myths also constitute an essential topic in CCT (Arnould and Thompson 2005). However, few attempts have been made to synthesise the stream of consumer research on marketplace mythology.

We begin with a brief review of previous research on marketplace mythology, highlighting the distinction between consumer myths and commercial mythmaking. The findings are presented around nine interrelated themes that were derived from 301 articles published in the *JCR*. We conclude with suggestions for future research on marketplace mythology in terms of brand storytelling, co-mythologisation, and the role of myth in the polarisation of consumer culture.

MARKETPLACE MYTHOLOGY

"Mythologies," Thompson (2004, p. 162) argues, "permeate consumer culture." They consist of universal archetypes and plot-lines that serve as metaphors for consumers to navigate between different ideological agendas. More precisely, Thompson (2004) draws on the natural health marketplace to illustrate the interrelationship between cultural mythologies, marketplace structures, and consumers' interpretive strategies. To make sense of the market offerings (e.g. alternative medicine, Hummer cars), Thompson (2004) found that consumers would often rely on metaphors, such as mythic constructions of nature vs. technology, that circulate in mass media and the marketplace (also Canniford and Shankar 2013).

From this perspective, marketplace mythology consists of communal beliefs that certain lifestyles are associated with higher levels of stress (Belk and Costa 1998), postmodern alienation (Firat and Venkatesh 1995), and disenchantment (Kozinets 2002). Marketplace mythology shaped by enterprises is largely the marketer's attempt to tap into consumer beliefs. For example, Thompson (2004) highlights the myth of humanity's fall from grace, as represented in the tale of Adam and Eve, and its enduring influence on Western cultural

beliefs. Natural health marketplace mythology, Thompson (2004) points out, draws from this archetypal cultural narrative to distinguish itself from mainstream science medicine.

Moreover, the same marketplace mythology may generate different metaphoric alignments serving conflicting ideological agendas, which leads to mythological instabilities and polarisation of consumer culture (Södergren 2022). In other words, ideological conflict can arise between different mythic formations (Luedicke, Giesler, and Thompson 2010). As an example, Thompson (2004) illustrates ideological conflict within the natural healthcare mythology, which, on the one hand, is based on the Romantic revenge-of-nature trope; and, on the other hand, a Gnostic perspective that science and technology are divine tools that enable humanity to attain her rightful dominion over nature. In today's consumer culture, such polarisation ranges from topics including attitudes towards electric scooters (Choron and Sakran 2019), food diets (Östberg 2003), and plastic surgery (Chalmers and Price 2009) to anti-vaxxers vs. supporters of vaccination (Berman 2020). In our increasingly polarised consumer culture, mythic interpretations are constantly contested by countervailing ideological discourses, which calls for rejuvenated attention to marketplace mythology.

Consumer Myths

Stern (1995) draws on the work of literary theorist Northrup Frye to demonstrate that four mythic plots—tragedy, irony, comedy, and romance—structure consumers' self-mythologising narratives. Following Stern (1995), myths are seen as the stories consumers tell to uncover the consumer values that advertising stories tap. From this structural perspective, consumer interpretation is subconsciously informed by universal stories of "birth/death/rebirth associated with nature's seasons and the human life cycle" (Stern 1995, p. 166).

For example, advertisements that appeal to consumers' sentimental or nostalgic longings are often successful because of the associations consumers make to romantic plots and narratives. Likewise, Brown, McDonagh, and Shultz (2013) illustrate how tragic plots of disaster and death (e.g. Titanic) resonate with consumers because of their ambiguous endings. Stern (1995, p. 167) summarises,

"Comedy ends in joy, and its correspondent value is happiness; tragedy ends in sadness, and its value is wisdom; romance ends in nostalgia, and its value is ideal peace or beauty; and irony ends in surprise, and its value is excitement."

In their study of consumption rituals during Thanksgiving, Walendorf and Arnould (1991) describe how consumer myths include elements of all plots in Frye's taxonomy. In one family, for example, the father cut himself with a knife while carving the traditional stuffed turkey, whereupon the holiday is associated with disaster. Hence, Stern (1995, p. 178) notes that advertisements that appeal to tragedy often use "a fear approach to enable the user to prevent an unhappy outcome." What is more, consumer stories are not limited to rituals; Stern (1995, p. 183) concludes that "the analysis of myths across consumer stories, including those told about nonceremonial occasions, everyday product purchases, and deviant consumption, is a promising direction for future research."

Brown, McDonagh, and Shultz (2013, p. 596) point out that previous consumer research has provided two explanations to why certain myths are “eagerly embraced by consumers and integrated into their lives, whereas others fail to strike a chord and ring true.” The first is rooted in *structuralism* and the notion of universal plots and archetypes (Stern 1995). A second explanation is more *post-structural* and related to consumer identity projects vis-à-vis social institutions and discourses of power (Thompson 2004). A few scholars, including Russ Belk, have studied consumer myths from an *existential* perspective (Belk and Costa 1998; Higgins and Hamilton 2019). However, the existential research stream on consumer myths remains relatively scant compared to structural and poststructural approaches.

Commercial Mythmaking

Commercial actors also compete to create myths that shape popular memory, offering identity value for consumers. When marketing the American South, for example, Thompson and Tian (2008) demonstrate how marketing agents selectively omit contentious racial politics, lynchings, poverty, etc., focusing instead on the cosmetic gloss of barn dances and barbecues. Thompson and Tian (2008, p. 596) define commercial mythmaking as

“the efforts of advertisers, brand strategists, tourist promoters, and other marketing agents to situate their goods and services in culturally resonant stories that consumers can use to resolve salient contradictions in their lives and to construct their personal and communal identities in desired ways... commercial mythmaking can also function as an ideological process that [creates] a particular interpretive rendering of the past and its sociocultural meaning.”

In postmodern consumer culture, brands compete in mass-mediated myth markets rather than product markets (Holt 2004). To succeed, it is often more crucial for brands to engage with cultural ideologies and embody compelling identity myths rather than produce quality goods. According to Holt (2004), iconic brands like Harley-Davidson and Volkswagen assert compelling stories that resolve acute cultural contradictions and help people feel better about their identities. For example, by incorporating bohemian mythology in their marketing communications, Volkswagen managed to shake off the associations with Nazi Germany (that still haunted the brand in the 1960s) and gained legitimacy in American culture. Moreover, by being perceived as a credible insider in the art world, the brand was endowed with cultural authenticity (Holt 2004).

Crockett and Davis (2015) note that far less is known about commercial mythmaking than mythmaking among consumers. Nevertheless, Brunk, Giesler, and Hartmann (2018) highlights the role of commercial mythmaking in the marketisation of a consumable past. More precisely, they note how East German brands after the reunification were imbued with socialist nostalgia for how things were “better back then” (p. 1325). They suggest that cultural production is crucial in the commercial side of mythmaking. For example, they point to the 2003 movie *Good Bye, Lenin!*, which “shifts socialist camaraderie and care to the level of brand consumption” (Brunk, Giesler, and Hartmann 2018, p. 1336). Films and TV shows are powerful tools in disseminating cultural myths and counter memories that shape popular memory (Thompson and Tian 2008). Advertisers often flirt with films and other forms of popular culture to imbue their market offerings with mythic and sociocultural meaning (Holt 2004).

METHOD

The *Journal of Consumer Research (JCR)* is one of the most prominent journals in our field. A search for the term “myth” yields 343 results in the *JCR* database. Out of these, 301 original articles were included in the final sample of this study. Some articles merely cited a reference that included the term “myth” and were therefore excluded. Other exclusions were editorials, tutorials, and articles that only touched upon the topic tangentially.

The final sample consists of papers that address myths and marketplace mythology in a meaningful way. We recognise the limitation of using articles from only one journal. However, the included sample (n = 301) seems rich compared to other conceptual papers of this type.

In our findings, we present each thematic category around a couple of papers that serve as exemplars of the theme in question. The first author downloaded and skimmed through all articles before choosing those (n = 18) that were read in more detail by both authors (Table 1). The aim of this procedure was not to be as extensive as possible, but to provide an overview of previous consumer research on marketplace mythology.

Table 1. Articles Included in the Detailed Analysis

Title	Year of Publication	Author(s)	Mythological Context
Politicizing Consumer Culture: Advertising's Appropriation of Political Ideology in China's Social Transition	2008	Xin Zhao and Russell W. Belk	Advertising Plots and Narratives
Images in Advertising: The Need for a Theory of Visual Rhetoric	1994	Linda M. Scott	Advertising Plots and Narratives
License to Assemble: Theorizing Brand Longevity	2019	Chloe Preece, Finola Kerrigan, and Daragh O'Reilly	Brand Evaluations
The Starbucks Brandscape and Consumers' (Anticorporate) Experiences of Glocalization	2004	Craig J. Thompson and Zeynep Arsel	Brand Evaluations
Demythologizing Consumption Practices: How Consumers Protect their Field-dependent Identity Investments from Devaluing Marketplace Myths	2011	Zeynep Arsel and Craig J. Thompson	Consumer Identity Work
Space as a Resource in the Politics of Consumer Identity	2021	Andre F. Maciel and Melanie Wallendorf	Consumer Identity Work
Therapeutic Servicescapes and Market-mediated Performances of Emotional Suffering	2019	Leighanne Higgins and Kathy Hamilton	Consumer Well-being
Chronic Consumer Liminality: Being Flexible in Precarious Times	2021	Laetitia Mimoun and Fleura Bardhi	Consumer Well-being
The Regeneration of Consumer Movement Solidarity	2021	Andreas Chatzidakis, Pauline Maclaran, and Rohit Varman	Consumption Rituals and Collectives
"We Gather Together": Consumption Rituals of Thanksgiving Day	1991	Melanie Wallendorf and Eric J. Arnould	Consumption Rituals and Collectives
The Politicization of Objects: Meaning and Materiality in The U.S. Cannabis Market	2021	Aimee D. Huff, Ashlee Humphreys, and Sarah J. S. Wilner	Legitimation of Consumption Practices
Social Emotions and the Legitimation of the Fertility Technology Market	2021	Laetitia Mimoun, Lez Trujillo-Torres, and Francesca Sobande	Legitimation of Consumption Practices
Hermeneutics and Consumer Research	1994	Stephen J. Arnold and Eileen Fischer	Myths about the Scientific Procedure
Scientific Style and the Conduct of Consumer Research	1985	Elizabeth C. Hirschman	Myths about the Scientific Procedure
Paths to Respectability: Consumption and Stigma Management in the Contemporary Black Middle Class	2017	David Crockett	Socio-political or Gendered Myths
Almost Equal: Consumption under Fragmented Stigma	2022	Christian A. Eichert and Marius K. Luedicke	Socio-political or Gendered Myths
Networks of Desire: How Technology Increases Our Passion to Consume	2017	Robert Kozinets, Anthony Patterson, and Rachel Ashman	Technology Myths
We Are What We Post? Self-Presentation in Personal Web Space	2003	Hope Jensen Schau and Mary C. Gilly	Technology Myths

FINDINGS AND CONCLUSIONS

We found that consumer research in marketplace mythology can be classified into nine interrelated themes:

- Advertising Plots and Narratives (e.g. Scott 1994; Stern 1995; Zhao and Belk 2008);
- Brand Evaluations (e.g. Brown, McDonagh, and Shultz 2013; Preece, Kerrigan, and O'Reilly 2019; Thompson and Arsel 2004)
- Consumer Identity Work (e.g. Arsel and Thompson 2011; Luedicke, Giesler, and Thompson 2011; Maciel and Wallendorf 2021)
- Consumer Well-being (e.g. Higgins and Hamilton 2019; Hill 1991; Mimoun and Bardhi 2021);
- Consumption Rituals and Collectives (e.g. Belk and Costa 1998; Chatzidakis, Maclaran, and Varman 2021; Wallendorf and Arnould 1991);
- Legitimation of Consumption Practices (e.g. Huff, Humphreys, and Wilner 2021; Humphreys 2010; Mimoun, Trujillo-Torres, and Sobande 2021);
- Myths about the Scientific Procedure (e.g. Arnold and Fischer 1994; Hirschman 1985; Wells 1993);
- Socio-political or Gendered Myths (e.g. Crockett 2017; Eichert and Luedicke 2022; Thompson 1996);
- Technology Myths (e.g. Kozinets 2008; Kozinets, Patterson, and Ashman 2017; Schau and Gilly 2003).

These constitute our main findings and are summarised in Table 2. Based on these interrelated themes, possible avenues for future consumer research on marketplace mythology include brand story-

telling; co-mythologisation; and the role of myth in the polarisation of consumer culture.

Table 2. Summary of Findings

<i>Mythological Theme</i>	<i>Brief Description</i>
Advertising Plots and Narratives	Advertising plays a myth-like role in making certain market ideologies seem natural
Brand Evaluations	Brands facilitate different mythic interpretations to alleviate cultural anxieties and provide consumers with identity value
Consumer Identity Work	Myths are important drivers in consumers' identity projects and resolve ideological tension
Consumer Well-being	Myths have emotional and restorative qualities that can be therapeutic and improve one's sense of well-being
Consumption Rituals and Collectives	Consumers collectively gather around myths and rituals to feel a sense of togetherness
Legitimation of Consumption Practices	Commercial mythmaking is important in the legitimation of stigmatised consumption practices
Myths about the Scientific Procedure	Marketing departments in business schools have instituted their own mythology based on physics envy
Socio-political or Gendered Myths	Our understanding of socio-political identities (e.g. what it means to be a woman) are often based on myths
Technology Myths	Myths were originally oral stories but are nowadays mass-mediated by means of technology

Brand Storytelling

Aaker (2018) distinguishes between six types of commercial storytelling. First, a *founder story* tells something about the heritage of the brand. For example, as Brown, Patterson, and Ashman (2021, p. 421) points out, “Hollister’s backstory is a thing of beauty... not a word of it is true, however.” Second, an *offering story* illustrates the magical powers of a commodity. For example, for over twenty years, Red Bull used “Red Bull gives you wings” as its catchy slogan. Third, a *brand story* is a cohesive narrative that encompasses the facts and feelings that are created by a brand and often inspires a strong emotional reaction. Fourth, a *customer story* (e.g. BMW drivers are always friendly) reveals compelling traits and characteristics that other consumers can identify with, often strengthening the social ties in a brand community. Fifth, a *growth strategy story* (e.g. Elon Musk’s growth story before the first Tesla car was shipped) provides credibility and inspiration to employees and investors. Lastly, a *borrowed story* denotes a brand drawing on myths in popular culture to convey meaning. Aaker’s (2018) typology of brand storytelling offers a potentially novel framework for understanding and advancing theory on commercial mythmaking.

In practical terms, Aaker (2018) shows how to apply the power of storytelling to strategic marketing. It seems that commercial mythmaking will be an increasingly vital topic in the age of digital marketing where storytelling is key to successful branding. Future research on how myths are conveyed in brand storytelling can include:

- What stories will be effective in promoting different types of brands?
- How can stories be told in the digital age? In ancient Greek, the myths were originally oral traditions.
- What are the consequences when mythic stories are increasingly passed on through social media?

- What cultural anxieties need to be alleviated through commercial myths on social media, through more immersive technologies, and future iterations of the internet?
- Is commercial mythmaking as relevant to business-to-business marketing as it is to consumer marketing?
- What if brand stories fail to generate the ideological power of myths? Will such failure undermine the perceived authenticity of the brand?

Co-mythologisation

The distinction between consumer myths and commercial myth-making offers opportunities for future studies on co-creation of meaning where both consumers and commercial actors partake in the myth-making process. Beverland (2018) points out that the consumer is a co-creator in a brand’s identity. In other words, consumers actively partake in the construction of myths around the brand. Consider, for example, the case of Burberry and ‘Chav’ culture (Hayward and Yar 2006). Chav culture came to be known as a type of fashion that involved designer brands, tacky jewellery, and bad taste; when Burberry became associated with this term, it greatly affected the brand and its story by plummeting sales to an all-time low.

Further research should study co-mythologising practices between brands and different types of consumer collectives such as brand communities (Muñiz and O’Guinn 2001), consumer tribes (Cova, Kozinets, and Shankar 2007), and subcultures of consumption (Schouten and McAlexander 1995).

The Role of Myth in the Polarisation of Consumer Culture

Lastly, the recent polarisation of consumer culture (Ulver 2021) calls for further attention to marketplace mythology in consumer research. For example, more research is needed to unpack the various ideological conflicts that may arise from myth markets, espe-

cially by employing non-dialectical theoretical frameworks such as Bakhtinian dialogism and heteroglossia (Fowler, Das, and Fowler 2022). From a macro-level perspective, it would also be interesting to study the role of public policy on the shaping of marketplace mythology beyond consumer myths (i.e. micro-level) and commercial mythmaking (i.e. meso-level) that have guided most of the previous research in this domain. For example, should it be criminalised to spread misinformation about certain topics such as anti-vaccination? As a final note, we call for more research employing existential or phenomenological frameworks to complement the majority of extant research, which is based on structuralism (Stern 1995) and poststructuralism (Thompson 2004).

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“Sharing in” Practices among Lower-Middle Class Urban Families in Brazil

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INTRODUCTION

Sharing is defined as “the act and process of distributing what is ours to others for their use and/or the act and process of receiving or taking something from others for our use” (Belk, 2007, p. 127). Sharing can occur in both abundance and scarcity situations. Open sharing (also called altruistic sharing) happens when there is no need to ask, whereas demand sharing occurs when one must ask of another, such as when children ask their parents for food (Belk, 2010, 2014; Peterson, 1997). When sharing happens within the extended family, or among friends or neighbors, it is called “sharing in”; when it is done with outsiders, it is called “sharing out” (Belk, 2010). In both “sharing in” and “sharing out” there is no transfer of ownership of the shared good, nor is there expectation of compensation, aspects that differentiate sharing from gifting and buying (Belk, 2014). Reciprocity in sharing is typically asymmetrical (Price, 1975), creating “a weak obligation to reciprocate”, characterized by “indifference to the time, quality and quantity of the return” (Peterson, 1997, p.173).

Recent marketing studies on sharing have focused mainly on “sharing out” situations. A recent literature review of studies on sharing (Ryu et al., 2019) covering almost 300 papers showed that, despite examining a wide range of products and services, the extant literature, focuses mainly on the so-called “sharing economy”. In addition, the review showed a growing interest on “sharing out” associated with some form of monetary compensation. However, the original concept of sharing advanced by Belk (2010) in his study on consumption was much broader, encompassing traditional sharing, as well as new forms of sharing in affluent societies, particularly “sharing out” with outsiders or strangers. In fact, several authors have recently criticized the use of the term “sharing economy” because it frequently refers to practices that are far from expressing true sharing (e.g., Hellwig et al., 2015; Kuper & Edinger-Schons, 2020).

“Sharing in” can be traced to ancient societies, but it appears in all contemporary societies as well (Belk, 2017; Belk & Llamas, 2012), often without being noticed. The sharing of resources by families and communities works as a collective possession of property; it “requires no invitation, generates no debt, and may entail responsibilities as well as rights” (Belk, 2010, p.717). In spite of this, the use of resources is not homogeneous within the family, nor is the power that each actor exercises concerning the use of shared goods in the context of the family relationship (Belk, 2010; Belk & Llamas, 2012). It is often the case that sharing is unconditionally expected from other family members, and a refusal to share may be punished by some form of verbal or nonverbal sanction. Each society has its own practices of sharing, including with whom one is supposed to share, and what types of goods, services or spaces are expected to be shared.

The present study aimed to investigate “sharing in” among members of lower-middle class urban families in Brazil. The reason for choosing this economic group was that, despite the restrictions on consumption they routinely face, consumers in this segment have access to a reasonable variety of goods, while those belonging to the lower class often fight for survival, with income barely covering basic food and housing expenses. Therefore, sharing among members of the lower-middle class segment is to a large extent optional, compared to families at the bottom of the social pyramid.

The following research question was addressed in the study: *What is the nature of sharing as a consumption practice in lower-middleclass urban Brazilian families?* Our contribution is threefold. First, we look at lower income families, a group that has been largely neglected by researchers in consumer behavior. Indeed, most studies from developed countries have looked specifically at affluent families and individuals, even though there are many more families in the world similar to the ones we studied in our research. Therefore, the present study contributes to the extant literature by examining sharing practices within this specific social group from an emerging market. Second, we contribute to the understanding of sharing practices by examining a context in which the extended family predominates, and not the nuclear family. Third, we investigate differences in sharing practices within families, an issue that “is not available in most ethnographies” (Ember et al., 2018, p. 384), nor in consumer behavior studies on sharing.

METHOD

Our research adopted an interpretive lens to examine the phenomenon under study. The unit of analysis was the extended family, conceptualized as individuals with blood or relational ties who live in the same household. The households were located in less-affluent areas on the periphery of the city of Rio de Janeiro, Brazil, but not in the slums. We interviewed 15 families and a total of 48 individual family members. All interviews were conducted in the families’ homes. The interviews were recorded with the informants’ permission and later transcribed. Data analysis consisted of two steps. First, we analyzed the interviews held with each family member and wrote a short report for each family, using a set of categories extracted from the literature, combined with those that emanated from the field. The second step consisted of a comparison of the 15 families in order to determine the similarities and differences among them. The third step included a comparison of the patterns identified in the study with those in the extant literature.

FINDINGS

Sharing is a daily practice within the families we studied. The extent of sharing, however, showed significant variations. Some families claimed that they shared “everything”, because “everything belongs to everyone.” Nevertheless, even members of these families mentioned exceptions to the “everything for everyone” rule. Other families stated that most goods were for everyone’s use, but that there were spaces and items for private, individual use, and “others do not touch.”

The informants used different terms to describe sharing. Some terms considered the buying situation as the backdrop for the practice of sharing, such as “shopping together”, or “buying for the whole family.” Other terms denoted ownership, such as certain items “belonging to everyone in the home” or “to the family.” The terms “mine” or “his/her” were rarely employed, because “what is mine is his and what is his is mine”, or “it belongs to nobody.” Sharing was also understood as permission to use: family members could use the objects “whenever they want”, sometimes taking turns, or even using them together, or with another one. Thus, anyone can “take”, “use”, or “enjoy” the shared object. Other terms were used to designate negative occurrences associated with the practice of sharing,

such as “getting everything mixed up” or “tangled up”, “invading” what belongs to the other, “stirring”, “abusing” or “confusing.” Informants also mentioned items for private, individual use that were not shared. The financial outlay for the acquisition and maintenance of goods guaranteed their privatization unless the owner chose to share them. For some, non-shared items had a well-defined owner (“what’s yours is yours”) or there were separate owners for similar items (“everyone has his/her own”). Those that were not included in the sharing carried an implicit prohibition against being used (“no-body should take it”).

There were basically three levels of sharing in these families. Some objects were typically shared in all families, others were shared only in some families, and still others were rarely shared at all. Among the items rarely shared were towels and underwear, but even those could be shared in some cases. Cellular phones were also among the objects that were rarely shared unless the owner kept the chip and shared only the device. Clothes, on the other hand, were often shared, particularly among siblings, but also between mothers and daughters. Even so, the younger members of the families sometimes avoided using their siblings’ clothes because they feared that this could be regarded by outsiders as an indication of poverty, or perhaps because they saw it as deindividuation.

There were also three categories of spaces: public spaces, which were open to visitors; private spaces, which were reserved for family members, and intimate spaces, which were reserved exclusively for one or more family members and no one else. There were very few of these (e.g., a couple’s bedroom), and in some homes there were none at all. Intimate possessions were reserved for the owner’s exclusive use and were not a cause of dispute, but other goods that were not meant for sharing might eventually be used without permission by others in the family, particularly siblings. In such situations, the informants reported practices to prevent this from happening, such as hiding the goods, locking them in a closet, or carrying them in a backpack.

In addition to the limitations on sharing pointed out in the marketing literature, such as possessiveness or attachment to a particular object, materialism and scarcity, our study revealed three additional limitations (although they varied from one family to the next): interest limitations, suitability limitations, and situational limitations. Interest limitations refer to a lack of interest in using a shareable item, even if available, due to differences in life cycle stages, or preferences for different styles, models, or sizes. Suitability limitations refer to the judgment of an object as being inappropriate for use by others, such as adult items to be used by children. Situational limitations are temporary factors that could lead to resistance to sharing, such as when an item had not yet been used by the individual who purchased it. In addition, what was shared among the family members residing in the home could not be automatically shared with other individuals even if they belonged to the extended family but did not live under the same roof. The limitations on with whom to share were thus well-defined and common to all the families we studied; shared goods were non-transferable outside the home. Losing a shared item – particularly a more expensive one – could result in the user being temporarily excluded from sharing until he/she proved to be trustworthy again. Exclusion could in some cases be due to failing to abide by explicit or implicit rules of conduct.

Another characteristic of sharing discussed in the literature is the connection between sharing and reciprocity. In our study, some families considered sharing to be an act that did not imply receiving anything in return for it, but other families explicitly expected some form of reciprocity, although of the same kind: “If it’s shared, it must be reciprocal. If he shared with me, I must share with him.” Even in

these cases, reciprocity was not expected to be immediate, nor was there any control on how much one should share with others. Even in the families that did not report any expectation of reciprocity, however, there was also an implicit understanding that members would share, because this was a common moral value. Thus, the practice of sharing seemed to create some sort of future moral obligation to also share one’s goods when and if the situation allowed, although limited control was exerted on this issue. However, children were taught that they were expected to share toys with their siblings.

Finally, there were differences among family members concerning their status as users of shared possessions. Usage rights were not the same for everyone, nor for all uses. Among family members, it was often the elders who decided priorities, sometimes on behalf of younger children. Also, the power to decide who was going to use the possession, and when, could also rest in the hands of whoever paid for it. However, the hierarchy was not so clear when the object was purchased by one family member as a gift to another, leaving open the discussion on priority of use.

DISCUSSION AND FINAL CONSIDERATIONS

This study provides an in-depth view of how lower-middle class families use sharing in their everyday life. Our findings are in line with the literature on “sharing in” as “the oldest form of mutual distribution” (Belk, 2017, p.249). In our study, “sharing in” appeared as a value associated with the concepts of family unity and belonging. The study unveiled several nuances to “sharing in” as a social practice by lower-income Brazilian families (Table 1).

Table 1 – Nature of Sharing among the Families Studied

Issue	Extent of Application
Family values	Sharing with the family is a moral value learned and transmitted from one generation to the next.
Scope	Sharing is limited to members of the extended family living under the same roof. Families differ in the extent of sharing.
Reciprocity	Expectations of reciprocity can be explicit or implicit, and even pass unnoticed.
Refusal to share	What one has the right to refuse to share varies from one family to the next.
Hierarchy and power	Decisions on sharing can follow the family hierarchy or be made by the provider of the shared object.
Exclusion of sharing	One can be excluded from sharing for failing to accept sharing rules, damaging/loosing the shared object, or not abiding by the obligation of sharing.

Sharing is learned and transmitted as a family value; no one is exempt from sharing at some point. In some families there is an explicit expectation that every family member living under the same roof should share his/her possessions in due course and according to his/her financial and material means. In other families this assumption is implicit and even, in some cases, not expressed at all. This type of asymmetrical reciprocity has often been identified in the anthropological literature, particularly ethnographic studies (e.g., Peterson, 1997; Pierce, 1975). Nonetheless there are limits on sharing. In our study, with whom one has to share was physically limited to those that live together and did not apply to other members of the extended family residing in other places. This is not the typical sharing practice, according to a large-scale study of 98 non-industrial societies (Ember et al., 2018), which showed “beyond-household sharing” as a ubiquitous practice.

In our study, sharing included both hierarchical and egalitarian aspects. Egalitarianism is seen in the use of a shared possession by several family members in similarity of conditions, but it is mostly a hierarchical practice, which tends to follow the family hierarchy, both the parental dominance and the higher status of the provider. If sharing entails giving up some control by those who make the shared good available, it also means gaining control by those who benefit from sharing. Control is associated with responsibility. One must take care of the object, one must not abuse it to the detriment of others, and one must make it available again in useable condition. Failure to respect these rules may result in the temporary or permanent exclusion of the right to enjoy certain shared goods. Sharing can even be denied when demanded, this power being reserved for the owner of the object if the situation allows him or her not to share. And when an object in high demand is not shared, a strategy to avoid unauthorized use may entail hiding it, as reported in ethnographic studies. For example, eating some of the food while collecting it was a strategy used by members of some hunter-gatherer societies to avoid sharing (Petersen, 1997). In sum, within the context of lower-middle class families, sharing must be understood as a practice that generates rights and obligations, in which rules of conduct tend to be informal, implicit or explicit and, at times, ambiguous.

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Market-centric pathways for racial inclusion: the case of #MyBlackReceipt

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INTRODUCTION

Marketing research has established that race continues to play an important role in the functioning of markets (Grier, Thomas, and Johnson 2019) and that markets are racialized at their core (Henderson, Hakstian, and Williams 2016; Poole et al. 2020; Tilley and Shilliam 2018). Questioning historical conceptions of markets as “free” or “fair” (Johnson et al. 2019), extant research has provided ample empirical evidence of ongoing racial discrimination and exclusion in a variety of consumption contexts (Ainscough and Motley 2000; Bennett, Lee-Treweek, and Vandeyar 2015). Many such studies have focused on systemic racial disparities that lead to exclusionary market practices (Bone, Christensen, and Williams 2014; Brumbaugh and Rosa 2009; Crockett, Grier, and Williams 2003). Together, these studies highlight that existing public policy measures have failed to fully alleviate racial disparities and point to the urgency of better understanding pathways for racial inclusion at the intersection of the market and society.

The following empirical investigation contributes to this timely and relevant body of research by studying an underexplored pathway in the battle against racial exclusion. Drawing on our empirical analysis of the initiative #MyBlackReceipt, we describe additional tactics that racial minorities can employ to activate that pathway and challenge systemic inequality in markets.

LITERATURE: IDENTIFYING EXISTING PATHWAYS FOR RACIAL INCLUSION

From our critical review of existing scholarship on marketing and race we identified two different pathways toward fighting market exclusion, defined as “the mechanisms through which certain individuals and communities are barred from the resources and opportunities provided by the market to other citizens” (Saren, Parsons, and Goulding 2019, 2).

In the first pathway, which we labeled *managing stigma*, the market is a space of continuous racial conflict where minorities face discrimination and stigma. Subsequently, affected consumers employ a range of tactics to cope with or mitigate their exclusion and change themselves to fit to the market, such as 1) dissimulating their racial identity through assimilation and appropriation of the dominant race’s consumption codes (Bone et al. 2014; Harris, Henderson and Williams 2005); 2) signaling cultural capital and achieving respectability through status-enhancing consumption (Crockett 2021, 2017; Poole et al. 2020); 3) deliberately avoiding stigmatized consumption goods, services and practices (Crockett 2017; Crockett and Wallendorf 2004) and 4) embracing counternarratives by reinterpreting the dominant stigmatized narrative (Crockett 2017; Milner and Howard 2013). While these tactics may alleviate exclusion for some individual consumers, they do little to change discriminating market mechanisms or address other systemic issues of racial exclusion.

The second pathway, which we labeled *developing positive representation*, sees consumers trying to change markets that render their ethno-racial identity invisible or devalued. Here, the market is seen as an uncivilized space that needs to be moralized and exposed to the principles of racial equality and inclusion. In contrast to *managing stigma*, where individual consumers are the agents and focus of transformation, here, activist consumers and the marketers that respond to them are the key actors promoting transformation at the market level. They reform marketing practices by restraining forces of exclusion and fostering adherence to the principles of racial equality and inclusivity (Mirabito et al. 2016). This pathway includes tactics such as 1) ethno-racial targeting, e.g. offering particular products for the needs of ethnic-minority consumers (Crockett 2021; Lamont and Molnár 2001; Peñaloza 2018); and 2) selling diversity through multiracial communications and creating value enhancing narratives for ethnic minorities (Crockett 2008; Moorman 2020; Vredenburg et al. 2020).

The described pathways entail tactics that impact racial exclusion at the individual and market level. However, by focusing on either improving individual consumers’ position in the market or attempting to moralize existing marketing practices, the scope of both pathways confines their impact on the broader objective of achieving market inclusion. In this paper we argue that hashtag initiatives such as #MyBlackReceipt are evidence of a promising third pathway to fight racial exclusion. In contrast to *managing stigma*, where it is up to the individual consumer to achieve change, and in contrast to *developing positive representation*, where racial minorities are offered token inclusion in the market, this approach is a collective effort of various market actors who *leverage within market boundaries* in attempting to redress racial inequalities. Our summary is presented in the findings section, contrasting the two existing pathways and their tactics, which we conceptualized from the literature, with the third pathway emanating from our empirical analysis.

RESEARCH CONTEXT: #MYBLACKRECEIPT

We empirically investigated a recent initiative enacted in the United States: #MyBlackReceipt. Aligned with the broader #Buy-Black movement and other racial movements that manifest in the digital space (e.g. #BlackLivesMatter), #MyBlackReceipt was launched in June 2020 by Kezia Williams. Through her company The Black upStart and social media platforms, Williams calls consumers to buy from Black-own businesses, and promotes financial literacy in Black communities. To launch #MyBlackReceipt, Kezia set up a website where consumers, businesses, and investors upload receipts that serve as proof of purchases from or investments made in Black businesses. The original goal was to generate receipts valuing \$5 million in 17 days, which was exceeded considerably. The key logic of the initiative is one that has long been drawn upon by Black

activists: to keep the money circulating and build wealth in the Black community.

#MyBlackReceipt is a recent instantiation of efforts to build Black wealth that have a long history in the USA and persistently faced challenges. A prominent challenge is racist backlash, responsible for the demise of historic efforts like Black Wall Street, a powerful and prosperous African-American community of the 1920s in Tulsa, Oklahoma (Fain, 2017). Thus, consumers and Black business owners may be reluctant to engage in #MyBlackReceipt fearing backlash or stigmatization. Moreover, some Black entrepreneurs and businesses may also have limited financial know-how, business acumen, and resources, and therefore be less competitive than others in attracting consumers.

METHODOLOGY

We conducted an empirical qualitative study of the #MyBlackReceipt initiative taking a non-participant approach by collecting archival data publicly available on traditional media and social media (Fischer and Parmentier 2010). We engaged in Thematic Analysis (Gibbs 2018; Miles, Huberman and Saldaña 2018) to guide our analytical process.

Data Collection We collected media articles from mainstream media outlets as well as blogs and independent publishers, and archival data from social media platforms. We searched for the hashtag #MyBlackReceipt on Factiva for media articles, complementing results with a Google search for the News feature using the same keyword. For social media, we used the applications 4K Stogram (Instagram) and Tweet Deck (Twitter) and the embedded search mechanisms on Facebook and YouTube, all searching for the same hashtag (#MyBlackReceipt). We collected all textual and visual information publicly available on social media pages. Additionally, we collected information on the official website for the initiative (MyBlackReceipt.com). Data was collected between August and November 2020 and covered the period from the first announcement of the initiative, June 1st, to October 31st, 2020. In total, our data set consists of 16,900 Instagram posts, 2,100 Facebook posts, 45 single-spaced pages of Tweets, 125 pages in PDF of website content, 25 media articles, 12 YouTube videos.

Data Analysis We conducted thematic analysis (Gibbs 2018) of the textual dataset including illustrated messages, transcripts and comments for YouTube videos; posts and comments on Facebook, Twitter, and Instagram. Starting with a subset of our data, we identified the main themes related to how the market was mobilized to fight racism, which were: goals, strategies, tactics and outcomes. We then coded and classified them further into different types. By iterating between our data and the literature we eventually focused our analysis on the tactics employed by the initiatives of #MyBlackReceipt in search for theoretically meaning patterns (Locke, Feldman, and Golden-Biddle 2020). During this iterative process authors independently classified excerpts, analyzed data exemplars, and utilized different types of data for triangulation purposes (Spiggle 1994). We engaged in negative case analysis, debated discrepancies until we agreed on descriptors that best represented the patterns in our data. As a result, the identified six tactics offer a grounded theoretical understanding of the phenomenon.

FINDINGS: LEVERAGING WITHIN MARKET BOUNDARIES

In contrast to the two pathways and related tactics synthesized by our literature review, the #MyBlackReceipt initiative is a collective, concerted and strategic effort that leverages various market actors, practices, and resources to fight racial exclusion. In line with

#MyBlackReceipt's previously described goal and overall strategy, the initiative creates a highly participative market space *within* the existing market. To activate this market space, members of the initiative employ six tactics: *educate*, *facilitate*, *embolden*, *partner*, *normalize*, and *champion*. Each of the tactics mobilizes a particular set of actors, resources and practices. We briefly describe each of these tactics below. Illustrative examples from our dataset are shown in the data table in the Appendix. The following figure outlines and contrasts the three pathways including their goals, level of action, as well as the involved market actors and their tactics.

Educate is a tactic that aims at teaching and advancing business skills as well as expanding Black business owners, entrepreneurs and consumers' understanding of market processes and the importance of keeping the money in the Black community. It is expected that, if Black business owners develop better financial and business acumen, they will thrive, create employment for Black people, and serve customers better. When educating, #MyBlackReceipt leaders leverage market resources and marketing tactics, e.g. free samples of educational resources.

Despite their general willingness to support the overall cause, consumers reported that researching and locating Black-owned shops in their vicinity was challenging. Additionally, it was often-times difficult to identify which branches of large businesses (e.g. McDonalds or 7eleven) are Black-owned. The tactic *Facilitate* addresses these difficulties and assists consumers in locating Black-owned businesses either through using the searchable directory on the myblackreceipt.com website or via the hashtag #MyBlackReceipt. Similarly, Black business owners can publicize and list their products, facilitating access to consumers. By sharing recommendations, lists and directories via social media and employing a wide range of buy-Black-related Hashtags beyond #MyBlackReceipt, this tactic expands the reach of Black-owned businesses and exposes Black consumers to a wider selection of brand, products and services.

Through the tactic of *Embolden*, leaders and supporters of #MyBlackReceipt encourage consumers to identify as "unapologetically Black" and openly support Black businesses. They do so through emboldening messages and calls for action that appeal to positive (e.g. pride, hope) or negative (e.g. anger) emotions. At the same time, businesses are encouraged to publicize their Black ownership (e.g. Yelp offered window tags). This tactic aims to strengthen Black confidence resulting in more participative, empowered and engaged market actors, such as consumers who can fully enact their boycotting consumption power (Shaw, Newholm, and Dickinson 2006).

The tactic of *Partner* refers to establishing connections with non-marginalized, non-Black allies to increase the initiative's presence, reach and impact. In so doing #MyBlackReceipt leverages the powerful influence of prominent market actors (e.g. celebrities, brands, sponsors, data platforms). This tactic legitimizes Black consumers and business owners, creates connections to the mainstream market and activates consideration for the needs and preferences of the Black community. This is in contrast to pathway two (developing positive representation) because here, Black-owned businesses are empowered by their "marketer partner" to participate on their own terms.

Another tactic of the initiative that serves the goal of keeping the money in the Black community is to *Champion* committed market actors, who are identified based on their shared views (Kozinets and Handelman 2004; Weijo, Martin, and Arnould 2018). Drawing on the prevalent consumer ethics to "vote with your purchase" (Shaw, Newholm, and Dickinson 2006), here #MyBlackReceipt calls on Black consumers to commit their financial resources to ex-

Figure 1: Market-centric pathways for racial inclusion

	Managing stigma	Developing positive representation	Leveraging within market boundaries
Level of action	Individuals cope with racial exclusion in the market by changing themselves to fit with the dominant cultural codes.	Marketers aim to better represent racial minorities in the market by responding to moral appeals of activist groups calling for more inclusive marketing practices.	Racial minority groups challenge systemic inequality by leveraging within market boundaries and creating a highly participative space within the existing market.
Goals	To be included in the market by adjusting to dominant cultural codes and norms.	To suppress forces of exclusion in the market.	To fight against systemic racial exclusion by leveraging market mechanisms.
Tactics employed	Avoidance, Dissimulation, Signaling, Embracing counternarratives	Ethnic targeting, Selling diversity	Educate, Facilitate, Embolden, Partner, Champion, Normalize
Actors mobilized	Individual racialized consumer	Marketers Consumer activists	Consumers, Business owners, Social movements and activist groups
Actors benefitting	Individual minority consumers	Minority consumer groups	Minority communities including consumers <u>and</u> businesses

clusively support Black businesses. Similarly, Black entrepreneurs are called to develop businesses that serve the Black community, and celebrated when they do so. At the same time, oppressors of the Black community and inauthentic Black-owned businesses are named and consumers asked to withdraw their support. The tactic is operationalized through the “receipt counter” featured on the initiative’s website, showcasing the collective catalysis (Kozinets, Ferreira, and Chimenti 2021) that the initiative has organized.

Finally, *Normalize* seeks to turn “buying Black” from a one-off protest into an internalized long-lasting practice. Discursive motivation occurs by associating the buying Black rationale with other known selective patronage initiatives, e.g. buying local; consuming in a more sustainable way (Hinrichs and Allen 2008). Such associations are impactful as they convey the message that societal change is possible.

The six tactics we identified by empirically studying the initiative #MyBlackReceipt were simultaneously implemented by its leaders and supporters. While the tactics in itself are complementary and some of them may be present in other forms of market activism, the hashtag aggregates them to achieve broader reach, visibility and impact (Johnson et al. 2019), creating a distinct pathway to pursue market inclusion. The tactics target a variety of Black consumers and entrepreneurs’ positions in the market. While some need encouragement to support the cause or education about the advantages of keeping dollars within the Black community, others may only need their choices facilitated.

DISCUSSION

Our paper contributes to consumer research on marketing and race by: 1) synthesizing and critically reviewing previous work on mitigating racial exclusion at the individual consumer and market

level and its limitations in terms of creating sustainable change; and 2) arguing for a promising complementary, multi-actor collective pathway that leverages market forces.

The newly identified pathway of *leveraging within market boundaries* offers an opportunity to pair the agency of racialized actors with market tools to help the intersectional issue of economic inequality that contribute to some aspects of racial exclusion in markets. Here, racialized Black consumers can funnel their resources toward building a sustainable future and in so doing move away from reactive toward creative tactics to combat racial exclusion. Unlike pathways one and two, this will benefit not only Black consumers, but also Black entrepreneurs and businesses, therefore creating wealth for the entire community.

When compared to the pathway of managing stigma, the new pathway recruits previously oppressive market actors to be allies in helping to combat exclusion. When compared to the pathway of developing positive representation, the new pathway offers ethnic minority actors the opportunity to develop marketing practices that prevent instrumental woke-washing and inadequate adaptations of their culture and ethos.

Our findings can serve to develop market-based guidelines for promoting inclusion and are relevant for policy makers, social institutions, consumers and consumer movements as well as marketers and businesses. As #MyBlackReceipt is a fairly recent initiative, a longitudinal investigation would complement our research to evaluate whether the initiative’s short-term impact can be turned into long-lasting sustainable change. Future research may also explore differences between historical Black movements efforts that failed, such as Black Wall Street, and hashtag initiatives like #MyBlackReceipt.

Appendix: Data Table

DATA TABLE: Tactics of Pathway "Leveraging the market"					
Educate	Facilitate	Embolden	Partner	Champion	Normalize
<p>"We're coming back in august with skill house youtube [...] so we call it classrooms for the culture and because we wanted to be accessible to all people we host these classes for free via instagram live we're probably going to be moving on to a different platform so people can access the information for free and then they can pay for the replay at a later date so we've talked about how you can buy your first home with no money down we've talked about how you can invest in the stock market with less than a hundred dollars and we've talked about how you can take advantage of all aspects of the stimulus plan not just the 1200 paycheck if you qualify [...] we have so many websites and we're consolidating y'all."</p> <p>SOURCE: Youtube https://www.youtube.com/watch?v=LiAhFXKCI74</p> <p>"I mean the biggest thing is honestly you have to be a knowledge [...] seeker, you can't swim in an ocean of knowledge and drown in ignorance. We're in the information economy right now so at the other side of your fingertips is an opportunity for you to qualify your black excellence with black knowledge."</p> <p>SOURCE: Youtube https://www.youtube.com/watch?v=LiAhFXKCI74</p> <p>"Black entrepreneurs should make more of the products that Black people buy disproportionately. The Nielsen Consumer Index Report noted that we over-index in spending on ethnic hair care & beauty products, women's fragrances, feminine hygiene products, refrigerated juices and drinks, gum, detergents. This is why the incredible success of J.I.V.E. Juice Company, and the Honey Pot and also True Laundry Detergent is nearly guaranteed. They capitalize on the Black dollar and also provide a service that others want too. We need more Black-owned companies making products in these categories and more. When we make the products and provide the services that we buy, our \$1.3 trillion becomes an investment and not a blank check for every other company to endorse but our own."</p> <p>SOURCE: News, Forbes https://www.forbes.com/sites/ianysun/2020/06/18/black-ownership-founder-still-cas-white-people-purchase-like-they-protest/?sh=7f6dacc9d266</p>	<p>"Javier Martinez @__javi__ Jun 8 Do you want to know how you can help @OpenTable & @Yelp? Create a black owned restaurant verified tag or search topic so people can support easier #MyBlackReceipt CC: @KeziaMW, @webuyblackcom" SOURCE: Twitter @__javi__</p> <p>"Yelp is taking to lay the groundwork for change and better support the Black community. Part of our commitment is to give people who want to support Black-owned businesses, an easy way to do so, and give businesses a way to self-identify as Black-owned on Yelp if they choose to do so with a free searchable attribute."</p> <p>SOURCE: Website, Yelp https://blog.yelp.com/author/ral</p> <p>"Register your business now, and start shopping on #june15th #myblackreceipt#blackdollars #blm #buyblack#blackbusiness #theblackupstart#blackunity #blackwealth#blackwalkstree #generationalwealth#19keys #chakabars #blackfamily#problack #blackpower #blackmoney#panafrican" N.B.: above comment was found at below post.</p>  <p>SOURCE: Instagram https://www.instagram.com/p/CBW_Nya1FTD/</p> <p>"Over the recent weeks, we've received an outpouring of requests from our community to provide an easy way to find and support Black-owned businesses on Yelp. In fact, this has been our most requested feature during this time, and over the course of two weeks* alone, we saw a 35x increase in the frequency of searches for Black-owned businesses across categories on Yelp compared to the same time last year. This inspired our teams to develop and release the searchable Black-owned attribute as quickly as possible to help connect people with great local Black-owned businesses in their communities."</p> <p>SOURCE: Website, Yelp https://blog.yelp.com/author/ral</p>	<p>DON'T SHOP AT A BUSINESS THAT WILL NOT HIRE YOU.</p>  <p>SOURCE: Instagram https://www.instagram.com/p/_VXXVAd6s-L/</p> <p>"TODAY IS BLACKOUT DAY. A CALL TO DRAW NATIONAL ATTENTION TO SPENDING POWER IN THE BLACK COMMUNITY."</p> <p>SOURCE: YouTube, CBS https://www.youtube.com/watch?v=e4CCvJb5pi4</p> <p>"Black businesses serve a need, not a guilty conscience," Williams said. "We believe that when consumers take pride in documenting their Black business patronization, it will create long term value for all participating."</p> <p>SOURCE: News, Adweek https://www.adweek.com/digital/how-my-black-receipt-tracked-million-in-spending-for-black-owned-brands-in-just-17-days/</p> <p>Unapologetically</p> <ul style="list-style-type: none"> • • • <p>"Juneteenth may mark just one moment in the struggle for emancipation, but the holiday gives us an occasion to reflect on the profound contributions of enslaved black Americans to the cause of human freedom. It gives us another way to recognize the central place of slavery and its demise in our national story. And it gives us an opportunity to remember that American democracy has more authors than the shrewd lawyers and erudite farmer-philosophers of the Revolution, that our experiment in liberty owes as much to the men and women who toiled in bondage as it does to anyone else in this nation's history."</p> <p>#jamelebouie#NYT #june15th #blackityblack#everybodyblack N.B.: above comment was found at below post.</p> <p>I'M BLACK EVERY DAY BUT ON JUNETEENTH I'M GONNA BE BLACKITY BLACK BLACK</p> <p>SOURCE: Instagram https://www.instagram.com/p/CBm3-ERaY56?utm_source=ig_web_copy_link</p>	<p>Can I tell you about these \$7.6 million flowers? About 5 years ago, I connected with one of the founders of #BroccoliCity, Brandon [...]</p> <p>Two years later, Darryl & Brandon opened a restaurant & I returned the kindness of their pro bono [...]</p> <p>This year, Darryl agreed to join the #MyBlackReceipt team and negotiated our partnership with #Yelp yielding over \$100,000 in free national advertising and assisting our goal of \$7+ million receipts.</p> <p>SOURCE: Facebook https://www.facebook.com/williams.kevin/posts/130157310646625778</p> <p>"Pepsi Dig In to support black-owned restaurants. [...] HERE'S HOW YOU CAN DIG IN my black receipt logo We hope to drive at least \$100 million in sales for Black-owned restaurants over the next five years. We've partnered with MyBlackReceipt to help us track our progress."</p>  <p>SOURCE: Website, Pepsi Dig In https://www.pepsidigin.com/</p> <p>"Brittany Washington @MrsJacquesW Jun 10 @MrsJacquesW is registered and plan on supporting as many other businesses during this time too. Follow @TheBlackupStart get registered and let's support. #myblackreceipt #shopblackowned #shoppeblack #shopblack... instagram.com/p/CBOW1_ZDxJh/..."</p> <p>SOURCE: Twitter @MrsJacquesW</p>  <p>"This inspired our teams to develop and release the searchable Black-owned attribute as quickly as possible to help connect people with great local Black-owned businesses in their communities."</p> <p>SOURCE: Website, Yelp https://blog.yelp.com/author/ral</p>	<p>BLACK OWNED NOT BLACK OWNED</p> <p>CAROL HOME AFRICAN PRIDE NIELLE ORGANICS AFRICAN PRIDE NIELA JESSE'S METABOLIC SOULNATURALS DOO SOBO DR. BEBELES LET'S JAM KEVIN W. TAYLOR MAKE MY TAIL YOUR APPROVE HONEY BABY NATURALS SUPERBUTTER</p>  <p>the owner vs. The Brand</p>  <p>The owner on the left CEO & founder of universal beauty group vs The brand</p>  <p>The owner Show this thread The product</p>  <p>the owner vs. the brand</p> <p>N.B: Above images are for one post only. They all denounce non-black-owned businesses selling hair products specifically for black hair.</p> <p>SOURCE: Instagram https://www.instagram.com/p/CBP4B6h1LV7?utm_source=ig_web_copy_link</p> <p>LET'S RECREATE WHAT BLACK FRIDAY MEANS IN AMERICA UNTIL WE RECEIVE REAL POLICIES OR REPARATIONS TO HELP DEVELOP OUR UNDERDEVELOPED COMMUNITIES... WE GREAT POP CULTURE SO LET'S POPULARIZE SPENDING OUR OWN MONEY WITH OUR OWN BUSINESSES UNTIL WE REALLY SEE MEANINGFUL CHANGE</p> <p>SOURCE: Instagram https://www.instagram.com/p/CBh_0B1FVA7?utm_source=ig_web_copy_link</p> <p>#buyblackonly dougboytiego If you're still eating fast food, shopping at Walmart, buying designer clothes and giving all your money to major corporations nothing will ever change. #buyblack#buyblackonly #supportsmallbusiness N.B.: above comment was found at below post.</p> <p>If we really want to avenge Breonna Taylor we need to start protecting and supporting each other. BUY BLACK ONLY support small businesses. Stop supporting your oppressors! This will make a bigger change than any protest.</p> <p>SOURCE: Instagram https://www.instagram.com/p/CBm3-ERaY56?utm_source=ig_web_copy_link</p>	<p>"The [KW] hopes this movement encourages people to make buying black a pattern and practice and not just a protest when you spend with a black owned business they're more likely to create black jobs, they're more likely to give back to black nonprofits black causes they're more likely to use that income that they generate from their business and buy assets that benefit black communities and also black families".</p> <p>SOURCE: YouTube, NBC https://www.youtube.com/watch?v=50ANDKE</p> <p>"Who said you can't look cute rocking a face mask? Point them out! Pictured is our Nwadi face mask. We love putting your names on our masks. Melanated voices amplified! #empowerHER #sungodsofficial"</p> <p>SOURCE: Instagram https://www.instagram.com/p/CDB_qfLk3b7?utm_source=ig_web_copy_link</p> <p>IF YOUR FEED IS GOING BACK TO NORMAL, SHAKE THE TABLE. IT'S STILL BLACK LIVES MATTER</p> <p>SOURCE: Instagram https://www.instagram.com/p/CB3_Bm3QgDQq?utm_source=ig_web_copy_link</p> <p>DON'T FUCKING SPEND MONEY</p> <p>Message to the Protesters: If you go back to normal & start spending money, you will NEVER get justice. They have no intentions on treating us fair. Never did. If you start spending money, the movement will pass like the wind & the state will continue to abuse people daily!</p> <p>SOURCE: Instagram https://www.instagram.com/p/CB1N8G7V6f?utm_source=ig_web_copy_link</p> <p>Black Businesses Matter</p> <p>SOURCE: Instagram https://www.instagram.com/p/CDeVFrBzOL7?utm_source=ig_web_copy_link</p> <p>#recycleblackdollars #recycleblackdollars</p>  <p>SOURCE: Instagram https://www.instagram.com/p/CB2Mc6FC9Q?utm_source=ig_web_copy_link</p>

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Prosocial Nudges and Visual Indicators Increase Social Distancing but Authoritative Nudges Do Not

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INTRODUCTION

Public health guidelines for social distancing are designed to reduce COVID-19 transmission and save lives. Although social distancing guidelines are relatively straightforward – keep six feet apart from others – following them is not always simple. To boost compliance with social distancing guidelines, simple visual indicators such as floor markings at six-foot intervals are often provided. Yet, information alone does not guarantee the behavior it is intended to promote (Hollands et al. 2016). To encourage social distancing, visual indicators are frequently accompanied by short messages, i.e., *nudges*. Different nudges have been widely employed during the pandemic to encourage social distancing and other COVID-19 risk-mitigating behaviors, including handwashing, mask-wearing, and vaccination. In many cases, these nudges highlight how compliance benefits oneself and others (Ceylan and Hayran 2021; Jordan, Yoeli and Rand 2021; Milkman et al. 2021; Rabb et al. 2021)³ or emphasize the medical expertise and authority behind the promoted behavior (Abu-Akel, Spitz and West 2021; Birnbach et al. 2017; Díaz and Cova 2021).

Although research suggests that nudges focusing on oneself or others foster preventive behaviors, it is often survey-based. Furthermore, results are inconclusive with respect to the relative effectiveness of nudges that emphasize benefits to oneself compared to nudges that emphasize benefits to others (Ashworth et al. 2021; Ceylan and Hayran 2021; Favero and Pedersen 2020; Jordan et al. 2021; Luttrell and Petty 2020; Rabb et al. 2021, Lu et al.2021)³. Relatedly, despite their ubiquity in public health messaging, it is unclear how authoritative nudges affect compliance with health guidelines and whether they trigger psychological reactance causing contrarian behavior (Díaz and Cova 2021, Krapen and Dolan 2021).

To address this knowledge gap, we tested whether social distancing is affected by visual indicators accompanied by nudges emphasizing personal benefits, public benefits, or authority in a field study at a major U.S. airport. During a ten-day period in January 2021, we collaborated with a private company to monitor the minute-by-minute locations of 57,146 travelers and track how social distancing varied in response to nudges presented on displays throughout a terminal (see Table 1).

Table 1: Nudge text by condition. Conditions were randomly assigned to two 24-hour periods during the study, balancing between weekdays and weekends. Crowd monitoring system displays as well as airport wayfinding and check-in monitors showed the condition’s message (i.e., nudge) to travelers throughout the terminal while color-changing poles presented crowdedness levels at each gate.

Condition	Nudge Text	Date
Baseline	N/A	Sunday, January 17 Tuesday, January 19
Generic	<i>Go towards green for less crowded areas</i>	Saturday, January 16 Wednesday, January 20
Self	PROTECT YOURSELF <i>Go towards green for less crowded areas</i>	Friday, January 15 Thursday, January 21
Others	PROTECT OTHERS <i>Go towards green for less crowded areas</i>	Thursday, January 14 Friday, January 22
Authoritative	DON’T BREAK CDC COVID-19 GUIDELINES <i>Go towards green for less crowded areas</i>	Sunday, January 17 Tuesday, January 19

Analysis

To analyze the effect of visual indicators and nudges on social distancing, we examine the proportion of travelers who maintained social distancing and were at least six feet apart from other travelers, excluding airport employees and groups traveling together. We repeat this analysis at both the whole terminal and gate level.

Results

Using a non-parametric approach, we first match observations across conditions by the number of travelers, and then compare average social distancing compliance between conditions over 30-minute time periods by estimating bootstrapped means, confidence intervals, and p-values. Table 2 presents results of pairwise comparisons at the (i) terminal level and (ii) the gate level.

First, to isolate the effects of visual indicators, we compare social distancing between the baseline and generic conditions. We find

that social distancing in the generic condition was marginally higher than the baseline in the terminal-level analysis ($p < .10$) and significantly higher in the more granular gate-level analysis ($p < .01$).

Next, we compare social distancing between conditions (i.e., self, others, and authoritative) to examine the effectiveness of the nudges. Both analyses indicated that social distancing compliance was higher in the others and self conditions compared to the generic condition (see Table 2). In contrast, social distancing was not statistically different between the authoritative and generic conditions.

Finally, we examine the consistency of social distancing differences between conditions across crowdedness levels at each airport gate. *Crowdedness* is the number of travelers at the gate divided by the gate’s capacity. *Gate capacity* is the maximum number of travelers that can occupy the gate while maintaining social distancing.

As depicted in Figure 1, for lower crowdedness levels (between 15% and 25%), social distancing was higher in the self and others

conditions (72%) compared to the generic condition (66%; $p < .05$). As gates become more crowded, differences in social distancing between conditions become more apparent. For example, between 70% and 80% crowdedness, social distancing in the self (68%) and others (66%) conditions remained higher than in the generic condition

(60%; $p < .05$). In contrast, at those crowdedness levels, the authoritative nudge decreased social distancing (57%; $p < .05$).

With the persistence of new cases and hospitalizations, COVID-19 remains dangerous around the world. Our findings demonstrate how nudges can promote or hinder COVID-19 preventive behaviors.

Table 2. Differences in percentage of travelers complying with social distancing guidelines between condition pairs. Each value is social distancing compliance of the latter condition subtracted from the former condition. CI and p-values were bootstrapped with 10,000 iterations. Observations were aggregated into 30-minute intervals and matched between conditions by number of travelers.

Comparison	Analysis	
	Terminal level	Gate level
Generic vs. Baseline	3.1*	4.4***
Others vs. Generic	7.9***	4.8*
Self vs. Generic	5.0***	5.0**
Authoritative vs. Generic	-2.0	-1.8
Others vs. Self	2.3	1.1
Observations	247	472

* $P < 0.10$, ** $P < 0.05$, *** $P < 0.01$.

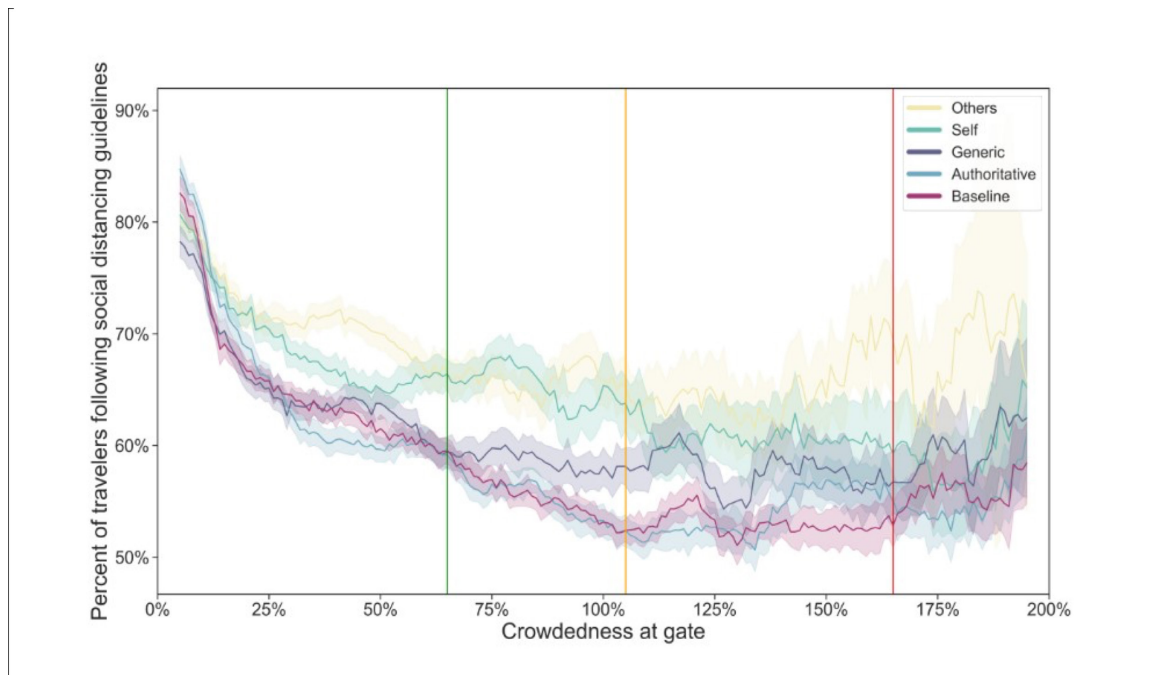


Figure 1. Social distancing as a function of condition across gate crowdedness levels. Lines represent moving averages at 10% intervals for the share of travelers maintaining social distancing. Shaded areas represent bootstrapped 95% CI with 10,000 iterations. Vertical lines mark the crowding thresholds for visual indicators to change colors (from light green to dark green at 65%, orange at 105%, and red at 165%).

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Technoism: A New Form of Consumer Prejudice and Discrimination

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INTRODUCTION

We introduce technoism, a new construct, to capture consumer's prejudice and discrimination toward technology. Consumers show prejudice against technology with objectively superior performance because of perceived human superiority. Three studies, across multiple contexts, demonstrate technoism exists, varies among consumers, and affects consumers' response to and use of technology.

Our data is publicly available at the following link: https://osf.io/8y3m6/?view_only=7e3a67c31d214b6db9e22e6fcc4284c2

Machines have become integral to consumer decision making from the mundane to the meaningful. Algorithms now make everyday recommendations from the household goods consumers buy to the movies they watch. Algorithms also influence potentially life-altering decisions related to consumer financial investments (Kou et al., 2014), whether to grant criminals parole (Dressel & Farid, 2018), and even triage decisions related to COVID-19 (Hao, 2020). In the modern age, this would seem a blessing as algorithms have exhibited the ability to outperform human decision making when it comes to desired outcomes (Dietvorst et al., 2015).

On the surface, machine algorithms seem a ripe and vibrant crop ready for harvest and further sowing. However, if one stirs up the soil and looks deeper, a long deeply held belief system seems to have taken root. Despite the superior performances of algorithm forecasts, research suggest humans exhibit apprehension, concern, and even distrust of algorithms (Longoni et al., 2019). People exhibit a preference for their fellow humans even when algorithms objectively exceed human performance (Dawes, 1979; Dietvorst et al., 2015; Longoni et al., 2020). On the surface such behavior might appear perplexing, however, it reflects a long active observation of human behavior: we distrust those that are different.

Across the course of history, humanity has exhibited prejudice and discrimination against those that are different, regardless of their merits. For example, some individuals or societies suppress others simply because of their gender or race, which is called sexism and racism (Masequesmay, 2020; Smedley, 2021). More generally, research has suggested that even when strides are made to bring humanity together it leads to other forms of prejudice and discrimination. For example, research on "speciesism" suggests that people deny basic rights to animals because of the belief that humanity is a superior species. In the case of machines, algorithms, and eventually artificial intelligence, this poses a risk that people may set aside factually better performance or decisions, purely based on the fact the recommendation comes from technology.

In this paper, we explore the idea that some people exhibit prejudice and discrimination against recommendations purely because the recommendations come from technology, which we term technoism. Technoism does not describe absolute refusal of technology but the value that an individual allocates to technologies in relation to humans. We propose, similar to racism, sexism, speciesism, and other forms of discrimination, that this level of intrinsic superiority over technology varies between individuals.

Our core research question is whether technoism exists and whether individual variation within it predicts prejudice and discrimination toward technology and, in this paper, algorithms. To test this hypothesis, we measured technoism by adapting items from

the speciesism construct (Caviola et al., 2019), originally measuring individuals' perceived superiority over animals, to the technology context. For example, technoism is assessed via items such as "An ideal society weights the opinion of human beings stronger than the opinion of technology.", "Humans should dominate technology", "Morally, technology always count for less than humans"; measured on a 7-point likert scale from "totally disagree" to "totally agree".

CONSTRUCT VALIDATION

In a first step, we tested for technoism's discriminant validity (preregistered: https://aspredicted.org/L6P_4B1) from the speciesism construct (Caviola et al., 2019) and from other perceptions related to technology (i.e., computer anxiety (Venkatesh, 2000), computer liking (Loyd & Gressard, 1984), technology optimism (Parasuraman & Colby, 2015), technology

insecurity (Parasuraman & Colby, 2015), perceived usefulness (Davis, 1989), perceived ease of use (Davis, 1989)). We collected 159 US participants ($Mage = 40.97$; 56.0% female) via Cloudresearch. All constructs demonstrated good reliability (range of $\alpha = 0.73 - 0.97$), except for computer liking ($\alpha = 0.46$). We calculated the average variance extracted for technoism ($AVE = 0.66$) and its zero order correlations with all other included constructs (see supplement Table S1 for complete correlation matrix). Technoism correlated the highest with perceived usefulness ($r = 0.379$). Thus, square root of the technoism's AVE (0.81) was bigger than technoism's correlation with all other constructs, demonstrating the construct's discriminant validity (Fornell & Larcker, 1981).

STUDY 1

Study 1 tested for technoism on the acceptance of algorithm input. More specifically, we tested whether the usage of algorithm input is perceived as less correct than the usage of human input if both inputs are qualitatively equal (i.e., same average accuracy in making correct predictions).

From an objective standpoint, the outcomes are similar, and thus if focused solely on ability no differences in perceived correctness should occur.

We collected 218 ($Mage = 38.91$, 47.7% female) participants from the US via Cloudresearch. Participants read about an employee that made investment decisions for an investment fund. For these decisions the employee received recommendations from a computer algorithm and a financial analyst, which have on average the same accuracy but differ in their recommendations. Depending on the experimental condition, participants learned either that a) the employee followed the computer algorithm's instead of the financial analyst's or b) the employee followed the financial analyst's decision instead of the computer algorithm's. Participants evaluated the employee's decision on a 7-point semantic differential with the two anchor points "not acceptable" and "acceptable". Subsequently, participants completed the technoism scale ($\alpha = .73$).

No main effect of condition was observed ($Malgorithm_instead_of_human = 5.80$, $SD = 1.14$; $Mhuman_instead_of_algorithm = 5.99$, $SD = 1.11$; $b = -0.195$, $SE = 0.153$, $p = .204$); however, we found a significant interaction ($b = -0.443$, $SE = 0.143$, $p = .002$). In both conditions, technoism significantly predicted perceived cor-

rectness of the employee's action. The higher a participants' score on technoism the more acceptable they thought the analysis was for following the human instead of the algorithm ($b = 0.210$, $SE = 0.105$, $p = .049$). In contrast, the higher a participants' score on technoism the less acceptable they thought the employee was for following an algorithm instead of a human ($b = -0.233$, $SE = 0.097$, $p = .018$); Moreover, individuals that scored relatively high on technoism perceived following an algorithm instead of a human recommendation as significantly less correct than following a human instead of an algorithm recommendation (Johnson-Neyman significance region for Technoism > 5.25 ; 42.20% of participants).

STUDY 2

In Study 2 (preregistered: https://aspredicted.org/VN7_H5S), we tested for technoism in the form of differential blame of a decision maker for a negative outcome that resulted from following an algorithm (vs. human) recommendation. Our experimental design consisted of four conditions: 1) a decision maker followed the recommendation of an algorithm instead of a human, 2) a decision maker followed the recommendation of a human instead of an algorithm, 3) a decision maker followed the decision of an algorithm in isolation, or 4) a decision maker followed the decision of a human in isolation. These latter two conditions allowed us to explore whether technoism led to bias in the absence of choosing between a human or algorithm or only when a decision maker makes a tradeoff.

All participants read a scenario that described a bank employee, who follows a recommendation (depending on the condition) to invest the participants' money. In all conditions, the average accuracy of human and algorithm recommendations was kept constant with 95%. We collected 366 US participants ($Mage = 37.92$; 51.6% female) via Cloudresearch. After reading the scenario, participants evaluated how much they would blame the decider, if their investment failed. We measured blaming of the decider with three items ($\alpha = .95$) adapted from an established scapegoating scale (Rothschild et al., 2012) and technoism as in Study 1 ($\alpha = .66$). We found no differences in blaming as a function of condition ($M_{algorithm_instead_of_human} = 4.43$, $SD = 1.72$; $M_{human_instead_of_algorithm} = 4.25$, $SD = 1.52$; $M_{isolated_algorithm} = 4.43$, $SD = 1.77$; $M_{isolated_human} = 4.39$, $SD = 1.54$; all $ps > .1$). However, we observed significant conditions by technoism interactions (interaction 1 "Algorithm_instead_of_human vs. Human_instead_of_algorithm x technoism": $b = -0.616$, $SE = 0.245$, $p = .012$; interaction 2 "Algorithm_instead_of_human vs. Human_isolated x technoism": $b = -0.662$, $SE = 0.217$, $p = .003$; interaction 3 "Algorithm_isolated vs. Human_isolated x technoism": $b = -0.451$, $SE = 0.228$, $p = .049$). Specifically, we found technoism led people to blame the employee more when they followed the algorithm instead of human ($b = 0.667$, $SE = 0.151$, $p < .001$). Moreover, technoism led people to blame the employee more when they followed the algorithm in isolation ($b = 0.457$, $SE = 0.175$, $p = .011$). In contrast, we found no relationship between technoism and blame when the employee decided to follow a human recommendation over an algorithm ($b = 0.051$, $SE = 0.181$, $p = .778$) or a human recommendation in isolation ($b = 0.006$, $SE = 0.147$, $p = .968$). Results of the interaction suggests technoism is prejudice against algorithms as opposed to favoritism toward humans.

STUDY 3

In Study 3 (preregistered: https://aspredicted.org/6SC_J3V), we tested whether the effect of technoism on decision maker blame is affected by the accuracy of the recommendation sources. As technoism describes the discrimination of technology irrespective of its

merits, we hypothesized that people may show bias against algorithms even if the algorithm recommendation is *more* accurate than the human recommendation.

Participants read a scenario about a doctor making treatment decisions for cancer patients. Here, the doctor receives an algorithm and a human recommendation to make the decision. We manipulated between-subjects three conditions: (i) the two recommendations have on average the same accuracy, (ii) the algorithm recommendation is *more* accurate on average (95%) than the human recommendation (75%), (iii) the human recommendation is more accurate on average (95%) than the algorithm recommendation (75%). In all conditions the doctor followed the algorithm recommendation.

We collected 325 US participants ($Mage = 28.91$; 73.8% female) via Prolific. Participants rated how much they would blame the decider if the chosen treatment would fail ($\alpha = .92$) and completed the technoism scale ($\alpha = .65$). We observed a main effect of condition; participants blamed the doctor more when he followed a less accurate algorithm ($M_{algorithm_low} = 4.89$, $SD = 1.39$) over a human decision than a more accurate algorithm over a human decision ($M_{algorithm_high} = 3.16$, $SD = 1.49$) or over a human decision with identical accuracy ($M_{control} = 3.57$, $SD = 1.48$, $p < 0.05$). Of central interest to technoism, the higher individuals scored on technoism the more they blamed the doctor for a negative outcome after following an algorithm recommendation even if the algorithm recommendation was significantly more accurate than the human recommendation ($b = 0.314$, $SE = 0.143$, $p = .031$). Technoism did not affect blaming of the decider if the human was more accurate than the algorithm ($b = 0.053$, $SE = 0.139$, $p = .704$); in essence everyone blamed the doctor the same for choosing the less accurate algorithm. The relation between technoism and decider blaming did not reach significance in the control condition ($b = 0.154$, $SE = 0.132$, $p = .246$) but was additionally established in Studies 4 – 9, outlined in the supplement material.

GENERAL DISCUSSION

We demonstrate across multiple contexts that appreciation of algorithm usage substantially depends on the individual beliefs (cf. technoism) and not only the decision context (Castelo et al., 2019; Granulo et al., 2020; Longoni et al., 2019). In essence, just as people have exhibited prejudice and discrimination toward their fellow humans because of sex and race, so do some discriminate against technology. Of note, this technoism is distinct from other constructs related to technology. Moreover, this work suggests that technoism can lead to bias even in situations where technology, in this case algorithms, perform objectively better than humans. Just as scholars have suggested that a careful monitoring of technology input is needed to avoid systematic discrimination of people by technology (Obermeyer et al., 2019), this work suggests that, as humans, we may need to be mindful of not discriminating against technology.

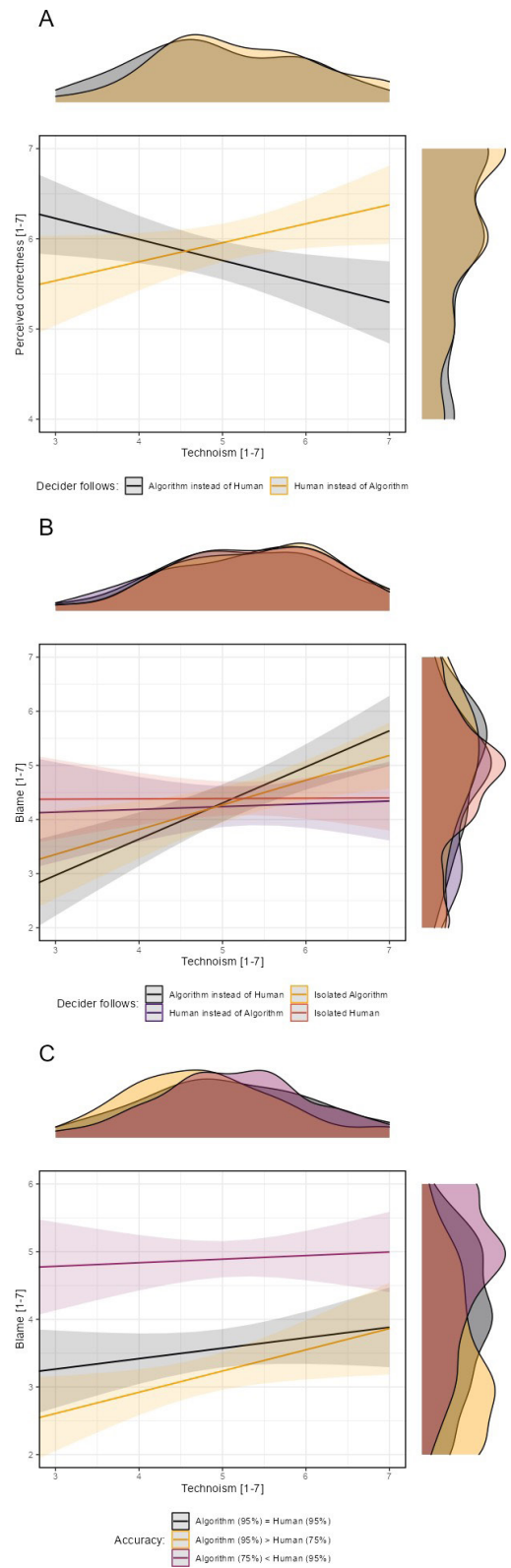


Figure 1. Regression plots for technoism in Study 1 – 3.

Plot (A) shows the effects of Study 1, the impact of technoism on perceived correctness depending on the recommendation source the decider followed. Plot (B) shows the effects of Study 2, the impact of technoism on blaming of the decider for a negative decision outcome, depending on the recommendation source the decider followed. Plot (C) shows the effects of Study 3, the impact of technoism on blaming of the decider for a negative decision outcome after following an algorithm recommendation, depending on the accuracy of the algorithm and human recommendation source.

Table 1. Regression results for Studies 1 to 3 & Effects of technoism on dependent variables in Studies 1 to 3 per condition

	B	95%CI		p
		SE	LL UL	
Study 1 (DV: correctness of decider behavior)				
Simple regression analysis				
Intercept	5.602	0.24	5.12 6.08	<.001
Conditions (1 = “Following algorithm instead of human recommendation”, 2 = “Following human instead of algorithm recommendation”)	0.20	0.15	-0.11 0.50	.204
Moderated regression analysis				
Intercept	8.94	1.11	6.77 11.12	<.001
Conditions (1 = “Following algorithm instead of human recommendation”, 2 = “Following human instead of algorithm recommendation”)	-2.02	0.73	-3.47 -0.57	.007
Technoism	-0.68	0.22	-1.11 -0.24	.002
Condition x Technoism	0.44	0.14	0.16 0.73	.002
Effects of technoism on DV per condition				
Conditions pooled	-0.20	0.07	-0.16 0.12	.785
Condition 1 (“Following algorithm instead of human recommendation”)	-0.23	0.10	-0.43 -0.04	.018
Condition 2 (“Following human instead of algorithm recommendation”)	0.21	0.11	0.00 0.42	.049
Study 2 (DV: blaming of decider)				
Simple regression analysis				
Intercept	4.43	0.18	4.08 4.78	<.001
Conditions 1 (1 = “Following algorithm instead of human recommendation”, 2 = “Following human instead of algorithm recommendation”)	-0.17	0.26	-0.69 0.34	.504
Conditions 2 (1 = “Following algorithm instead of human recommendation”, 3 = “Following isolated algorithm recommendation”)	0.01	0.24	-0.47 0.48	.979
Conditions 3 (1 = “Following algorithm instead of human recommendation”, 4 = “Following isolated human recommendation”)	-0.04	0.24	-0.51 0.44	.871
Moderated regression analysis				
Intercept	0.97	0.82	-0.65 2.59	.241
Conditions 1 (1 = “Following algorithm instead of human recommendation”, 2 = “Following human instead of algorithm recommendation”)	3.01	1.31	0.44 5.59	.022
Conditions 2 (1 = “Following algorithm instead of human recommendation”, 3 = “Following isolated algorithm recommendation”)	1.02	1.21	-1.36 3.40	.401
Conditions 3 (1 = “Following algorithm instead of human recommendation”, 4 = “Following isolated human recommendation”)	3.39	1.16	1.12 5.66	.004
Technoism	0.67	0.16	0.36 0.97	<.001
Conditions 1 x Technoism	-0.62	0.24	-1.10 -0.14	.012
Conditions 2 x Technoism	-0.21	0.22	-0.65 0.23	.350
Conditions 3 x Technoism	-0.66	0.22	-1.09 -0.24	.003
Effects of technoism on DV per condition				
Conditions pooled	0.31	0.08	0.15 0.47	<.001
Condition 1 (“Following algorithm instead of human recommendation”)	0.67	0.15	0.37 0.97	<.001
Condition 2 (“Following human instead of algorithm recommendation”)	0.05	0.18	-0.31 0.41	.778
Condition 3 (“Following isolated algorithm recommendation”)	0.46	0.18	0.11 0.81	.011
Condition 4 (“Following isolated human recommendation”)	0.01	0.15	-0.29 0.30	.968
Study 3 (DV: blaming of decider)				
Simple regression analysis				
Intercept	3.57	0.15	3.28 3.85	<.001
Conditions 1 (0 = Control “Both recommendation sources have an accuracy of 95%”, 1 = “The algorithm has an accuracy of 95% and the human of 75%”)	-0.41	0.20	-0.80 -0.02	.041

Conditions 2 (0 = Control “Both recommendation sources have an accuracy of 95%”, 2 = “The human has an accuracy of 95% and the algorithm of 75%”)	1.33	0.20	0.94	1.72	<.001
Moderated regression analysis					
Intercept	2.80	0.66	1.51	4.09	<.001
Conditions 1 (0 = Control “Both recommendation sources have an accuracy of 95%”, 1 = “The algorithm has an accuracy of 95% and the human of 75%”)	-1.13	0.95	-3.00	0.73	.233
Conditions 2 (0 = Control “Both recommendation sources have an accuracy of 95%”, 2 = “The human has an accuracy of 95% and the algorithm of 75%”)	1.82	0.99	-0.13	3.78	.068
Technoism	0.15	0.13	-0.10	0.41	.233
Conditions 1 x Technoism	0.16	0.19	-0.22	0.54	.406
Conditions 2 x Technoism	-0.10	0.19	-0.48	0.28	.600
Effects of technoism on DV per condition					
Conditions pooled	0.27	0.09	0.10	0.45	.002
Condition 1 (Control “Both recommendation sources have an accuracy of 95%”)	0.15	0.13	-0.11	0.42	.246
Condition 2 (“The algorithm has an accuracy of 95% and the human of 75%”)	0.31	0.14	0.03	0.60	.031
Condition 3 (“The human has an accuracy of 95% and the algorithm of 75%”)	0.05	0.14	-0.22	0.33	.704

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Between Two Worlds: Consumption of Private Schools by Low-Income Families

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INTRODUCTION

We examine education as a form of consumption by low-income families in Brazil that have risen economically in recent years. The study adopts the view of consumption as a symbolic activity. Goods are bought, consumed, or used more for their symbolic value than for their utilitarian purposes. It is through the appropriation of meanings residing in goods that individuals categorize their position in the social world (McCracken, 1988). At the heart of consumption as a symbolic activity is the understanding that consumers use goods as extensions of the self (Belk, 1988). As stated by Baudrillard (1996), goods are never possessed, but rather abstracted from their function and their meaning incorporated to the individual. Holt (1995) adds that consumption can be understood as experience, play, integration, and classification.

One of the most striking social and economic phenomena in recent times has been the entry in the global consumer society of large fractions of the world population that have gained access to products and services that neither them nor their ancestors had ever consumed before. Although this new consumption at first was often directed towards traditional consumer goods, other desires followed, finally entailing the consumption of services such as leisure and education. These phenomena have been observed in several emerging economies, such as India (Chudgar and Creed, 2016; Sermeels and Dercon, 2021) and Uganda (The Economist, 2022). In this context, the following research question guided the study: *How do low-income Brazilian families, residing in poor communities that have improved their economic situation in recent years, use private education as a means and a symbol of social ascent?* We depart from a Bourdieusian perspective of education (Bourdieu, 1984, 1986, 2007), as well as from Holt's (1995, 1998) and Üstüner and Holt's (2010) contributions by incorporating Bourdieu's perspective to the understanding of status consumption into the marketing research agenda.

The contribution of our study derives from the scant attention given to education from the perspective of symbolic consumption in the field of marketing. Most studies, particularly in economics and education, see education as an investment, either public or private (e.g., Santibañez et al., 2021), even when recognizing there is also a consumption component to it. The literature also addresses the benefits of education on consumption, that is, individuals' access to goods and services, or their ability to use them because of education (e.g., Cheng, 2021). To our knowledge, few marketing studies have examined education as symbolic consumption in the context of low-income families that have improved their social standing (an exception is Costa Filho and Rocha, 2020). However, due to the very logic of scarcity, one can expect that consumption by this social fraction presents meanings that are different from those of consumers who exercise this role in the context of abundance. By examining the phenomenon, we concur with Rocha et al.'s (2020, p.2) view that "as an emerging economy, Brazil offers a fertile research landscape" to study the consumption of the less-privileged members of society.

METHOD

The study is qualitative and interpretive. The informants were fathers and mothers of lower-middle class families with children enrolled in private elementary schools, residents of *favelas* (slums), who improved their economic situation in recent years. The *favelas*

are typically located in the hills of the city, side by side with wealthier areas where the upper classes reside. Despite proximity, the two worlds are quite segregated, except that the *favela* residents often work in stores, other types of services, or as domestic employees in the homes of the wealthy. Twenty-four in-depth interviews were conducted with parents of 14 families. Informants were first asked to tell their family history, and then to describe their choices of private education for their offspring. Each parent was interviewed separately to search for occasional differences in their views of the experience. All names were disguised. The analytical method used was thematic analysis (Braun and Clarke, 2006). Each family was analyzed separately and then compared with the others and the final results with the literature.

RESULTS

Contrasting different worlds

Metaphors of private education have emerged in systematic contrast to public education. The backdrop is that public schools are meant for the lower class and are suitable for the more "ignorant" and "poorer," and "for the worst people," whereas private schools are seen as a place frequented by the middle class, by children of liberal professionals, who belong to "more structured families," consisting of "better people," who, even if poor, are "concerned about their kids." The contrasts that these two worlds represent – one rejected and the other coveted by the informants – extend to all aspects of the school. The private school is protective, quiet, ventilated, organized, disciplined and progressive. The public school, on the other hand, is threatening, a place of shouting and disorder, a place of disrespect and aggression, pure "chaos."

Making symbolic differences tangible

Ease of access to teachers and principals were highly valued and were seen as a tangible symbol of parents' status. Such was the case of Mário, who stated: "In private schools you have a more humane contact. You know the teacher; you know the principal; I just think it's better." And Rebeca, who had easy access to her son's teacher: "I know the teacher. I have her phone number, her email address, and her Facebook. I can make an appointment and go there and talk to her whenever I want to." A good physical infrastructure was also seen as a tangible sign of school quality. And to display the symbols of their social ascent, the parents often used social media to share photos depicting diplomas, attendance at extracurricular activities typical of the elite, and school uniforms.

Compensating inequality

Putting children in a private school meant giving them the opportunity to move forward in the process of social ascension initiated by their parents, by acquiring social and cultural capital. Regarding the acquisition of social capital, the private school offered the opportunity to interact with those "from the street" (those who live in urban areas of the city), as opposed to those "from the hill" (that is, those who live in the *favelas*), which was a common demarcation among the informants, who, for the most part, were born and raised in Rio's *favelas* on the city's hillsides. Interacting with those "from the street" made it possible to acquire different habits, attitudes,

and behaviors. “We look for what is best for him... because [there are] these things that go with the school and with socializing with friends. The school offers some things like outings, trips abroad. [...] We want him to participate in those things too, to have that interaction with friends” (José).

The acquisition of cultural capital was manifested by the refinement of musical, artistic, culinary and fashion tastes. The children consumed activities typical of the elite, such as ballet and language classes, visits to museums and exhibitions, or even trips abroad. The different tastes, preferences, and interests, as well as the polite manners and language obtained through private education, were also mentioned on a recurring basis. Cultural activities were well regarded by the informants, as explained by Raiane, who sought to take her daughter to children’s theater plays: “I go there, and I want to cry because I never had that. And she is there completely happy because for her, it’s normal.”

Among the activities, learning English was the highlight. Most of the private schools offered the discipline as part of their curriculum, but some of the families paid for an additional English course for their children. In the Araújo family, for example, Jaqueline attended ballet, swimming, and jazz classes, as well as an English class. The same was true of Laura, of the Ribeiro family: her school offered English classes as part of the curriculum, but the father planned to enroll Laura in an English course because “English taught there is different; it’s stronger.” Learning English meant inserting their children into a globalized world, giving them the opportunity to access other worlds unknown to their parents.

Circumscribing a new social logic

Forming circles of friendship with classmates and parents from other social classes, which extends beyond the boundaries of the school, was seen in a very positive light by the informants, who never had had the opportunity to interact in environments frequented by members of higher classes, except in situations of subservience. Another advantage provided by interacting with children from other classes related to future prospects. Instead of thinking about professions without much promise, such as manual labor, or aiming to be

a thief or a drug dealer (“like many youngsters in the *favelas*”), children learn to want “more dignified” careers, such as being a professor, a doctor, or an engineer. Mário pointed out: “Although they are children, they talk about pursuing a profession; they talk about going to college. I didn’t have that when I was in school.” Fausto synthesized his wishes for his son: “What I want for my son is not what I had. I don’t want him to have to go to work when he’s only thirteen, like I had to. [...] What I really want is for him to graduate, get a master’s degree, and have a cool profession – not one like mine.”

Private education was therefore an instrument of distinction for both parents and children. The distinction between parents who put their children in a private school and those who did not was articulated as a symbolic expression of love, as a testimony to the structure and solidity of the family and its social ascension:

“The public school caters to the lower class. Not that I’m from the upper class; we, ourselves, are from the lower class; but there are people from every layer. Even here in [the slum], there are spots that are worse than others. Then the kid goes to school with those influences. As long as I can, I’m keeping mine in the private school, so she can interact with others... I’m not saying they’re any better – we can’t judge people. But at least their parents think as we do. They want the best for their kids.” (Ricardo)

In the Vieira family, the son acquired tastes, preferences and behaviors considered distinct from those of the other boys in the community and similar to those of their schoolmates, in such a way, that he “...doesn’t even act like he’s from here [the slum].” The parents themselves created barriers by forbidding their children from playing with the others in the streets and alleys of the *favela*. Ricardo compared his daughter with other children in the community: “When she’s around other children, she’s even a bit withdrawn because she doesn’t know how to play the games of the children who are being raised without much supervision.” Thus, the informants saw their offspring assimilating the lessons from the “other world” and becoming, at least to some extent, part of that world.

DISCUSSION AND FINAL CONSIDERATIONS

Table 1 summarizes the main findings of the study.

Table 1 – Main findings

CLASSIFICATION		EXPERIENCE	INTEGRATION
<i>Contrasting different worlds</i>	<i>Making symbolic differences tangible</i>	<i>Compensating inequality</i>	<i>Circumscribing a new social logic</i>
- Who goes there - Who are their parents/ families - What social rules are enforced - What are the performance requirements	- Ease of communication with schoolteachers and principal - Quality of physical infrastructure - Use of social media to display distinction	- Socializing with “the street” - Acquiring superior role models - Acquiring taste - Experiencing the unexperienced	- Assimilating tastes and preferences - Becoming part of the “other world”

Embedded in a consumer society (Baudrillard, 1970), low-income consumers use private education to classify, experience, and integrate (Holt, 1995). Classification is rooted in the contrast between private and public schools, representing two opposite worlds that mirror the inequality in Brazilian society. While the private school is seen as the territory of the rich and privileged, the public school is represented as a place of poverty, exclusion, and deviant behavior. Such representation of the public school, albeit overstated and stereotyped, recognizes some of the problems identified by previous research in Brazil (e.g., Saisi, 2016). On the other side, the

representation of the private school pictures an idealized world of respect, organization, and progress, to which our informants aspire to belong. Thus, symbolic consumption of education serves to classify adults, children, and places of attendance. An invisible hierarchy is established in which the family and its members stand out from the rest because they can consume private education. They symbolically leave the “hill” and start to experience the “street,” but they are still on the boundaries between the two worlds.

These parents wanted to offer a set of experiences, social and cultural, to their offspring, and by doing so, vicariously experience

it themselves. The informants assumed that the tastes, attitudes, and preferences of the upper classes formed a set of codes that should be mastered to ascend. Since they, themselves, did not have this social and cultural capital to transmit to their children, they used private education, through which, in their understanding, several resources – attitudes, skills, preferences and behaviors – could be obtained and internalized (Bourdieu, 1986). By consuming private education (and its accessories), the appropriate cultural and social capital could then be transferred, owned, and accessed, when necessary, by their offspring. Thus, our informants were willing to make sacrifices to provide the relevant social markers to their children.

The child's socialization in a private school serves the family's plans for social ascension. It is necessary to build a network of relationships that transcends the social world of the "hill" and that can only be found on the "street," where the wealthiest people live because, although it is necessary to "live" on the hill, there is no need to "interact" there. This subtle territorial demarcation is in line with Üstüner and Thompson (2012, p.801), who noted that "consumers further assert their privileged social status position by setting strict boundaries on the range of normatively acceptable social interactions."

In Brazil, private education, from which the poorest segments have been systematically excluded, has become a symbol of belonging to the middle class and an aspiration of the lower classes. Therefore, examining the acquisition of this object of desire provides some relevant insights into how private education conveys meanings associated with distinction, status, and social ascension, and how parents appropriate these meanings and transfer them to their children. Aware of their limitations, the families in our study sought an education that would provide the tacit acquisition of the cultural and social capital necessary for the social ascent of the next generation so that the parents' own histories of childhood deprivation would not be repeated.

The study has several limitations. We examined a group of families living in the slums on the hillsides of the city of Rio de Janeiro, a cosmopolitan urban center, where poor communities live side by side with the wealthy areas. Although segregated, members of poor families do interact with the wealthier part of the population, mainly as service providers, and thus they can observe and learn about their lifestyles and tastes. Wherever segregation is more complete, the issues investigated here may show a different turn. In addition, the families examined had left poverty – in some cases extreme poverty – to have a discretionary income. They have experienced lifestyle changes in recent years that may have stimulated their desire for further ascent. Thus, they may differ from others that have remained in poverty. Future research should seek to understand the continuity of the processes used to socially ascend by low-income families, both through education – as in the case of higher education – and through the search for and access to other goods and services. It would also be interesting to investigate families with similar characteristics whose children have remained enrolled in public schools.

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A machine learning approach for the prediction of individual and market level demand from retail loyalty program data:

Analytic models and discussion of possible behavioral and business practice mechanisms

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INTRODUCTION

Consumers walk many paths. Every decision requires the integration of several factors, be they economic, biological, or social, that complement and compete in terms of importance given the context of the decision (Brehmer, 1992; Dubé et al., 2014). Some decisions can also be emotionally charged, impulsive, and a little irrational (Amos, Holmes, & Keneson, 2014). Thus, the decision-making process results in heterogeneous consumer journeys, which makes predicting behavioral outcomes a unique challenge.

Behavioral prediction models at aggregate market levels are already well-established in the market and perform quite well. Methods such as the autoregressive-integrated moving average (ARIMA) model have been around since the 1970s and perform accurate predictions of aggregate market demand (e.g., total sales) at daily, weekly, monthly, or yearly scales (Box & Pierce, 1970). Yet, these models typically only use historical time-lagged sales data to predict future sales and require extensive transformations to address the non-linearity and seasonality of factors driving demand. Modern machine learning (ML) techniques for predictive modelling can overcome some of these limitations, while also affording superior accuracy of aggregate demand forecasts with a greater number of predictor variables (Bajari, Nekipelov, Ryan, & Yang, 2015).

Despite the technological advances in ML and its recent uptake in consumer research (Mariani, Perez-Vega, & Wirtz, 2022), little research has applied these methods to the prediction of food demand. Food choices are particularly complex due to the interplay of individual factors, ideals, resources, social frameworks, and the environmental context that influence consumer value negotiations, strategies, and choices throughout their lifecourse (Furst, Connors, Bisogni, Sobal, & Falk, 1996). Despite heterogeneity at the individual level, demand at the market level is a lot more predictable. Traditional statistical models have fared well at predicting the market demand for fresh foods on daily and weekly time scales (Arunraj & Ahrens, 2015; Marmier, Gonzales-Blanch, & Cheikhrouhou, 2009). ML approaches like non-linear autoregressive exogenous neural networks (Lutoslawski et al., 2021), artificial neural networks (Çetinkaya & Erdal, 2019; Huang, 2013), support vector regression (Rincon-Patino, Lasso, & Corrales, 2018), decision trees and random forest (Evers, Tavasszy, van Duin, Schott, & Gorte, 2018) have also been applied to predict market demand. Yet, common among all the ML approaches applied previously, the demand models were built using features constructed from historical sales, often without the incorporation of marketing or consumer variables. None of these models have been tested at predicting demand for food products at the individual level. Therefore, we seek to answer the following three research questions: (1) can ML methods be applied to predict food demand using marketing data from retail loyalty programs?, (2) can such models be applied at both the market and consumer levels?, and (3) what features are most important for prediction?

The objective of this article is to present two consumer demand prediction models that are useful and actionable for marketers working in food retailing today: (1) prediction of weekly sales at brand-level, and (2) prediction of monthly individual-level sales on a given brand. One million randomly selected purchase decisions within the

context of grocery retailing over a two-year period are used to train five machine learning (ML) models capable of predicting demand at both levels. Predictors included in the model are core to marketing, including over 70 variables that cover price, promotion, placement, product, and consumer characteristics. The results reveal two actionable models for marketers capable of predicting brand-level weekly demand for branded food products with an r-squared of 99% and individual-level monthly demand with 54%, based on the manipulation of marketing variables within the control of a marketer. An investigation into the contribution of each feature to the prediction model uncovers differential pathways of demand prediction, where marketing strategies like price discounts and flyer promotions contribute more to the market level sales prediction than those at the consumer level.

DATA AND CONTEXT

Loyalty program data was obtained from a large retail chain that operated 256 grocery stores located in the province of Quebec, Canada for a 23-month period ranging from February 1, 2015, to December 30, 2016. Each row of the dataset corresponds to one item purchased at a grocery store checkout by one of the retailer's loyalty cardholders, which can be linked to time-bound product, store, marketing, and consumer information from other tables defining the context.

Brand marketing managers are the target audience for our prediction models. Focusing on 22 individual food brands under the portfolio of three of the world's largest multi-national corporations (MNCs), which includes 3815 unique product codes (UPCs), we form a full dataset that spans 757.8 million purchase transactions by 657,261 loyalty program cardholders (an additional 138,136 were removed by isolation forest as outliers). Predicted outcome measures (weekly brand-level and monthly individual-level sales on an individual food brand) were aggregated across the full dataset and matched to the individual transaction representing a single purchase decision. A random sample of one million transactions was taken from the full dataset to train the five ML prediction models to conserve computational costs like system RAM, training time, and prediction time.

Each of the one million transactions was linked using search query language (SQL) to a timestamp, consumer information, and product, placement, price, and promotion (4 Ps) marketing data defining the context at the point of sale within the retail loyalty program data. This process yielded 77 predictor variables: (i) *time* variables: holiday, season of year x 4, year, week of year, month of year; (ii) *product* variables: MNC corporate brands x3, individual food brands x 22, product size in grams or milliliters, product category x 18; (iii) *placement* variables: retail banner x 4, urban or rural; (iv) *price* variables: regular price, discount, final price; (v) *promotion* variables: number of loyalty points awarded, location of promotion in flyer (front, inside major, inside minor, back), digital promotion, in-store price-cut or sell-off; and (vi) *consumer* variables: days registered in loyalty program, length of relationship with brand in days, cluster number (predicted with k-means clustering), and neighborhood socioeconomic indicators for income, unemployment, education, and household composition from the 2016 Canadian census.

Note that the consumer variables were only used for the individual-level predictions, not the brand-level.

We first conducted principal component analysis (PCA) and k-means clustering to identify distinct segments of cardholders based on past expenditures, with the Silhouette score being used as an evaluation metric to determine the optimal number of clusters. This process resulted in each loyalty cardholder being assigned to one of two clusters, which was used as a predictor for the individual-level demand model. All predictor variables were standardized using the sklearn StandardScaler python package. Machine learning models implemented for the sales predictions include linear regression, random forest, eXtreme gradient boosting (XGBoost), k-nearest neighbors (kNN), and multi-layer perceptron artificial neural network (aNN). The kNN optimally used the 10 nearest neighbors for both models. The aNN was constructed using two layers (73 neurons, 37 neurons) for the market level model and two layers (75 neurons, 50 neurons) for the consumer level model, both using a Rectified Linear Unit (ReLU) activation function. Shapley values were used to determine the importance of each feature to the predictions (Jia et al., 2019). The random sample of one million transactions was partitioned to 70% for training and 30% for testing the machine learning models. Root Mean Square Error (RMSE), Mean Absolute Error (MAE), r-squared, training time, and prediction time were used as performance metrics. All data analyses were conducted using Python 3.7 on Google ColabPro+. Data were stored on Google Drive and connected to virtual machines running our Python code. The following open-source libraries were used: *numpy*, *pandas*, *matplotlib*, *seaborn*, *sklearn*, *xgboost*, *shap*, and *yellowbrick*.

RESULTS

Two principal components explained 97.794 (SD= 0.35%) of the variance in sales. Using these two components to feed into the k-means clustering algorithm, we observed that the optimal number of clusters is two, which yielded the highest silhouette score of 0.655. The first cluster ($k=0$) contains 75% of cardholders ($n=491,409$) who consistently spend more on the 22 food brands, whereas the second cluster ($k=1$) contains the remaining 25% ($n=165,852$).

A summary of the predictive results is provided in Table 1. For brand-level monthly sales, random forest (RF) regressor is the best performing algorithm with the lowest RMSE and MAE, highest R-squared, and decent training and prediction running times. Remarkably, RF can predict brand-level weekly sales with 99.96% accuracy given the 73 marketing predictors. The MAE for RF predictions of weekly sales across all 256 stores is only \$1,228.90. aNN also performs well but has a slightly higher error and substantially longer training times (33x longer than RF in seconds). kNN also achieves high accuracy at 95.60% but suffers from a long prediction time. Linear regression is the worst performing, only explaining 68.90% of the variance in weekly sales at the brand level.

Regarding monthly individual-level spending, aNN performs best. The aNN algorithm achieves 53.4% accuracy and the lowest RMSE and MAE, despite longer training times. Given the 78 predictors used for the consumer model, aNN can predict an individual’s monthly spending within a \$12.02 margin of absolute error. RF performs second best and is approximately 2% less accurate than aNN but benefits from a shorter training time. Again, we observe the linear model performs worst at individual demand predictions but is not that much worse than the best-performing non-linear aNN model.

Table 1. Performance metrics (n = 1,000,000)

ML method	Weekly Brand-level Sales					Monthly Individual-level Sales				
	RMSE	MAE	R ² (std dev)	Train time (s)	Predict time (s)	RMSE	MAE	R ² (std dev)	Train time (s)	Predict time (s)
linear regression (LR)	1,146,805.73	694,981.41	68.90% (1.47%)	2	0	16.92	13.35	47.10% (0.14%)	5	0
random forest (RF)	34,218.88	1,228.90	99.96% (0.01%)	518	7	16.18	12.32	51.42% (0.18%)	1,568	32
eXtreme gradient boosting (XGBoost)	711,745.21	445,724.92	88.14% (0.25%)	129	1	16.48	12.72	49.90% (0.21%)	158	1
k-nearest neighbors (kNN)	415,984.28	136,353.49	95.60% (0.18%)	0	4,147	16.8	12.82	47.64% (0.24%)	0	4,286
multi-layer perceptron artificial neural network (aNN)	266,454.86	124,019.54	95.38% (0.10%)	17,200	4	15.85	12.02	53.40% (0.10%)	4,107	1

Shapley values were computed for each of the one million observations in the dataset. The Shapley value for a feature represents how much the model prediction changes the feature is observed versus unknown, which is measured in units of dollars. We present these results in a beeswarm plot in Figure 1, where each observation is represented by a single dot on each feature row. The position of the dot on the x-axis is determined by the Shapley value, whether it has a negative or positive impact on the prediction. Dots “pile up” to show density, while the colour shows the original value of the feature as high or low (e.g., 0 would appear blue whereas 1 would appear red for a binary indicator).

Notable differences exist among the top ten features contributing to the brand and consumer-level predictions. For the brand

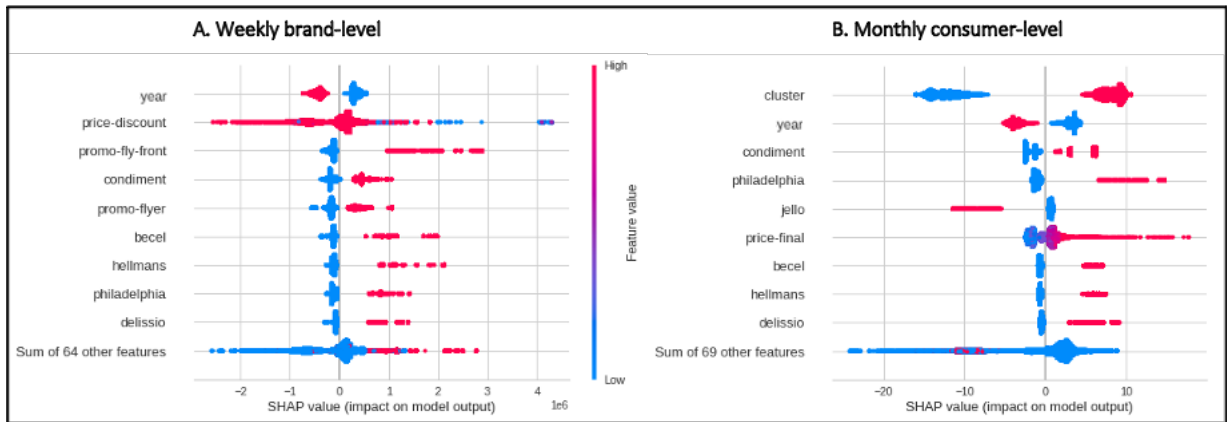
model, time (year) is the most important predictor, followed by the magnitude of price discount, and whether the product was on promotion on the front-of-flyer or not. Price discounts and flyer promotions have strong positive impacts on predictions of weekly sales for branded food products.

Conversely, for the consumer-level model, cluster number is the most important predictive feature. The importance of the cluster number in contributing to individual demand predictions highlights the utility of quantitative segmentation approaches, such as the one done with k-means clustering at the start of this article. Other important features include time (year), brand name, and the final price. Only the final price appears in the top 10 predictors, suggesting that the final price, regardless of a discount or not, is most predictive of

monthly consumer sales. Individual brand names (e.g., Philadelphia) appeared within the top 10 predictors, which are synonymous with frequently purchased brands with strong and lasting market share.

The strength of individual brand names and categories seems to overcome the impact of marketing on predictions at an individual level in this model.

Figure 1. Top 10 feature importance by SHAP value for (a) brand-level and (b) consumer-level (n = 1,000,000)



DISCUSSION

These analytical results align with previous research that has demonstrated the use of machine learning models for predicting the demand of food products at a market level. However, our model only uses marketing features that describe the food environment at the point of sale to make brand-level predictions of weekly sales with an r-squared of 99.96%. This model can be extremely useful for marketers and brand managers in practice. After selecting one of the 22 food brands in one of the 18 product categories, one can manipulate any of the 5 placement, 3 price, 9 promotion, or 1 product variables to experiment with predictions of market-level outcomes for the brand, for any week of the year, given the scenario in mind.

Marketers should continue to pay careful attention to the magnitude of a price discount, which is one of the most influential features of our model. The distribution of the Shapley scores for price discounts does suggest that some discounts may not actually boost overall revenues for a brand; marketers could use our model to predict the impact of price changes on market outcomes so as to guide their marketing program strategies. Even in the consumer-level model, the final price paid (which factors in the price discount) is among the top ten predictors of an individual's spending on a particular brand in any given month.

Our results also reveal the difficulty in predicting individual behaviors. The best performing ML model for monthly consumer spending, the multi-layer perceptron artificial neural network (aNN), achieved an r-squared of 53.40%, meaning that our model accounts for about half the variance in individual sales. The consumer model also integrates consumer-specific variables defining the length of the relationship the consumer has with the retailer and the food brand, as well as neighborhood-level socioeconomic characteristics, none of which appear among the top ten predictors of individual-level sales. The most important feature, rather, is the cluster number which was assigned using a k-means clustering analysis based on all-time consumer expenditure across the 22 food brands. This points to the usefulness of quantitative segmentations in marketing practice, and how nested ML approaches can yield superior predictive results. These benchmark individual prediction models can now open the door for future research that employs other methods of segmentation, which do show promise in improving the low r-squared.

Clearly, the other half of the variance not explained by the consumer model must be explained by factors outside our model, which could be tied more so to the biological, psychological and social context that is specific to an individual at a point in time. Possible other factors include hunger (Hoeftling & Strack, 2010), lifecycle events and experiences (Furst et al., 1996), social influences (Shepherd, 1999), emotions (Gutjar et al., 2015), impulsivity (Mishra & Mishra, 2010), neurocognitive evaluations of value (Petit et al., 2016), risk perceptions and risk preferences (Lusk & Coble, 2005), decision-making under uncertainty (Tonkin, Coveney, Meyer, Wilson, & Webb, 2016), weight management and dietary goals (Lowry et al., 2000), dietary habits (Hackett et al., 2008), or other behavioral mechanisms. Future work, for example, could incorporate measures of these facets as features for segmentation via clustering, which could also likely enhance the accuracy of behavioral predictions for the individual-level model.

Future research may consider implementing optimization algorithms to tune marketing parameters to achieve desired outcome measures. At the consumer level, this optimization is a key pathway for personalized marketing or precision retailing (Dubé, Soman, & Almeida, 2021). Using this model, price discounts and promotions could be tailored to maximize an individual's spending on a particular food brand in each month. However, this also raises questions of fairness, welfare, and equity around personalized pricing that are still to be addressed in marketing practice, particularly for food (Kallus & Zhou, 2021). The optimization of individual spending on a branded food product also raises a secondary ethical issue with societal relevance: should we implement an individual-level ML optimization algorithm on branded food products, when, at the same time, processed foods have been found to increase the risk of overweight/obesity, cholesterol levels, and metabolic syndromes (Pagliai et al., 2021)? Perhaps this optimization approach would be more suitable for boosting the consumption of healthy foods that are notoriously under-consumed, such as vegetables (Ma, McRae, Wu, & Dubé, 2021), as a pathway enabling the convergence of food, health, and wealth (Dubé, Pingali, & Webb, 2012).

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Evaluative Dynamics: Summarizing Customer Journeys, Interviews, and Lives

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INTRODUCTION

Life is filled with experiences over time that we undergo twice: once in the living, and once in the recounting. When we go on a week-long vacation, we have the moment-by-moment experience of that vacation. But when a friend asks us how the trip was, we do not give them a week-long tale. Summarizing and compressing experiences is an essential part of learning and decision-making, both in consumption and management.

How do people summarize continuous experiences? Take a customer journey (Edelman and Singer 2015), consisting of how a customer felt across their various touch points with a firm, such as when they first saw the firm's ad, logged on to its website, received information about the product, installed the product, and so forth. How does a consumer summarize how satisfying an entire customer journey was? One idea is to literally "sum up" the affect experienced over the course of the journey—say, by plotting happiness over time and then taking the area under the curve (integral). However, researchers have suggested people instead weigh the peak and end moments most heavily (Fredrickson and Kahneman 1993), or consider the trajectory's velocity (Hsee, Abelson, and Salovey 1991), acceleration (Hsee, Salovey, and Abelson 1994), or improvement and deterioration (Bhargave and Montgomery 2013; Loewenstein and Prelec 1993).

Previous work has studied how people summarize trajectories by testing the importance of only one or two features at a time (e.g., peaks and velocity), and by considering lines that simplify the complexity of real-life trajectories, such as how consumers feel when shopping for a product or how managers feel when listening to an interviewee (Bhargave and Montgomery 2013; Carmon and Kahneman 1996; Fredrickson and Kahneman 1993; Hsee et al. 1994; Kahneman et al. 1993; Loewenstein and Prelec 1993). The current work significantly builds and expands on this previous work by considering 27 differently patterned trajectories and quantifying the relative extent to which 20 features of these trajectories predict people's summaries.

The features we chose capture both the literal characteristics of each trajectory and more semantic features based on participant's descriptions of the trajectories. Literal features include how much the trajectory was improving or deteriorating over time (various weighting of the first derivative, or slope), whether such changes are fast or slow (various weighting of the second derivative, or acceleration), what the peak, valley, and end values of the line are, the combined content contained by the trajectory (integral, area under the curve), and the number of peaks, valleys, and total extrema. Semantic features include how interesting the trajectory is (as represented by the number of unique words used by different participants to describe the trajectory), the semantic meaning of these words (as generated from a trained neural network), and the valence of these words (as calculated by a sentiment model).

Here we explore the possibility that more than one of these features is important, because they inform an evaluation of how well or poorly the trajectory is going overall. This evaluative representation is how consumers naturally represent the trajectory, perhaps because such a psychological representation is more compact and useful than keep tracking of all the literal features of the pattern (e.g., its peaks, troughs, integral, velocity, and so on). This evaluation is also what ultimately informs how people rate the experience, such as how satisfying a customer journey is, whether to hire someone based on their interview performance, or how meaningful a life is.

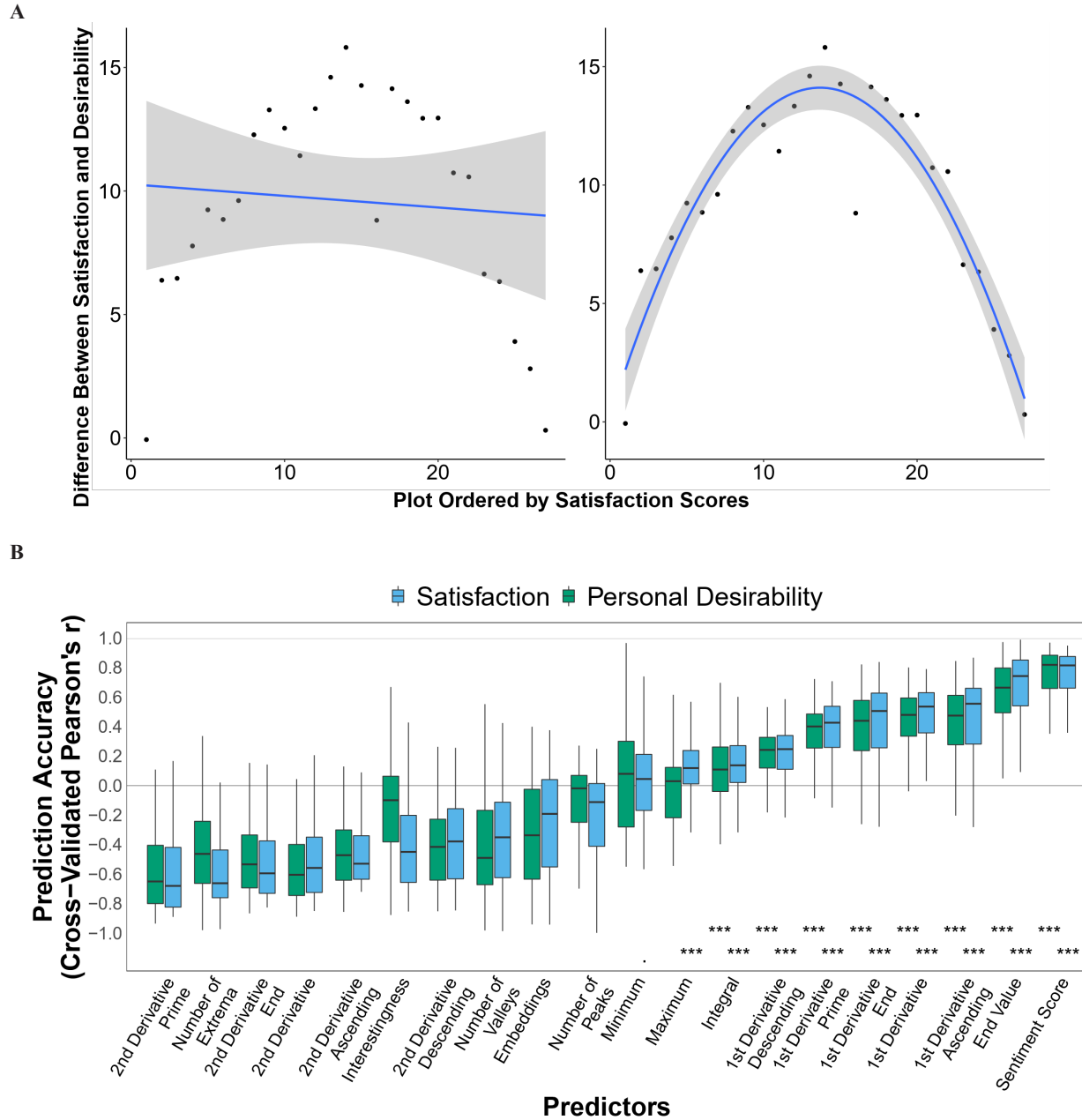
Study 1 examined how consumers judge the satisfaction of 27 customer journeys, derived from a range of basis functions and common narrative arcs of stories (Vonnegut 1995). The plots captured a fictional customer's experience with a solar panel firm named *Solaro*, with "Happiness" plotted on the y-axis and "Customer Touchpoint" plotted on the x-axis. After seeing each pattern, participants (296 recruited, 119 excluded) answered questions about how satisfied and desirable the customer journey was, and how willing they would be to pay for the service (DVs in all studies were on 0–100 scales). Participants also described the journey using a single word.

Patterns of customer satisfaction resembled that of desirability and willingness to pay (satisfaction: $r = .42, p < .001$; personal desirability: $r = 0.39, p < .001$). Notably, participants' summaries of satisfaction and personal desirability depended on the *pattern* of the trajectory ($b = 0.17, p < .001$). Participants also differentiated between how satisfying and desirable a customer journey was ($b = 9.61, p < .001$), with satisfaction scoring significantly higher than personal desirability ($M = 43.37 (29.64)$ vs. $M = 33.75 (31.58)$; $t(4778) = -46.75, p < .001$). Moreover, we noticed an interesting pattern between summaries of satisfaction versus desirability: When we plotted satisfaction and desirability scores arranged in ascending order of satisfaction, the differences were initially small, then increased, then decreased again (Figure 1A). Indeed, when we regressed the difference between satisfaction and personal desirability on customer journey numbers ordered by the average satisfaction scores, we found that a linear model fit the data poorly ($b = -0.05, p = .672$), whereas a quadratic model fit them well (quadratic $b = -0.07, p < .001$; quadratic $>$ linear, $p < .001$). Thus, although customer journeys were generally viewed as more satisfying than personally desirable, satisfaction and personal desirability converged for journeys that were viewed as either extremely full or devoid of satisfaction. While consumers acknowledged that ups and downs could lead to satisfying experiences, they preferred to avoid fluctuations themselves in favor of experiences that were consistently good or improving.

To quantify how well each feature predicted summaries of satisfaction and personal desirability, we used a leave-one-subject-out cross-validated procedure. Summaries were significantly predicted by (from best to worst) the sentiment scores of the word descriptors, followed by the end value, various first derivatives, integral and maximum value (Figure 1B).

Figure 1

LINEAR AND QUADRATIC FITS TO THE DIFFERENCE BETWEEN SATISFACTION AND PERSONAL DESIRABILITY RATINGS (A) and PERFORMANCE OF FEATURES IN PREDICTING Satisfaction AND PERSONAL DESIRABILITY (b) in study 1



Note. (A) Points arranged by increasing satisfaction scores. (B) Feature score boxplots depict the median and 25th and 75th percentiles. Features are ranked by how well they predict satisfaction (blue). The thin line above the plot depicts the noise ceiling, an estimate of the maximum possible performance of our predictors, given the reliability of the data (obtained by randomly splitting the participants in half, finding the average rating per lifeline for each half, correlating the two halves, and correcting with the Spearman-Brown Prophecy Formula: $r_{full} = 2(r_{half}) / (1 + r_{half})$, where r_{half} = split-half reliability and r_{full} = full-length estimation). The noise ceiling encompasses the range of values between the 25th and 75th percentiles of all split-half correlations. Stars beneath boxes indicate whether the distribution of correlations is significantly different from a null distribution, via a Wilcoxon signed-rank test. Absence of a star indicates non-significance. * = $p < .05$, ** = $p < .01$, *** = $p < .001$.

Study 2 asked participants (296 recruited, 78 excluded) to describe the same patterns from Study 1 *without* also summarizing how satisfying or desirable they were, or how much they would pay for them. In short, participants were merely asked to describe each customer journey using one word and one sentence. We hypothesized

that, even when participants are not explicitly asked to evaluate experiences, they use highly evaluative language to describe trajectories, such that a sentiment score of their natural descriptions in this study correlates highly with their sentiment scores in the previous study, and again predicts satisfaction ratings.

We first ran the same sentiment analysis used in Study 1 on the words participants provided. We then ran a Pearson's correlation between their sentiment scores in this study and their analogous scores from Study 1. We found near-perfect correlations, both when correlating the sentiment scores of this study's full sentences ($r = .92, p < .001$) and single words ($r = .99, p < .001$).

We next tested whether the sentiment scores for both words and sentences from this study predicted participants' summaries from Study 1 by utilizing the leave-one-out cross-validation procedure outlined in Study 1. Our predictors were the average sentiment scores for words and sentences from the current study. Both sentiment score types significantly predicted satisfaction (sentences: mean $r = .73, p < .001$; words: mean $r = .73, p < .001$) and personal desirability (sentences: mean $r = .68, p < .001$; words: mean $r = .72, p < .001$) ratings from Study 1, even though Studies 1 and 2 involved different groups of participants. These results suggest that consumers' representations of customer journeys are *naturally* evaluative.

Studies 3 and 4 extended these findings into two new domains respectively: hiring a candidate based on interview performance (Study 3) and summarizing the meaningfulness of a life (Study 4). While seemingly different, all domains involved summarizing experiences over time.

In Study 3, the plots captured a fictional candidate's perceived interview performance for a teaching position at a university called *Northridge College*, with "Perceived Performance" plotted on the y-axis and "Time" plotted on the x-axis. Participants (295 recruited, 155 excluded) then rated how likely it was that they would hire the candidate and were asked to describe the experience using one word.

In Study 4, the plots captured entire lives, with "Happiness" plotted on the y-axis and "Age" plotted on the x-axis. Participants (203 recruited, 79 excluded) rated how meaningful the person's life was overall, how much the life was personally desirable, and how they would describe the life with one word.

Both studies replicated the main findings of Study 1. At the same time, there was interesting variation in the ordering of the best-performing features, depending on the domain. Over short periods, such as an interview or customer journey, ends and slope mattered a lot, suggesting that people expect interviewees and firms to deliver an improving experience that ends climactically. Over long periods, such as a lifetime, integrals mattered more, suggesting that people were more forgiving of lives without peaks, perhaps because people have less control of an entire life. Yet again, the most predictive feature was a sentiment score of the words people use to describe these patterns.

Finally, we also found that meaningfulness ratings in Study 4 were highly correlated with satisfaction ratings from Study 1 ($r = .93, p < .001$), as were personal desirability ratings from the two studies ($r = .93, p < .001$).

GENERAL DISCUSSION

Experiences over time are ubiquitous in consumption, management, and life, and they can be summarized in various ways. Yet how do people ordinarily do so? Is there any consistency in how they summarize events over time across various practical domains? In three different domains—determining whether a customer journey is satisfying, an interviewee should be hired, and a life is meaningful—we found that 1) people's summaries were affected by the patterns of the trajectories; 2) people's judgments were best predicted by a sentiment score of the words they used to describe the patterns, followed by the area, slope, and end value of the pattern; and 3) over short periods, ends and first derivatives mattered a lot, quantitatively supporting previous work (Carmon and Kahneman 1996;

Fredrickson and Kahneman 1993a), while over long periods such as a lifetime, integrals were more important. Apparently, people in consumer, managerial and everyday life settings are likely to represent continuous events in evaluative terms.

The fact that consumers spontaneously evaluated experiences over time using a valence judgment significantly extends classic work on evaluation (Fazio et al. 1986; Osgood 1952, 1962), with practical implications for the specific domains we tested. Previous work has found that consumers represent concepts (Osgood 1952), entities (De Freitas et al. 2017, 2018), and counterfactuals (Folkes and Lassar 2015; Tsiros and Mittal 2000; Wiggin and Yalch 2015) in evaluative terms. Adding to this list, we find that consumers are also highly evaluative in how they naturally summarize information over time. Perhaps, the evaluative dimension is a particularly useful and compact way to represent experiences, informing the summaries consumers need to make of them without the need to keep track of all the literal features of a trajectory. In this vein, future work could also investigate whether consumers are better able to remember evaluative details of a trajectory than its literal features.

Limitations and Future Directions. One drawback of our design is that the patterns were artificially constructed, and our 'measures of success' were provided by participants rather than collected 'from the wild', e.g., using journal citations or how much profit a movie made. It would be worthwhile to test whether the current results replicate using real-world data, such as customer reviews or movie ratings. In a separate pilot study, we tested whether we could predict movie ratings based on the sentiment arcs of their scripts but did not find promising results. One likely reason may be that ultimately the most relevant predictor of a movie's rating is not the trajectory of its content but that of the viewer's *mental experience* of it.

The current work also leaves open several other exciting questions, including what factors moderate people's summaries of trajectories, whether the duration of the trajectory matters (e.g., a shorter life may be viewed as more tragic than a longer one), and whether there are some domains that diverge from the consistency found across the three studied here.

Implications. Managers care about what makes some customer journeys more successful than others (Edelman and Singer 2015; Lemon and Verhoef 2016) and about how to make good hiring decisions (Arvey 1979), and candidates care about what patterns of performance are most likely to get them hired. The current work uncovers the types of experience patterns, as well as the features of those patterns, that are most likely to lead to success. For instance, candidates should end their interviews positively, display either consistently or increasingly positive impressions, and make a deep impression at a "peak" point of their interview.

The results have further implications for each of the specific domains we tested. For instance, our results both confirm and diverge from previous theoretical positions on customer journeys. One debate is whether customer journeys should be smooth (Edelman and Singer 2015) or constantly fluctuating (Siebert et al. 2020), given that the latter may be more exciting. Supporting the smooth view, we find that consistently positive trajectories are viewed as most satisfying, meaningful, desirable, and likely to lead to a hire. Of course, in practice it is hard to sustain this level of service, so managers and candidates may want to take note that people rate almost as positively those experiences which end pleasantly, constantly improve, or have a distinct peak. But note that not all fluctuations from perfection are equally effective. In this vein, our results also provide mixed support for the strong fluctuation view, since we find that people do not personally desire experiences that fluctuate, even if they recognize that such experiences may be satisfying or meaningful.

A broader implication is that customer experience managers may want to think of creating certain *patterns* of experience and tracking what patterns their consumers are in fact having. Luckily for them, something as simple as a sentiment score of the consumer's natural language description of their customer journey can be highly indicative of whether these efforts are working.

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How Coherent Nature Makes Natural Products Attractive: The Moderating Role of Centrality of Naturalness in Category Representation

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INTRODUCTION

We investigate the underlying cognitive process and a boundary condition for evaluation of natural products. Our findings highlight consumers' lay belief about coherence in nature and suggest higher inter-attribute coherence and, thus, better product evaluation for natural products, but only if being natural is a central attribute in those products. Natural products have become increasingly popular among consumers but our understanding of consumers' lay beliefs and underlying cognitive processes about these products remains limited. We propose that consumers hold a belief on nature having coherent characteristic, which is transferred to natural products and increases their inter-attribute coherence, i.e., more aligned and consistent attributes. Our findings in an Implicit Association Test (IAT) and two experimental studies confirm these propositions and show that naturalness improves inter-attribute coherence and consequently willingness to purchase of natural products. Our proposed effects are limited to the products in which naturalness is a central attribute. The naturalness literature is mainly in psychology and environmental studies and outside the context of marketplace. These studies look primarily at how individuals interact with nature, either in experiences like hiking and surfing (Canniford & Shankar, 2013) or in exposure to natural elements in living environments (Shanahan et al., 2015). The studies that look at naturalness in the context of marketplace build mainly on general preference for nature and within a limited number of product categories (Roman et al., 2017; Prada et al., 2017; Berry et al., 2017; Scott et al., 2020). These studies mostly did not provide an underlying mechanism for the effect of naturalness on product evaluation that can get generalized across different product categories. Our paper tries to fill this gap in the current literature by proposing a mediator along with a boundary condition for explaining the impact of naturalness on product evaluation. Unlike previous studies, the application of our reasoning is not limited to a selected number of product categories and can be generalized to all types of products. Naturalness is commonly defined as being close to nature, i.e., the biological and physical world around us (Thompson, 2011), as opposed to that which is man-made (Wachsmuth, 2012; Rozin, 2005; Lanier et al., 2013). We highlight the consumers' lay belief about interconnected and integrated whole, i.e., coherent, characteristic of nature. Humans hold a widespread belief that characterizes nature as coherent, bringing integrity among diverse, ever-changing, and sometimes competing components (Thompson, 2011, 2004; Deangelis & Waterhouse, 1987; Wu & Louks, 1995). In coherent nature, all entities are believed to be highly interrelated in harmony and uniformly create a single whole, unless they get disrupted by human interruption (Wilson, 1993). We propose that the coherent qualities of nature transfer to natural products and make them to have more coherent attributes. This implies more interconnected, aligned, consistent and less conflicting attributes for natural products. Therefore, we propose:

Hypothesis 1: Nature is commonly perceived to have higher coherence compared to man-made developments.

We propose that consumers evaluate natural products as having coherent attributes. In another words, we expect the perception

of coherence to transfer from the mental representation of nature to the evaluation of natural products. Contrastingly, as man-made developments are associated with having lower coherence compared to nature, we expect consumers to evaluate man-made products as having fewer coherent attributes compared to natural products. Previous studies showed that naturalness is not evaluated the same across products (Scott et al., 2020). We contribute to these results and propose that the centrality of naturalness, i.e., the degree to which the internal structure and the coherence of that product depends on naturalness (Sloman et al., 1998; Gershoff & Frels, 2015), is different across product categories. This difference in the degree of centrality is linked to how naturalness improves the coherence of product attributes and eventually product's preference. We propose that when naturalness is central in defining a product, it increases the inter-attribute coherence of that product. We do not expect to find the same impact in a product where naturalness is not a central attribute. Unlike earlier studies (Rozin et al., 2004; Scott et al., 2020), the application of our reasoning is not limited to a selected number of product categories and can be generalized to all types of products.

Hypothesis 2: Being natural, compared to being man-made, increases inter-attribute coherence only in products in which naturalness is a central attribute.

A high degree of coherence between intrinsic attributes of a product entails lower trade-offs, i.e., receiving costs in the outlay of using the benefits (Anderson, 1971, 1981; Miyazaki et al., 2005). Confirming the results of previous studies (Wang et al., 2010; Khan et al., 2011; Hedgcock & Rao, 2009), we expect to find a better evaluation of a product, i.e., willingness to purchase, as the result of its lower inter-attribute coherence due to lower trade-offs. Hence, we propose that inter-attribute coherence mediates the effect of naturalness on willingness to purchase. In line with Hypothesis 2, we expect the positive impact of naturalness on product evaluation (which is the result of higher inter-attribute coherence) to exist only for products in which naturalness is a central attribute.

Hypothesis 3-1: Naturalness, compared to being man-made, increases willingness to purchase only in products in which naturalness is a central attribute.

Hypothesis 3-2: A product's inter-attribute coherence mediates the effect of naturalness on willingness to purchase.

Figure 1 shows our research model.

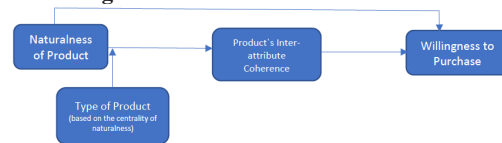


Figure 1: Research Model

Figure 1 Research Model

Study 1

Beliefs about nature are for the most part strong engrained beliefs (Kellert, 1993; Wilson, 1993). Studies describe individuals'

responses towards natural elements as evolutionary, universal, and innate (Hale, 2016; Ulrich, 1993). Therefore, we expect that individuals' beliefs about nature and naturalness can best be captured using the implicit association test (IAT). We use the IAT in Study 1 to measure implicit association of nature with coherent attributes.

Sixty-one (61) individuals participated in this study on the MTurk website. They had to categorize words in the middle of the screen into either left or right categories by pressing the A or L keys. Their response time in milliseconds was recorded. The words that appeared in the middle of the screen belonged to any of four categories: nature, man-made, coherent, and incoherent. We used Carpenter et al. (in press) to create the IAT, including 7 trial blocks.

The results of our pretest confirmed that participants perceived the words in the coherent condition as more coherent than the words in the incoherent condition ($M_{\text{Coherent}} = 6.11$, $M_{\text{Incoherent}} = 3.92$, $F(1,49) = 18.12$, $p < .01$) (and different from neutral: (single sample t-test) $t(49) = 7.20$, $p < 0.1$). Moreover, participants perceived the words in the nature condition to be related to nature versus man-made ($M_{\text{Nature}} = 7.6$, $M_{\text{Man-made}} = 0.31$, $F(1,49) = 884.17$, $p < .01$) (and different from neutral $t(49) = 22.76$, $p < 0.1$).

Using Greenwald et al.'s (2003) improved algorithm we found that the mean response latency in the hypothesis incongruent critical blocks was significantly larger than the mean response latency in the hypothesis congruent critical blocks ($M_{\text{congruent}} = 1062.41$, $M_{\text{incongruent}} = 1180.06$, $F(1,57) = 11.14$, $p < .01$). The IAT D score was also significantly different from zero ($D = -.21$, $SD = .44$, $t(57) = -3.60$, $p < .01$). Therefore, the participants responded significantly faster when they grouped man-made related words with incoherent words and nature related words with coherent words, compared to the time when they grouped man-made related words with coherent words and nature related words with incoherent words. These results provide support for H1 and suggest an implicit association in consumers' mind between nature versus man-made and coherent versus incoherent words.

Study 2

Study 2 highlights the role of centrality of naturalness and investigates the effect of naturalness on inter-attribute coherence (Hypothesis 2) and willingness to purchase (Hypotheses 3-1, 3-2) across the products where naturalness is (is not) a central attribute.

Two-hundred (200) individuals took part in Study 2 on the MTurk website. The participants answered questions regarding one of the four products, i.e., a package of chocolate cookies or a bottle of pain-relief pills, either in the natural or the man-made conditions in a 2*2 between subject design. First, the participants saw a generic product with no specific indication of naturalness and wrote down some attributes that they might consider in purchasing the product. Next, they saw the same products as those in the first task but with a label (containing additives/pharmaceutical formula, produced in laboratory for man-made containing only natural ingredients with no additives or preservatives/100% natural formula for natural condition) to manipulate naturalness. The participants evaluated those products on the same series of attributes that they indicated in the first task.

In a pretest, we measured the centrality of naturalness for cookies and pills. We asked if a cookie (pill) is natural, how similar will it be to an ideal version of a cookie (pill), how important is naturalness to a cookie (pill) and to what extent is naturalness a defining characteristic of a cookie (pill) (adapted from Gershoff & Frels, 2015). We found out that naturalness is a central attribute for a chocolate chip cookie as it received a score that is significantly higher than 5 (neutral) ($M_{\text{Cookie}} = 6.20$, $SD_{\text{Cookie}} = 2.01$, $t(50) = 4.27$, $p < .01$), but it is

not a central attribute for a pain-relief pill ($M_{\text{Pills}} = 4.75$, $SD_{\text{Pills}} = 2.17$, $t(50) = -.79$, $p > .43$).

We calculated a score for inter-attribute coherence of each product based on the rating scores that each participant gave for evaluating the attributes of each product. We considered an attribute positive (negative) when it received a score higher (lower) than 4. To calculate the final coherence score, we divided the number of aligned attributes (whether positive or negative) by the total number of attributes. For example, a product with the rating scores of 2, 7, 6, 5 on its attributes has a coherence score of 0.75, i.e., three positive attributes (higher than 4) divided by 4, likewise for a product with the rating scores of 7, 1, 2, 3 on its attributes, i.e., three negative attributes (lower than 4) divided by 4. Larger coherence scores showed higher degree of inter-attribute coherence. We found out that naturalness improved inter-attribute coherence in the products in which naturalness is a central attribute and marginally decreased inter-attribute coherence in the products in which naturalness is not a central attribute (for cookies: $M_{\text{Man-made}} = .70$, $M_{\text{Natural}} = .83$, $F(1,175) = 4.10$, $p < .05$); for pills: $M_{\text{Man-made}} = .76$, $M_{\text{Natural}} = .65$, $F(1,175) = 2.82$, $p < .1$).

Naturalness improved willingness to purchase only for products in which naturalness is a central attribute (for cookies: $M_{\text{Man-made}} = 7.53$, $M_{\text{Natural}} = 7.97$, $F(1,175) = 5.41$, $p < .03$). There was no significant difference between the willingness to purchase for products in which naturalness is not a central attribute in the natural compared to the man-made condition (for pills: $M_{\text{Man-made}} = 7.22$, $M_{\text{Natural}} = 7.15$, $F(1,175) = .27$, $p > .58$). Using Hayes' (2013), we found the significant moderated indirect effect of naturalness on willingness to purchase through inter-attribute coherence (Index of moderated mediation: .21, $BootSE = .09$, $LLCI = .01$, $ULCI = .42$, with 95% confidence interval).

One explanation for our findings is positivity-bias. To measure the degree of positivity of products, we divided the number of product's attributes that received the score of neutral or better than neutral by the number of attributes. We found significantly higher degree of positivity in natural compared to man-made conditions for products in which naturalness is a central attribute (for cookies: $M_{\text{Man-made}} = .78$, $M_{\text{Natural}} = .96$, $F(1,175) = 8.45$, $p < .01$). However, we did not find this effect for products in which naturalness is not a central attribute (for pills: $M_{\text{Man-made}} = .79$, $M_{\text{Natural}} = .85$, $F(1,175) = .77$, $p > .38$). Entering the level of positivity as a covariate, we confirmed a significant indirect effect of inter-attribute coherence (Index of moderated mediation: .22, $BootSE = .09$, $LLCI = .06$, $ULCI = .42$, with 95% confidence interval, 5000 bootstraps). This finding showed that the mediation role of inter-attribute coherence existed despite the positivity bias towards nature.

Study 3

Study 3 provides further support for the findings of Study 2. Two-hundred (200) participants took part in Study 3 on the MTurk website. We used the same procedure as Study 2. We changed the products to a t-shirt and a lice-killing shampoo to make sure that the results of Study 2 were not confounded by the healthiness attribute of the products. The t-shirt was labeled as made with 100% natural material and the shampoo was labeled as using 100% natural formula in the natural condition. In the man-made condition, the t-shirt was labeled as made with synthetic material and the shampoo was labeled as using a pharmaceutical formula. We then asked participants to evaluate the products. We replaced willingness to pay in Study 2 with product evaluation to make sure that our results were not biased by the perceived prices of the products.

The results of our pretest showed that naturalness is a central attribute for a t-shirt as it received a score that is significantly higher

than 5 (neutral) ($M_{T\text{-Shirt}}=6.13$, $SD_{T\text{-Shirt}}=1.67$, $t(49)=4.79$, $p<.01$), but it is not a central attribute for a lice shampoo ($M_{Lice\text{-Shampoo}}=4.83$, $SD_{Lice\text{-Shampoo}}=2.07$, $t(49)=-.59$, $p>.57$).

Using the same procedure as in Study 2 we found out that naturalness improved the interattribute coherence of the products in which naturalness is a central attribute and decreased (but not significantly) the inter-attribute coherence of the products in which naturalness is not a central attribute (for t-shirt: $M_{Man\text{-made}}=.54$, $M_{Natural}=.74$, $F(1,185)=6.97$, $p<.01$); for lice-shampoo: $M_{Man\text{-made}}=.72$, $M_{Natural}=.71$, $F(1,185)=.001$, $p>.9$).

Naturalness improved product evaluation of the products in which naturalness is a central attribute and decreased (but not significantly) the inter-attribute coherence of the products in which naturalness is not a central attribute (for t-shirt: $M_{Man\text{-made}}=4.17$, $M_{Natural}=4.90$, $F(1,185)=7.35$, $p<.01$); for lice-shampoo: $M_{Man\text{-made}}=5.20$, $M_{Natural}=4.95$, $F(1,185)=.88$, $p>.3$).

Using Hayes' (2013) we found a significant moderated indirect effect of naturalness on product evaluation through inter-attribute coherence (Index of moderated mediation: .25, $BootSE=.14$, $LLCI=.03$, $ULCI=.50$, with 90% confidence interval). Next, using the same procedure as Study2, we checked for the role of positivity-bias. Our results confirmed the findings of Study2, and we found a significant mediation role of inter-attribute coherence even after controlling for the level of positivity (Index of moderated mediation: .17, $BootSE=.11$, $LLCI=.001$, $ULCI=.39$, with 90% confidence interval).

Our findings show that consumers' belief of coherent nature impacts the evaluation of natural products by increasing the inter-attribute coherence of these products. Our results suggest a novel boundary condition for the effect of naturalness on product evaluation and show that this effect is not the same across all products but is according to the centrality of naturalness.

This paper contributes to the current literature on naturalness (Thompson, 2004; Rozin et al., 2012; Scott et al. 2020) by highlighting consumers' lay belief about coherent nature and natural products. Previous studies either mostly did not delve into a mechanism for the effect of naturalness on product evaluation or limited their explanation to general preference for naturalness (Rozin et al., 2004; Berry et al., 2017). Unlike previous studies, e.g., Scott et al., 2020, that limited their focus on explaining the role of naturalness in products with specific goals, our paper explains the role of naturalness in evaluation of products in different categories and providing any types of benefits. Our findings have important marketing and public policy implications.

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Table of Results

Study	Variable	Mean			Analysis
Study 1 (IAT)	The mean response latency for grouping man-made related words with coherent words and nature related words with incoherent words	$M_{\text{incongruent}}=1180.06$			$F(1,57)=11.14, p <.01$
	The mean response latency for grouping man-made related words with incoherent words and nature related words with coherent words	$M_{\text{congruent}}= 1062.41$			
Study 2	Inter-attribute coherence of products	Naturalness is a central attribute for product	Natural	$M_{\text{Natural}}=.83$	$F(1,175)=4.10, p<.05$
			Man-made	$M_{\text{Man-made}}=.70$	
	Inter-attribute coherence of products	Naturalness is not a central attribute for product	Natural	$M_{\text{Natural}}=.65$	$F(1,175)=2.82, p<.1$
			Man-made	$M_{\text{Man-made}}=.76$	
	Willingness to purchase	Naturalness is a central attribute for product	Natural	$M_{\text{Natural}}=7.97$	$F(1,175)=5.41, p<.03$
			Man-made	$M_{\text{Man-made}}=7.53$	
Willingness to purchase	Naturalness is not a central attribute for product	Natural	$M_{\text{Natural}}=7.15$	$F(1,175)=.27, p>.58$	
		Man-made	$M_{\text{Man-made}}=7.22$		
Study 3	Inter-attribute coherence of products	Naturalness is a central attribute for product	Natural	$M_{\text{Natural}}=.74$	$F(1,185)=6.97, p<.01$
		Naturalness is not a central attribute for product	Natural	$M_{\text{Natural}}=.71$	$F(1,185)=.001, p>.9$
			Man-made	$M_{\text{Man-made}}=.72$	
	Product evaluation	Naturalness is a central attribute for product	Natural	$M_{\text{Natural}}=4.90$	$F(1,185)=7.35, p<.01$
			Man-made	$M_{\text{Man-made}}=4.17$	
	Product evaluation	Naturalness is not a central attribute for product	Natural	$M_{\text{Natural}}=4.95$	$F(1,185)=.88, p>.3$
			Man-made	$M_{\text{Man-made}}=5.20$	

When and how virus anthropomorphism intensifies consumer stigma toward patients

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INTRODUCTION

Governments, companies, and individuals worldwide are accustomed to depicting infectious diseases as a person during the COVID-19 pandemic. For instance, the World Health Organization anthropomorphizes the coronavirus and calls on people to destigmatize patients in the fight against COVID-19. In addition, enemy metaphors are frequently used in public discussions about infectious diseases. Even academic journals sometimes represent virus as an anthropomorphized enemy. Advertisements also commonly anthropomorphize viruses. Although virus anthropomorphism might attract more attention and thus increase consumers' adoption of protective measures, could doing so potentially harm people suffering from the virus? This is the primary research question.

Over the past two decades, scholars have conducted a great deal of research on anthropomorphism, which is defined as the tendency to attribute human-like characteristics, intentions, and behavior to nonhuman objects (Aggarwal and McGill 2007). Overall, virtually all the extant empirical research on anthropomorphism explores bilateral relationship scenarios: how consumers react to anthropomorphized agents or how anthropomorphized agents influence consumers. In other words, consumer is an *actor* in the relationship. However, little is known about the effect of anthropomorphism in a tripartite relationship context, i.e., consumer become an *observer* in the relationship. To paraphrase, we focus on how the process of imbuing life into viruses (i.e., anthropomorphized agents) affects observers' (i.e., consumers) evaluation on victims (i.e., stigmatized patients).

Stigma is defined as “a *mark* placed on a person, place, technology, or product associated with a particular attribute that identifies it as different and deviant, flawed or undesirable” and results in elevated risk perceptions (Kasperson, Jhaveri, and Kasperson 2001, p. 19). We argue that an anthropomorphized virus (vs. non-anthropomorphized) is less random and more likely to serve as a social marker. This makes sense because anthropomorphism has been proved as a powerful tool to access human schema (Epley, Waytz, & Cacioppo 2007), apply social norm (Chen, Sengupta & Zheng 2022) and make social belief more available (Wan, Chen, & Jin 2017). Therefore, we predict virus anthropomorphism (vs. non-anthropomorphism) can lead to greater stigma toward patients.

We further demonstrate that defensive attribution is the underlying mechanism. Defensive attribution theory states that an observer attributes the causes for a negative event to minimize their fear of being a victim (e.g., attribute the patient's suffering to their own dispositions). A strong hypothesis from this theory is observer would assign more culpability to the victim who are dissimilar to the observer compared with those who are similar to the observer (e.g., Grubb and Harrower 2008). Virus anthropomorphism (vs. non-anthropomorphism), as a stronger presence of mark, would increase consumers' dissimilarity perception from patients, which in turn increases the likelihood of defensive attribution and thus induces more stigma toward patients.

Six studies, including a text analysis, a field experiment and 4 online experiments, are combined to examine our hypotheses. Study 1, text mining on 139, 845 tweets, offers evidence that “tripartite relationships” do exist in practices and provide preliminary support for the main effect through testing consumers' engagement on anthropomorphized (vs. non-anthropomorphized) donation appealing tweets.

Study 2 provides real-life confirmation on the main hypothesis using a field experiment on Facebook. Under the background of COVID-19, we published a campaign to prevent and address social stigma toward COVID-19 patients. An actual expression of addressing the stigma problem—the click rate of the ad appeal on Facebook—was the dependent variable of interest.

Four laboratory studies follow. For each study, in the anthropomorphism condition, the introduction was written in a first-person language (e.g., “I am Tubercle Bacillus. If people infect with me...”). Conversely, people in the control condition read the introduction in the third-person language (e.g., “This is Tubercle Bacillus. If people infect with it...”). In the context of pulmonary tuberculosis, Study 3 reveals that virus anthropomorphism increases stigma toward infectious disease patients. Study 4 demonstrates the mediating mechanism of attribution bias. Study 5 shows that the main effect attenuates for diseases which are difficult to generate an internal attribution since it is harder to produce attribution bias in this situation. Study 6 confirms the moderating role of group identity based on intergroup attribution bias. The negative effect of virus anthropomorphism on prosocial behaviors toward patients occurs only for outgroup members but not in-group members.

Overall, by exploring how the process of imbuing life into viruses (i.e., anthropomorphized agents) would affect observers' (i.e., consumers) evaluation on victims (i.e., stigmatized patients), our research provides novel contributions to the anthropomorphism literature through a new perspective such that consumer become an observer rather than actor. Defensive attribution as an underlying mechanism is verified. Our study has significant implications in many domains including media design of governments' campaigns to decrease disease stigma and NGO's campaigns raising money for stigmatized patients.

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In Limbo: Liminality Narratives of Young Adults Returning to the Family Home

“It opened doors.” Mandy, 28

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INTRODUCTION

Modern life trajectories (Elder, Johnson and Crosnoe 2003) are messy and non-linear (Shirani and Henwood 2011). Increasingly, fluid life courses include overlapping, intermingling transitions and even reversals (Shanahan 2003; Turner 1977). This is especially true of emerging adulthood (Arnett 2014), which has a “tremendous variation in timing of life course transitions” (Weinberger, Zavisca and Silva 2017: 334) and is characterized by instability and ambiguity (Harrington, Bielby and Bardo 2011). ‘Boomerang kids’—young adults returning to the parental home after a period of independence—are a rising global phenomenon, amplified by the recent pandemic (theguardian, 18th of October 2020). This reverse transition marks a regression of the normative progression to adulthood (Sassler, Ciambone and Benway 2008; Settersten 2003), accompanied by tensions between the established adult identities and the child-like state of living with parents, between autonomy and dependence (Lewis, West, Roberts and Noden 2016; Severson and Collins 2020).

Previous studies on young adults returning to the parental home have primarily focused on identifying the drivers that lead to their return (Billari and Liefbroer 2007; Holdsworth 2000; South and Lei 2015; Stone, Berrington and Falkingham 2014) and how they negotiate adulthood as a result of the move (Lewis et al. 2016; Sassler et al. 2008; Severson and Collins 2020). This study investigates ‘returning home’ pathways and the role of consumption in navigating the ambiguities that accompany the return to living with parents. Based on life-course and liminality literature and substantiated by in-depth interviews with young adults, this study presents three ‘returning home’ narratives and corresponding consumption transitions ‘in limbo’.

THEORY

Moving back home

Individual life trajectories are varied and take unexpected paths. Young adults’ return to the family home often goes hand in hand with completing education, becoming unemployed or the dissolution of a partnership (Stone, Berrington and Falkingham 2014). In the UK, this trend has been made more prominent with the dramatic rise in housing costs and the recent SARS-CoV-2 pandemic (Bell, Codreanu and Machin 2020). Life-course literature recognizes these reversals of life transitions (McMillan and Eliason 2003; Shanahan 2003), potentially ending in a feeling of regression (Shirani and Henwood 2011).

Returning to the parental home has strong implications on young adults’ independence. Lewis et al. (2016) found that most returners struggled with a sharpened sense of dependence and being treated as a child by their parents when living together. A child-like self co-exists and competes with the adult self (Lewis et al. 2016; Sassler et al. 2008; Severson and Collins 2020), marking a *dividual* (Appau et al. 2020) state of self in transition. Further, Lewis et al. (2016) note that periods of co-residence are usually of uncertain duration, which renders the ‘betwixt and between’ state even more delicate. Yet, while young adults want to be treated as equals and aspire to recover their independence, Sassler et al. (2008) find that young adults also benefit from the domestic and economic support of their

parents. Hence, transition reversals are experienced as highly ambiguous and liminal (Turner 1977; van Gennepe 1960)—a transition-in-transition—waiting to be mastered and recovered.

Consumption in Transition

Progression from childhood to adulthood marks a coming-of-age transition that is rooted in identity tensions between reliance and autonomy, chaos and organisation (Drenten 2013). Consumption plays a key role in helping young adults navigate and fulfil the desires latent between these tensions. Stability-seeking consumption (Noble & Walker 1997) self-gifting, compulsive consumption, indulgence and increased materialism (Rindfleisch, Burroughs and Denton 1997) constitute common coping strategies related to transition. Weinberger, Zavisca and Silva (2017), for example, found that the period after gaining residential independence is characterised by heavy investment in exploratory experience as a means to build cultural capital. In parting from the “old” self, the separation from possessions and consumption practices that represent the past can facilitate the transition (Martin Young 1991). In the transition to adulthood (Cody 2012; Hemetsberger, Bauer, von Wallpach and Broger 2013), consumption practices that represent the old selves are shed, while some childhood brands become therapeutic and alleviate the transition to a new role. However, consumption can also prolong or stall liminality (Darveau and Cheikh-Ammar 2021) when it hinders the self-development of a future self (see Yau and Christidi 2018). Appau et al.’s (2020) study of Pentecostal converts shows that individuals in transition can be even stuck in an ongoing cycle of incorporation and separation consumption practices when liminality turns permanent. Considering these different possible pathways, this study aims to understand the ambiguity inherent in re-transitions from independent life to home and uncover the role of consumption in alleviating or stalling young adults’ return to independence.

METHODOLOGY

Our exploratory study includes 10 narrative interviews and collages to elicit individuals’ biographies and to gain a nuanced understanding of reverse transition narratives of young adults and related consumption patterns in regaining balance and independence (Flick 2018). The collages were used as autodiving technique helping participants to elicit rich life narratives and consumption patterns associated with their past, present and prospective future selves. The UK context was chosen to capture the rising trend of Generation Boomerang. Participants were recruited personally, via Gumtree and Reddit using maximum variation sampling (Patton 2014). Interviews were conducted in February and March 2020 online via video Zoom calls, lasting on average 75 minutes each. Following grounded theory, this study analyzed verbatim transcripts and developed narrative themes through an iterative process of categorization and abstraction (Charmaz 2006; Spiggle 1994).

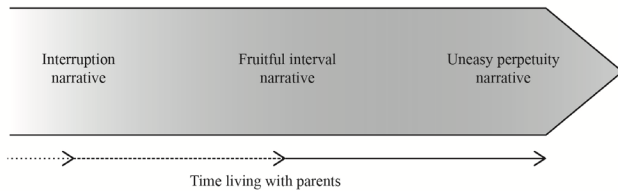
FINDINGS

Young adults’ transition to the parental home unfolded in the context of their broader past-present-future narratives that are deeply entangled with their former lives and current life contexts. We identified three key narratives and accompanying changes in consumption

patterns: (1) *interruption* narrative, (2) *fruitful interval* narrative and (3) *uneasy perpetuity* narrative.

Figure 1

Narrative Distribution According to Time Living with Parents



(1) The *interruption narrative* portrays young adults who experienced the return to the family home as an interruption to their otherwise ‘normative’ life trajectories (Settersten 2003). Prior to moving in, life was on a stable path, independence a matter of course. Moving back home is therefore a big adjustment and feels like going back in time – “I had that feeling of like, ‘oh, God living with my parents again’” (James, 32). Thus, staying with parents is characterized by strong tensions between the former independent self and the present child-like status. Yet, escaping the family home, similar to ‘disengagement’ coping strategies identified by Yau and Christidi (2018), offers temporary relief.

Still, moving back to the parental home and being cared for has its draws, as it has helped participants save a bit of money and they expect their future trajectories to progress as planned once they return to living independently. Despite the tensions and the strong intention to move out, there is an overall appreciation of the support offered and the convenience of living at the parental home. At times, this turns into an indulgence in their former selves, potentially stalling the transition (Darveau and Cheikh-Ammar, 2021). For Harriett (30), living with her mum is a time in which she can indulge by playing the role of a child (Martin Young, 1991) before she plunges back into adulthood.

The moving out date is in sight, thus rather than negotiating their place as adults in their family home, the young adults put their lives ‘on hold’, *suspend* self-oriented consumption and mostly adhere to parental consumption patterns and rituals. Some more active strategies of coping include *future-oriented* and *imagined* consumption. Maria, living out of boxes in her childhood room at the time of the interview, dreams of decorating her new home with pictures and plants, “It gives you a sense that the space is yours, and that you live there ... a stamp of your personality in your place” (Maria, 27). Harriet, about to move out, has been trying to spend as little as possible so she can save up for her new home. Accordingly, interruptors’ view of the future is optimistic and confident and their prospective consumption is detailed.

(2) Young adults in the *fruitful interval narrative* view the return to the parental home as a transformative and productive period in their lives, allowing them to build strength, take control and gather the necessary resources to achieve their future goals. For some it is a purposeful and significant turning point in their life trajectories: “I actually did make the decision to like – when I moved home to change my life around” (Mandy, 28). Often, young adults described their time living independently as liberating and tumultuous, characterised by abandoned consumption and loss of control. Adam describes the time before moving back to live with his parents as “living by like feeling, like doing whatever felt good. And then, just you know, paying the consequences for it afterwards.” (Adam, 33). Returning home is a consequent and constructive move, giving them the security and the freedom to pursue their careers and dreams. While the sense of freedom expressed by returners seems paradoxical

and contradicts prior findings (Lewis et al. 2016; Severson and Collins 2020), it marks a deliberate decision of the young adults to restructure their lives, as Mandy (28) expresses: “So, yeah, I just got a really strong support system. So, I think that’s why I feel comfort, in a sense being home. Because I feel like I can take my time deciding what I’m going to do with my life,”.

Their longer stay at the parental home gives them scope to negotiate their independence in the family home. *Reciprocity* as a coping strategy (Yau and Christidi 2018) is more prevalent and is keeping the parent-child relationship in balance. Mandy pays rent and Alia helps out extensively around the home. The young adults also express a strong sense of agency (Elder et al. 2003; Gecas 2003), viewing their parents as partners on a common mission.

Accordingly, consumption while living at home focuses on self-investment in the future and has therapeutic qualities in prospect of an independent life. Consumption strategies encompass *deconsumption* and *saving* behavior. Future orientation also emerges in other, less tangible areas, such as career-planning, living a healthier life, building up mental resilience or having the opportunity to learn from past mistakes – “So, when you’ve got your basic needs sorted, then you can go high-level thinking and reflecting and become more enlightened I suppose” (Adam, 33).

(3) The *uneasy perpetuity narrative* is the most challenging of the three. It applies to young adults who return to the parental home as a course of necessity and do not have the resources to progress to independent living, despite their desire to do so. Similar to lives preceding a fruitful interruption, time living independently was characterised by living in the moment, purposelessness and lack of control. Accordingly, consumption is indulgent, impulsive and oblivious. The underlying theme in their narratives is of loss of control and structure, which brings them back home. Lacking field-dependent capital (Appau et al. 2020; Üstüner and Holt 2007) to make the desired transition to independence leaves them in limbo. In uneasy perpetuity, the lack of financial resources but also less tangible means such as health, mental wellbeing and employability weigh heavy on them.

Participants have been living with their parents for an extended period (the longest stay in the sample is 11 years), with little hope of moving out in the future. This is problematic as they are stuck in an awkward limbo where they are neither at ease with their current state nor are they propelled to their desired state. Living in a state of permanent liminality (Appau et al. 2020; Szokolczai 2014; Thomassen 2009) participants feel immobilised, depressed and without enthusiasm for their futures. This shows up as stagnation and lack of structure while co-residing with parents. The lack of perceived self-efficacy and agency is palpable in their narratives: “and I think to myself, the future is going to happen whether I make it happen or whatever happens.” (Wim, 35). Adam is plagued by uncertainty, which is reflected in the vagueness of his future outlook and narrative, “I don’t know. I mean I just don’t know what the future holds.” (Adam, 32).

This state of paralysis is reflected in consumption habits as well. Rather than focusing on gaining independence, attention is centred around more achievable goals, self-improvement and focus on the here and now. Wim (38) likes to look for interesting, short-term work via Gumtree. Chance over choice (Drenten 2013) plays a big role in their future narratives. Wim (35) dreams of winning the lottery, while Roberto hopes his cryptocurrency investment will earn a substantial return and help him become more independent – “[that would] change my life” (Roberto, 28). Yet, daydreaming without agency leaves them in uneasy perpetuity of *investments in moments* of living and *risky investments* as coping strategies.

DISCUSSION

Our study illuminates the role of consumption in transition, specifically reversals, and contributes to the literature on the life course trajectories of young adults. We identified three distinct narratives and related consumption patterns surrounding the return to the parental home. Sampling a broad variation in life trajectories, a striking divergence in the role of a reversal in an individual’s life course is revealed: from being framed as a temporary reversal or a pause (*interruption*) to a crucial consolidating and productive stage in one’s life course development (*fruitful interval*) to a seemingly permanent, pernicious reversal (*uneasy perpetuity*) (Appau et al. 2020; Szokolczi 2014). Thereby our study supports prior views of reverse transitions as being conceptually different from regular phases of liminality (Thomassen 2009; Turner 1977; van Gennep 1960).

Within the three narratives, distinctive consumption patterns unfolded. The *interruption* narrative exhibits *bridging* consumption patterns, suspending and reducing consumption related to independence and adapting to the demands of their new role. In the *fruitful interval* narrative, a shift from living in the moment to *future-oriented and imagined consumption* patterns characterizes a phase of productive consolidation and preparation for re-transitioning, akin

to the ‘turning point narrative’ in first-time motherhood (Hemetsberger, von Wallpach and Bauer 2015). *Uneasy perpetuity* is framed by future uncertainty, thus consumption reflects *living in the moment* and coping with uncertain outcomes, as a result of a permanent, liminality-induced paralysis (Üstüner and Holt 2007; Shirani and Henwood 2011). *Deconsumption* emerged as a key consumption practice throughout the narratives—not as an ideological statement but rather as a pragmatic, potentially future-oriented strategy (Wilczak, 2018).

Our study also contributes to the broader literature on life transitions and liminality (van Gennep 1960; Elder et al., 2003) with three potential transitions in the context of broader past-present-future narratives. In reconciling independent selves, role-dependent tensions are either negotiated, compensated or result in paralysis and permanent liminality (Appau et al 2020). However, in contrast to the loss of control over oneself and one’s environment (Drenten 2013) as dominant themes in the literature on reverse transitions (Lewis et al. 2016; Sassler et al. 2008; Severson and Collins 2020), we find that reverse transitions also exhibit a constructive and liberating character as reflected in the freedom rhetoric of the fruitful interval or, as our informant Mandy phrased it: “It opened doors”.

Table 1: Findings
Key Narratives of Young Adults Returning to Live With Their Parents

Narrative	<i>Interruption</i>	<i>Fruitful Interval</i>	<i>Uneasy Perpetuity</i>
Duration	Short	Extended	Permanent
Description	A momentary interruption in / a reversal of their life trajectory. “Yeah, I just come back, have a little sort of semi-holiday back in my home country for a few months, and then go back to China.” (James, 32)	A period to recover, build strength and gather resources for the future. “[I] actually did make the decision to like-- when I moved home to change my life around” (Mandy, 28)	A seemingly permanent state, marked by stagnation. Lacking the means to progress to independence. “I’m staying with my parents, it’s not too good, but I can’t afford the rent. It’s not too good to be staying with parents, I’m going to be 36 soon.” (Wim, 35)
Consumption while living independently	Liberating, exploratory, relational consumption. Ascetic consumption framed by budgetary constraints. Investment in the future.	Indulgent, abandoned, exploratory, relational consumption. Ascetic consumption framed by budgetary constraints.	Indulgent, impulsive, relational, careless consumption. Ascetic consumption framed by budgetary constraints.
Consumption while living with parents	Suppression of individual consumption and conforming to family consumption habits. Indulgence in home comforts and family support. Delayed consumption.	Self-investment. Future-orientated saving and de-consumption. Strategic consumption of family support and reciprocation.	Living and investing in the moment. Self-improvement. Saving as a coping , precautionary strategy rather than an investment in the future.

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Tower of Babel: Thematic Cohesion in Online Consumer Conversations

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INTRODUCTION

In the 2021 Andy Weir science fiction novel *Project Hail Mary* (2021), a human and an alien meet in space and, in a matter of weeks, learn each other's languages so well that very few misunderstandings ever occur in their communication. The speed with which they manage to advance from establishing a common understanding of words like 'yes' and 'no' to accurately conveying fuzzy concepts such as 'grief' or 'grace' is all the more impressive given how seemingly incompatible the two languages are: while human tongues are represented by English, the alien language in the book is constructed from sequences of musical notes. Although several explanations are conceivable of this unlikely triumph of desire for mutual understanding, one would be wise to mainly attribute it to the simple fact that the author felt the need to sacrifice a degree of realism in order to move the plot forward (Hutchinson, 2021). Alas, it appears that real life either lacks an omnipotent author that can ensure well-paced plot progression for all characters in the story or else, that communication problems of mere mortals do not score high on the priority list of said author. A vastly more common experience for most of us is one of conversing with other humans and slowly realizing that no side seems to really grasp what the others are saying: much like in the myth of the Tower of Babel, too much is often lost in translation, even when all parties in the conversation are fluently speaking the same language.

The problem of mutual (mis)understanding is a universally human one, but its many manifestations are of interest to marketing and consumer researchers as much as to linguists or psychologists. When word of mouth is said to propagate throughout a network of consumers, can one assume that information contained in the original message does not quickly morph, like in a game of 'whisper down the lane', into something so different that it ceases to be of relevance to the marketer? When studying large-scale consumer collectives, how does one differentiate superficial consumer-to-consumer interactions, which are 'conversations' in name only (Arvidsson & Calianadro, 2016), from such interactions in which meaningful communication does occur and which lead to opinions changing (Colleoni et al., 2014) or communal bonds emerging (Cova et al., 2011)?

In this paper, we pave the way to answering these questions by developing an approach to analysing changes over time in thematic foci in conversations that occur on the popular social media platform Reddit. Specifically, our methodology involves measuring thematic similarity between consecutive comments and building an understanding of common ways online conversations develop with a combination of a topic modeling algorithm (Blei et al., 2003), Jensen-Shannon measure of mutual information (Manning & Schutze, 1999), and k-means clustering (Hartigan & Wong, 1979).

We test our approach on a dataset of over 200,000 conversations on Reddit. We gain insight into the structural organization of consumer conversations and identify three archetypes of online conversations with distinct overarching structural organizations. Interestingly, we find that most often, users do not converge on a shared understanding of the topic of the conversation and in cases that they do, this thematic convergence tends to happen relatively late in the conversation. We conclude with a discussion of implications of these findings for researchers, marketers, and platform holders.

DATA

The data for this study come from Reddit, a popular social media platform that is structured as an assortment of hundreds of thousand communities. These communities, many of which are brand-centric, are called *subreddits* and are created, maintained, and moderated by Reddit's users.

Reddit can be seen as a collection of rooted discussion trees, each comprised of several nodes, or postings. There are two types of postings. First type is *submission*, which is the root node of each discussion tree. Submissions contain a title and a "main body", which can be text, hyperlinks to external websites, or rich media (e.g., images, GIFs, videos). The second type of postings is called *comments*. These are all the other nodes in the discussion tree. Each comment is placed as a direct reply to a higher-level node, which can be either another comment or, in case of top-level replies, the submission itself.

We collected all activity from 1,027 subreddits centered around various brands, platforms, and consumption practices in the video game industry. We chose to focus on the video game industry in particular due to several factors. First, it is a booming industry, with just the US share of the market trumping global box office and global streaming services revenues (Shieber, 2019; Wijman, 2019). Second, many of Reddit's largest communities are devoted to video game-related topics and the website's user base has been shown to be more technologically inclined than those of other social media (Gevers, 2019). The dataset is comprised of a total of 251 mil. comments across 21 mil. submissions posted by 6.7 mil. users in 2019.

Here and elsewhere in the text, we use the terms *conversation* and *discussion* interchangeably to refer to a single full *comment branch* of a discussion tree that starts at the root node (i.e., submission) and ends with the final comment (i.e., a comment to which there are no further direct replies). We filter our dataset and only keep discussion trees with a minimum comment length of 10 words or more. From among these trees, we keep comment branches of length five or more. The motivation for these filtering thresholds is elaborated on in the following section.

METHOD

3.1. Topic Modeling

Topic discovery is the method of using statistical models to divide a collection of text documents (in our case, Reddit posts and comments) into thematic clusters. We develop a topic model of the postings in the dataset and identify 200 topics. To do so, we make use of Latent Dirichlet Allocation, or LDA, a well-established unsupervised machine learning technique often used for topic discovery (Blei et al., 2003). In order for LDA to better pick up on the latent semantic patterns in the texts, we filter out comment branches with comments shorter than 10 words, leaving in 382,620 branches.

At this step, our unit of analysis is a single user's posting. LDA represents each posting in the dataset as a mixture over a set of latent underlying topics. When given a new posting, the algorithm assigns to it a set of probabilities of that posting containing each of the identified topics in the entire dataset. As a result, for each posting, the LDA model produces a vector of probabilities, whose length is equal to the number of topics the model identified (200 in the case of our

model). These numeric vectors can be thought of as individual thematic signatures of each particular posting.

3.2. Jensen-Shannon Divergence

As discussed previously, each branch, or conversation, is composed of subsequent postings. In order to estimate thematic similarity between two subsequent postings (i.e., a posting and the immediate reply to it), we employ Jensen-Shannon divergence – a metric of mutual information commonly used for measuring the degree of similarity of two probability distributions (Manning & Schütze, 1999).

In subsection 3.1, we produced, for each posting pair, two probability vectors of length 200 that represent the postings' respective thematic signatures. Computing Jensen-Shannon divergence between these two vectors produces a variable ranging from 0 to 1, with value of 0 corresponding to perfect thematic similarity and value of 1 signifying absolute thematic dissimilarity within a 'posting-reply' pairing. Jensen-Shannon distance close to 0 is observed for postings that are very similar semantically as well as thematically (direct quotes of one another at the extreme), whereas moderately high values are indicative of 'productive' discussions whose participants operate in a similar thematic space and successfully build on and add to the arguments proposed earlier in the previous postings. Finally, high thematic dissimilarity between a posting and a reply to it tells us that consumers participating in the conversation were not successful in establishing a common understanding of the topic they are discussing.

Following the logic described above, the Jensen-Shannon divergence is calculated for the entire conversations (i.e., branches of postings). Each conversation can be seen as sequences of 'parent-child' pairs, such that the 'child' part of the first pair becomes the 'parent' part of the second pair and so on. We sequentially perform pairwise comparisons of thematic similarity within consecutive 'parent-child' posting pairs, starting from the similarity between the root node (submission) and a direct reply to it and ending with a comparison of thematic signatures of the penultimate and final comments in the branch. We repeat this process for each branch (i.e., conversation) of length five or more, for a total of 235,804 branches.

3.3. K-means Clustering

Computing Jensen-Shannon distances at the previous step allowed us to create representations of individual Reddit discussions as vectors of thematic similarity between adjacent comments (i.e., postings). The next, and final, step of our analysis involves looking for commonalities between the organisational structure of thematic (dis)similarities over the course of a conversation across all branches in the dataset. To do so, we perform k-means clustering on the resulting vector representations of the discussions. *k*-means is a local search procedure for minimising within-cluster variances. The core idea behind the algorithm is to assign each data point to one of *k* clusters so that the distance between each data point in the cluster and the cluster centre would be minimal (Hartigan & Wong, 1979).

Since the branch lengths vary greatly within our dataset, we resized all vectors to length 100 by using nearest-neighbour interpolation (Han, 2013) for upscaling branches shorter than 100 postings long. The few discussions of length greater than 100 postings (41 out of 235,804 branches) were discarded. We also remove very short discussions (branches with fewer than five comments), resulting in the final sample of 235,773. Using *k*-means clustering, we then divided the resized vector representations of Reddit conversations into three archetypes with distinct patterns of thematic cohesion or, conversely, thematic divergence of consecutive postings. In the next section, we present a discussion of the obtained results.

4. Results and Discussion

Using the approach described in the previous section, we clustered over 200,000 Reddit conversations based on their particular 'signature' of thematic cohesion, or stability. We were able to identify three clusters, or archetypes, which are visualised in Figure 1. Each of the three bars corresponds to a different archetype and can be thought of as a 'progress bar' (ranging from 1 to 100) for the chronology of conversations of that type, with each vertical slice *n* representing thematic similarity between *n*-th and *n-1*-th comments. A short summary of the results is presented in Table 1.

Conversations that match the first archetype resemble the plot of the parable of the blind men and an elephant (Saxe, 2016): although participants in such conversations were brought together by the same Reddit posting and are clearly sending and receiving information to one another, they tend to operate in vastly different thematic spaces and fail to ever converge on a common understanding of the topic of the conversation. Over 60% of the discussions in the dataset correspond to this archetype.

The second archetype paints a more optimistic picture of online discourse: the proverbial 'blind men' in conversations of this type similarly start out in a place of mutual misunderstanding, but eventually succeed in converging on a common set of topics, albeit the first steps towards this thematic convergence are typically not taken until the second half of the conversation. Such discussions are least frequent, with just under 18% of the analysed discussions being assigned to this archetype.

One might be tempted to assume that the first and second archetype correspond to conversations symptomatic of, respectively, a clash between several echo chambers and healthy discourse that occurs in a Habermasian public sphere (Habermas, 2020), but it is important to note that further analysis would be needed to corroborate that intuition. As it stands, our analysis speaks not to the ability of consumers conversing on Reddit to agree with one another about a specific issue, but rather to the difficulty they experience in even agreeing on what the issue *is*. Converging on a shared thematic space is a necessary condition for communication characteristic of public sphere, but not a sufficient one.

Finally, while the second archetype can be thought of as having two acts (act one: mutual misunderstanding; act two: gradual thematic convergence), conversations matching the third archetype (21.7% of all discussions) roughly follow a three-act structure (Field, 1982): mutual misunderstanding is followed by thematic convergence, but then, intriguingly, thematic cohesion, which is achieved by the speakers by the first fifth of the conversation, starts dissolving in the second half. Notably, lack of agreement about the thematic focus that we observe in the first act of conversations of this type tends to be less pronounced compared to the cacophonous chatter in the early stages of the first two archetypes. However, by the end of the third act, archetype-III conversations achieve a higher level of discord that the one seen between the first few utterances. One possible interpretation of this finding is that, having exhausted the topic by the end of act two, consumers lose interest in maintaining focus, although only further research could illuminate the actual reasons behind the dissolution of these conversations' thematic cohesion in the last act.

We conclude with a brief discussion of implications of these findings for researchers, marketers, and platform holders and some possibilities for future research. We found that consumer conversations on Reddit often have little thematic cohesion and so may have limited value to marketers that, for example, look to leverage electronic word of mouth to disperse brand-relevant information. This finding calls into question validity of the implicit assumption of immutability of information that is passed through a network of

individuals (Yap & Lim, 2017, p. 216) – an assumption that goes into much of the research of the phenomenon of social influence (Katz & Lazarsfeld, 1955; Pei et al., 2014; Watts & Dodds, 2007). A follow-up study could also illuminate the factors that may determine along which archetypal course a particular online conversation will develop, thus enhancing our understanding of conditions conducive

to healthy online discourse. Finally, further research could test external validity of the study by conducting similar analyses with data collected from other social media platforms in order to understand if conversation archetypes outlined in this paper (or their prevalence) are considerably shaped by the affordances of the different social media platforms.

Archetype	Organisational Structure	Number of conversations / Share among all conversations
Archetype I	Consistently very low thematic similarity over the entire course of the conversation; participants do not arrive at a shared understanding of the topic of the discussion.	142,284 / 60.3%
Archetype II	Very low thematic similarity in the first half of the conversation; gradual thematic convergence in the second half of the discussion.	41,576 / 17.6%
Archetype III	Low thematic similarity in the first fifth of the conversation; high thematic similarity achieved by the end of first fifth; dissolution of thematic cohesion in the last third of the discussion.	51,913 / 22.1%

Table 1: Summary of the archetypes of consumer conversations on Reddit

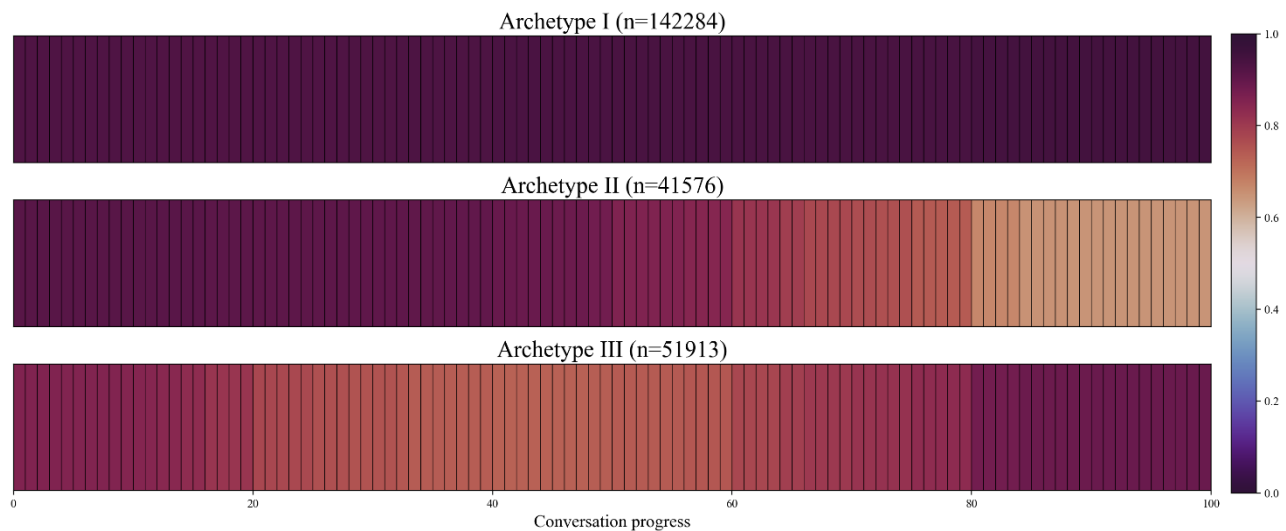


Figure 1 - Archetypes of thematic cohesion in consumer conversations on Reddit

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Cause-Related Marketing Accelerates Satiation

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INTRODUCTION

Imagine that you went to a Krispy Kreme Doughnuts store to buy a box of donuts. The cashier tells you that 1% of your payment goes to a charity that helps people in poverty. You decide to buy the box of donuts and you start eating them. How much do you think you will enjoy eating the first bite of the donuts? How long do you think any effect of the charitable giving would last as you continued to eat the donuts? More generally, how does giving to a cause affect enjoyment?

The example describes cause-related marketing (CRM) that many companies engage in. It is a donation-based promotion that links product sales with a donation (Winterich and Barone 2011; Andrews et al. 2014). For example, Patagonia, which is well known for CRM, donates 1% of sales for each product sold to environmental charities. It is widely believed that CRM helps businesses build strong brands, and also benefits both firms and consumers.

Consistent with this belief, research on CRM shows that CRM positively influences the utility of a product, product attitude, purchase intention, and even attitude towards the brand (Arora and Henderson 2007; Andrews et al. 2014; Gupta and Pirsch 2006). The research suggests that a warm glow feeling explains the effectiveness of CRM on choice and purchase intention. People choose to purchase CRM products because they feel good about themselves when choosing them.

However, less is known about whether consumers indeed enjoy consuming CRM products after the choice. Although one past work suggests that consumers with positive attitudes toward CRM have less regret with their purchase of CRM products (Galan-Ladero et al. 2013), how they influence the ongoing consumption experience, especially how long their enjoyment lasts, remains unclear.

On the one hand, it could be that consumers enjoy consuming CRM products in the long run because people feel good about themselves by helping others in need (Andreoni 1990; Dunn et al. 2008). Moreover, research suggests that consumption of socially responsible products, such as green products, makes an accompanying consumption experience more enjoyable by increasing positive emotions (Tezer and Bodur 2020). Thus, it is possible that the positive emotion that CRM products elicit may spill over and make consumption experiences more enjoyable over time.

Nevertheless, we predict that consumers' enjoyment with a product will drop more quickly when it is linked to a cause than when it is not. Past research suggests that considering external benefits of consumption undermines enjoyment (e.g., Maimaran and Fishbach 2014; Etkin 2016). For instance, children consumed fewer carrots and rated them as less tasty when external benefits of eating carrots (e.g., helping them know how to read and count) were highlighted (Maimaran and Fischbach 2014). While consuming a CRM product, consumers may think more about how their consumption can benefit people whom they have decided to help. That is, they will be concerned about others' needs during consumption. This, in turn, could make a repeated consumption experience seem like work rather than a relaxing break. Therefore, we predicted that, over the course of repeated consumption, CRM will lead to faster drops in enjoyment.

Hypothesis 1: People will satiate faster with a product with a cause than a product without a cause.

Hypothesis 2: Faster satiation rate with a cause-related product is mediated by increased concern about other's needs and an increased feeling that consumption feels like work.

Study 1: We recruited 150 participants (Female: 37 percent, $M_{age}=40.07$) from Amazon MTurk. Participants received 75 cents as compensation. Study 1 had 3 (between: cause, no-cause, and control conditions) causal treatments \times 6 (within: trials) repetitions in a mixed design.

Participants viewed and rated a painting in the study. In the cause condition, participants were told that the painter drew the painting to support wildlife animals and that they will need to donate 5 cents to a wildlife animal charity (WWF) to view the painting. In the no-cause condition, participants were told that they will need to pay a commission fee of 5 cents to Adobe, which owns the copyright, to view the painting. In the control condition, participants were not given any information about payment. They were just asked to view the painting.

After the manipulation, participants in all conditions started viewing a lesser-known painting by Paul Cezanne. They viewed the painting six times repeatedly, and at each trial, they were asked to report how much they enjoyed viewing the painting (0-Not at all to 100-Very much). Lastly, we measured participants' donation frequency, and general interests in artworks as covariates to control for their influence on enjoyment.

The mean enjoyment ratings for three conditions across six trials are plotted in Figure 1. Data were analyzed using a linear mixed effect model. The model included the covariates of donation frequency and general interests in artworks. First, results indicated that there was no significant difference in enjoyment across the conditions at trial 1, $M_{cause}=66.90$ vs. $M_{no-cause}=64.67$ vs. $M_{control}=67.91$, $\beta=-.49$, $p=.85$. There was a significant main effect of trial, $\beta=-3.48$, $p<.001$, which indicated decreased enjoyment over time in all three conditions.

Most importantly, the condition \times trial interaction was significant, $b=-1.14$, $p=.04$. Planned contrasts showed that enjoyment dropped more quickly for the cause condition compared to the control condition, $b=-2.26$, $p=.039$. However, there was no difference between the no-cause condition and the control condition, $b=-0.37$, $p=0.73$. Lastly, the difference in the slopes between the cause condition and the no-cause condition was marginally significant, $b=-1.89$, $p=.08$. That is, enjoyment decreased faster in the cause condition than in the conditions without a cause. The results remained consistent without the covariates.

Consistent with the hypothesis, Study 1 showed that people satiated faster when the painting was linked to a cause than when it was not. The satiation rates did not differ between the control and the no-cause conditions, which suggests that pain associated with payment did not explain the results. However, it is possible that participants in the cause condition satiated faster because they were forced to donate their money to the designated charity and hence became more annoyed over the course of the experience. To rule this out, in Study 2, we asked people to choose the charity or the image provider to receive the 5 cents they paid. In addition, we examined the underlying mechanism of the effect in the next study.

Study 2: We recruited 120 participants from Amazon MTurk (Female: 38 percent, $M_{age}=42.69$). Participants received 75 cents as compensation. Study 2 had a 2 (between: cause and no-cause conditions) causal \times 6 (within: trials) repetitions mixed design.

Unlike in Study 1, participants in Study 2 were able to choose the charity or the image provider. In the cause condition, participants chose one charity out of three (WWF, Charity:Water, and Feeding America) to whom they would like to donate their 5 cents. In the no-cause condition, participants chose one image provider out of three (Adobe, Getty Images, and Shutterstock) to whom they would like to pay their 5 cents. They were told that the painting will be selected based on the charity or provider that they choose. However, they viewed the same painting regardless of their choice.

As in Study 1, participants viewed the painting six times and reported enjoyment after each trial. After viewing the final painting, participants reported how much they concerned about the needs of others while viewing the painting (one-item; 1-not at all to 7-very much), and how much they felt viewing the painting seemed like work (two-items; 1-not at all to 7-very much). Lastly, donation frequency and general interests in artworks were measured, which served as covariates.

The mean enjoyment ratings across six trials are plotted in Figure 1. As in Study 1, data were submitted to a linear mixed effect model. The model included the two covariates. The results showed that there was no significant difference of enjoyment between the conditions at trial 1, $M_{cause}=71.43$ vs. $M_{no-cause}=70.05$, $\beta=3.79$, $p=.41$. There was a main effect of trial, $\beta=-3.44$, $p<.001$, which indicated that participants in both conditions satiated over time.

More critically, the predicted condition \times trial interaction was significant, $b=-2.16$, $p=.04$. This result indicates that enjoyment in the cause condition dropped more quickly than that in the no-cause condition. The results remained consistent without the covariates.

In addition, the main effect of choice (i.e., options of the charities and image providers), the interactive effect between choice and trial, and the interactive effect among condition, choice, and trial on enjoyment were all not significant, $ps>.21$.

Next, we conducted a serial mediational analysis to test whether CRM leads to faster satiation by increasing concerns about others' needs, and feeling that consumption was viewed as work. To capture the satiation rate, we used the estimated slope for each participant from the linear mixed effect model. A serial mediational analysis (Model 6, Hayes, 2017) indicated that concerns about others' needs and the extent to which consumption felt like work sequentially mediated the effect, $b=-.08$, 95% CI $[-.33, -.001]$. More specifically, participants in the cause condition showed greater concern about others' needs while viewing the painting compared to those in the no-cause condition, $b=.91$, $p=.01$. Greater concern about others' needs led participants to see consumption as more like work, $b=.15$, $p=.04$. Lastly, viewing consumption as work predicted greater satiation rates (smaller values indicate greater satiation rates), $b=-.59$, $p=.06$. Thus, the results supported our hypothesis. The results again remained consistent without the covariates.

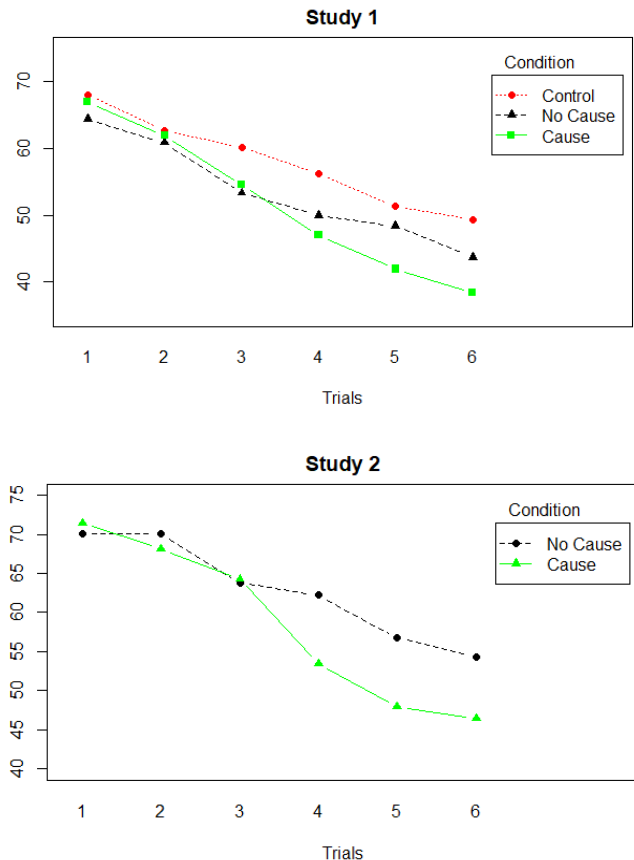
Study 2 showed consistent evidence that CRM accelerated satiation. More specifically, CRM increased concerns about others' needs during the consumption, which in turn led people to view the experience as work, and in turn predicted greater satiation. We ruled out the possibility that forced choice of charity might have accelerated satiation by letting participants choose the charity that they would like to support.

Across two experiments, we demonstrated that CRM led to faster drops in consumption enjoyment. Our findings make several contributions. First, this is the first work to examine how CRM influ-

ences consumers' consumption experiences over time. Second, unlike past works that demonstrate positive effects of CRM (e.g., Andrews et al. 2014), our work shows long-term costs that such practice can produce, which is a faster decrease in consumption enjoyment.

Future studies will test this effect using different stimuli (e.g., songs), and examine interventions that can attenuate the faster satiation for CRM products.

Figure Mean Enjoyment Ratings Across the Trials.



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Pool More, Drive Less: An In-Depth Qualitative Investigation of Barriers and Motivators of Ride-Pooling in Autonomous Vehicles

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INTRODUCTION

Technological developments – digitization, automation, and electrification – allow for radical changes in the mobility market. Especially, the advancement of autonomous vehicles (AVs) pushes this wave of innovation. AVs are expected to make traffic flow more efficiently, especially on motorways. However, recent simulation results show that unregulated use of AV can lead to an increase in travel demand and to more congestion (Hörl et al., 2019). Ride-pooling combined with AV technology has the potential to mitigate these problems by combining the advantages of public transport (higher vehicle occupancy) and private vehicles (direct trips). Further, ride-pooling allows for substantial accessibility gains, especially in areas and during times of the day for which conventional public transport services cannot be efficiently operated.

A number of current studies is related to the acceptance of ride-pooling in AVs: What risks do passengers associate with ride-pooling in AVs? What are expected benefits? Answers to these questions are required to produce credible estimates of the potential of ride-pooling and to advance our understanding on how to promote pooling in AVs. In addition, results may inform transportation service providers, policymakers, AV designers, and other stakeholders about behavioral and service-design factors that will impact the uptake of pooled AVs.

Ride-pooling

Ride-pooling (RP) describes pooled on-demand mobility where travelers may share a ride with other passengers during the whole or a certain part of the trip. The service is provided by professional operators and thus differs from carpooling, which is a service where private people offer a shared ride (Sonneberg et al., 2019). The pick-up and drop-off of rides can happen at existing public transport stops, virtual stop points or at a specific address (door-to-door). This depends mostly on the service operator and the geography where the mobility service is offered. So far, most RP services, i.e., the usage of vehicles with four to eight seats for shared taxi services, have only been tested in pilots with conventional vehicles and with professional drivers. More efforts are needed to achieve a large-scale implementation. MOIA for instance, a RP transport service in Hamburg, Germany operated a fleet of 250 vehicles in 2019 and served on average about 6 000 trips per day. With an average occupancy rate of 1.33, the service served only about 0.11% of all trips and remained a niche product (MOIA, 2021). This example shows that the potential of RP is still very high and can further be exploited.

Ride-pooling in Automated Vehicles

Automated vehicles (AVs) in their most advanced stage permit fully automated driving and aim at being more efficient and safer than driver-operated vehicles, and even increase resource utilization by enabling new car sharing models (Thrun, 2010). In the case of ride-pooling in AVs a driver becomes obsolete and the space in the vehicle can be used otherwise. Mobility on-demand, especially RP in AVs, could provide the best option for an inexpensive service

which will contribute for very much needed sustainable solutions (Kramers et al., 2013; Martinez & Viegas, 2017) as well as for a facilitation of multimodality (Krueger et al., 2016).

Previous Insights into Acceptance of AVs and RP

In the past few years, several studies have addressed the psychological factors influencing behavior related to riding AVs such as perceptions of safety and technology adoption (e.g., Bansal & Kockelman, 2018; Zmud et al., 2017)

Concerning RP research has addressed this very specific mobility service as described above in combination with psychological factors (de Ruijter et al., 2021; König et al., 2018; König & Gripenkoven, 2019) ride-pooling platforms can potentially lead to reduced congestion levels without adversely prolonging travel times. While previous studies concluded that shared rides can offer substantial benefits, initial evidence suggests low adoption levels. We postulate that previous studies that investigated the potential of ride-pooling failed to account for the trade-off that users are likely to make when considering a shared ride. We address this shortcoming by formulating user net benefit stemming from sharing as a compensatory function where the additional travel time and on-board discomfort need to be compensated by the price discount for a traveller to choose a shared ride over a private ride. The proposed formulation is embedded in a method for matching travel requests and vehicles. We conduct a series of experiments investigating how the potential of ride-pooling services depends on travel demand characteristics, user preferences and the pricing policy adopted by the service provider. In particular, the impact of various behavioural settings in terms of users' willingness to share their ride and delay aversion on service adoption and its operational efficiency is assessed. Our results suggest that the total vehicle mileage savings found by previous studies is only attainable when users are very willing to share their ride (i.e. attach low premium to private rides. Additionally, insights about carpooling and ridesharing can shed light on determinants that can be related to RP. Studies have shown that barriers and motivators might exist regarding the trip purpose (i.e., long or short distances; leisure or work; etc.), the usage of an app or other tools while planning (i.e., usability and data privacy), personal and social attitudes (i.e., norms; socializing; flexibility; etc.), travel and waiting time, and number of passengers (see e.g., Adélé & Dionisio, 2020; Alonso-González et al., 2020; Hörl et al., 2020; Kang et al., 2021; König & Gripenkoven, 2019)

More recently, studies focusing on individuals' attitudes found several factors that influence behavior of using RP in AVs, such as accessibility, technology improvements, cost-saving, information, improving the built environment, reliability, adoption of technology, security (Etminani-Ghasrodashti et al., 2021) trust in the AV (Hörl et al., 2019; Nordhoff et al., 2020) comfort, time, perceived costs (Stoiber et al., 2019) and anxiety in social situations (Dolins et al., 2021).

Development of these technologies are fast paced. Likewise, consumer's knowledge, experiences and preferences with regards to using AVs and RP are shaped by these current developments and

need to be tracked and continuously investigated to understand and better predict consumers attitudes and behavior. Our study contributes to filling the gap of current determinants influencing the intention to use RP in AVs. Further, an in-depth analysis of the barriers and motivators related to RP in AVs can provide a deeper and more differentiated understanding of the determinants to use these services.

METHODS

Research Approach

To investigate barriers and motivators related to RP in AVs, we adopted a qualitative exploratory approach. Semi-structured qualitative interviews allow for exploratory data collection and permit an in-depth investigation of factors such as attitudes and behavioral tendencies (Brinkmann, 2014). Furthermore, the time perspective (talking about hypothetical scenarios in the future, such as using RP in AVs) is a challenge that can be overcome by applying specific interview methods, such as the narrative approach (Sools, 2020).

Sample and data collection

We conducted 19 semi-structured qualitative interviews. Participants were people living in the German-speaking part of Switzerland who were either mostly public transport user (n=9), both public transport and private car user (n=3), or mostly private car user (n=7). Participants were balanced in terms of gender (male, n= 9; female, n=10) and aged between 21 and 61 years. The interviewees received a monetary incentive for their participation.

Each interview took between 45-60 minutes and was conducted remote via Zoom. The interviews were conducted by trained inter-

viewers following a pre-tested semi-structured interview-guideline. All the interviews were recorded and transcribed.

Analysis:

The transcribed interviews were analyzed using the software MAXQDA based on the procedures of structured content analysis (Nielsen et al., 2015; Radke et al., 2011). In a first step, interview-transcripts were coded by two independent coders along the main categories based on the findings from the literature research.

In a second step, subcategories were identified and classified as either a barrier, a motivator or a neutral factor. This resulted in a two-level structure of the coding system: (1) main categories (deductive coding), (2) subcategories that are classified as either a barrier, a neutral factor, or a motivator (inductive coding).

RESULTS

Relevant determinants were categorized into 21 main categories (Table A: Appendix). The results of the present study replicate results from previous studies, confirming the relevance of several determinants such as safety, security, availability, or privacy concerns etc.

Analysis based on the subcategories revealed a variety of barriers and motivators that are relevant to explain the intention to use RP in AVs. Frequently mentioned determinants are found in the categories: safety, time, availability, flexibility of the offer, environment, socializing, and reliability. The determinants *security* and *reliability* are discussed in further detail below. Table 1 lists the valence (i.e., barriers and motivators) of the identified subcategories for the two determinants.

Table 1. Subcategories and valence of safety and reliability

Determinant	Barriers (B)	n (B)	Motivators (M)	n (M)
Safety	Feelings of insecurity at the beginning	14	Trust due to growing familiarity	18
	Distrust in technical functionalities		Trust in technical functionalities	
	Difficulties at handing over control to a machine		Safety standards: Trust and information	
	General fear, fear of accidents and/or technical issues		Less susceptible to human errors	
	Helplessness in case of technical issues		Presence of driver or other passengers	
	Feelings of uneasiness			
	Safety issues for other road users			
	Concerns about unforeseen situations			
	Guilt in case of accident			
Reliability	Unreliable	10	Reliable (2)	9
	Less reliable than public transport		Suitable for journeys without fixed appointments (2)	
	Unpredictability of vehicles available		On-time when planning and enough information available	

Notes: B = Barriers; M = Motivators; n = Number of interviewees, stating arguments in this category.

Safety

Safety is defined as feeling safe regarding technology and infrastructure. The barriers related to safety include feelings such as fear of accidents and technical issues, helplessness in case something happens, general uneasiness, and guilt in case of an accident (see Table 1). Unforeseen situations as well as concerns about other road users seem also to be an issue. The former can be related to extreme weather situations (“I am still critical how such technology [works] with black ice and slush. And how the sensors work in bad weather

and bad conditions.”) or unforeseen situations (“It would be dangerous, if the AV would not be able to detect and recognize animals or people [...] and put, any animal or anyone in danger, then I would not use it in any case.”) The same applies to the control that passengers need to give up when riding in AVs .

When it comes to technical functionalities, we see controversy. On the one hand, some participants experienced distrust related to technical functionalities (“The car thinks for you and that is just dangerous.”). On the other hand, participants reported trust in tech-

nical functionalities. Trust in safety standards is generally very high, and for some, information about safety standards builds trust. AVs are often perceived as less susceptible to human errors and thus safer than driver-operated vehicles (“*Nevertheless, technology is more reliable than people. I am convinced of this.*”). A general sense of unfamiliarity at the beginning is common due to this new mode of transport. Also, riding with others evokes a positive feeling of safety (“*When something happens, I am not alone. Actually, it’s exactly the same. But you’re not alone in the boat. You are kind of together and it changes the feeling. It gives more security.*”).

Reliability

Reliability refers mainly to issues related to punctuality and predictability. A large share of participants perceives RP in AVs as being unreliable (“*In terms of planning, the problem is that it doesn’t always leave reliably at [a specific time]*”; “*For example, if I know I have to be in town on time at a certain time, I don’t know if that would be the service for me.*”). Only a few perceive RP in AVs a reliable service (“*Yes, I think that is very punctual and you can rely on it*”). For few participants public transportation is more reliable than RP in AVs (“*With the bus, I know exactly when it leaves. I don’t have to do anything, it’s there. It has a fixed, predictable schedule.*”) and one participant argued that the unpredictability about the availability of vehicles hinder him or her to choose the service.

GENERAL DISCUSSION

Due to its potential to solve transportation issues such as pollution or congestions, RP in AVs is a promising mobility service. Understanding consumers’ preferences is of fundamental importance when it comes to accelerating the adoption of innovations in the marketplace. Furthermore, it is very important to be able to differentiate consumers’ (changing) attitudes to keep pace with the fast-developing industry. In our in-depth qualitative investigation, we could verify 21 different determinants that influence the use of RP in AVs. We were able to replicate the findings regarding the mere determinants already assessed in prior research (Adelé & Dionisio, 2020; Alonso-González, van Oort, et al., 2020; Dolins et al., 2021; Etmnani-Ghasrodashti et al., 2021; Hörl et al., 2020; Kang et al., 2021; König & Gripenkoven, 2019; Nordhoff et al., 2020; Stoiber et al., 2019). However, the market share of their pooled version (ridesharing, e.g., UberPOOL or LyftLine). However, instead of categorizing the determinants into barriers or motivators, we went a level deeper and were able to gain a more differentiated understanding for each of the 21 determinants by identifying for each determinant three subcategories: barriers, neutral arguments, and motivators.

We described two determinants: *security and reliability* in more detail. The in-depth analysis from the qualitative interviews allowed us a more differentiated view of the factors driving the intention to use RP in AVs and uncovered several controversial motivators and barriers. For instance, regarding safety, some participants reported to feel secure and to trust the technical functionalities of an AV, whereas the opposite was true for others. This shows a much more differentiated process of assessing the own preferences and suggests that to identify consumers’ preferences, we need to dive more deeply into the argumentation of costumers.

A similar picture was found for reliability. From our in-depth interviews we can conclude that people are concerned with issues such as punctuality and predictability. There is a tendency to perceive RP in AVs as being unreliable. However, this issue becomes less relevant, if RP in AVs is used for non-time-sensitive trips such as leisure trips, where arriving at a specific time is not very important. Another argument that can be seen as a motivator for RP in AV is when the trip can be planned well in advance.

The discussed examples show that determinants can be used in the argumentative process and the individuals’ construction of preferences as a barrier as well as a motivator. Thus, the preferences and resulting behavior do not merely depend on the general attitude towards RP in AVs but are very much related to specific situations and needs.

From these findings we can derive several recommendations that may inform policymakers, transportation planners and mobility providers likewise on how to design and promote RP in AV: E.g., providing reliable information about the trip (pick-up / drop-off) may reduce uncertainty and increase perceived reliability of mobility service. Or by offering test rides might increase familiarity with new mobility service and reduce insecurities.

Finally, we need to acknowledge the limitations associated with the present study. Likewise, to all research endeavors concerning innovative services that are not yet available to test and experience, findings are limited to the extent of participants’ capabilities to foresee their future preferences. Also, the qualitative methodology was designed to uncover and explore barriers and motivators genuine to the acceptance of RP in AVs. Future research is needed to confirm the proposed relationships and different target groups using a quantitative approach.

Despite its limitations results of this study may inform transportation service providers, policymakers, AV designers, and other stakeholders about behavioral and service-design factors that will impact the uptake of pooled AVs.

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Appendix:

Table A: Main categories of determinants

1. Security	7. Safety	11. Reliability	17. Environmental attitudes
2. Interaction with the vehicle	8. Social interactions	12. Flexibility	18. Privacy
3. Payment	9. Social situation	13. Information on app and planning	19. Perceived control
4. Costs	10. Social norms/expectations	14. Availability	20. Prior experience
5. Comfort (trip related)		15. Time	21. Hedonic motivations
6. Ownership		16. Skills	

The Use of Ownership Language and Its Consequences on Evaluation

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INTRODUCTION

Consumers often use ownership language to signal that a given item is theirs and belongs to them (Peck & Shu, 2018; Pennebacker, Mehl, & Niederhoffer, 2003). For instance, when listing items on used item selling websites, people often describe the items to be sold using ownership language (e.g., my car, this sofa is mine, etc.). Consumers' use of ownership language is not limited to tangible products. They often feel that intangible products, such as ideas, digital goods, and even computer codes, are 'theirs' (Belk, 2013) and use ownership language to indicate the items belong to them.

Despite the prevalence of the use of ownership language in the marketplace, less research attention has been paid to examining its impact on consumer evaluation. Instead, little research has indirectly investigated this issue, implying using ownership language can have diverging effects on consumer evaluation. For instance, Dai and Hsee (2013) found that ownership status can influence motivated judgments, such that hungry consumers perceived the exact cake as larger when it did not belong to them. This work suggests using ownership language may lead to enhanced consumer evaluation. In contrast, territorial research found that using territorial marking to communicate a claim over one's ideas inhibited others' intrinsic motivation and creativity (Brown & Baer, 2015). In the context of ownership transfer, like the present research, this finding implies that using ownership language may ward off prospective buyers.

With these two opposing predictions, the present research demonstrates that ownership language use decreases prospective buyers' evaluation due to perceived barriers to future ownership. Our prediction is based on the notion that the use of ownership language makes it difficult for prospective buyers to feel that they would know the target items better than anyone else (e.g., owners), resulting in perceived barriers to future ownership.

Our contributions are manifold. First, it contributes to our understanding of psychological ownership by examining how using ownership language could influence item evaluation because prior findings are only suggestive (Brown & Baer, 2015; Dai & Hsee, 2013). Second, this research reveals that the effect of the use of ownership language takes place for tangible and intangible items. Although a growing number of studies are asking if the impact of psychological ownership depends on product type (Peck & Shu, 2018), we find that the effect is quite universal. Lastly, our research provides practical implications as well. For instance, marketing managers (e.g., open-source platforms, second-hand goods websites) can leverage our findings to promote more consumer sharing.

STUDY 1A

Study 1A aims to examine the effect of using ownership language on the evaluation of intangible items (i.e., projects) using secondary data from the open-source code-sharing platform, Scratch.com. This platform helps users to program creative multimedia projects, which can be shared with others on the platform. In most cases, the shared projects were presented with a brief description which might include ownership-related language. For instance, typical project descriptions could be written like "my project is about my favorite things" or "Hi, this is my project!"

Users of the platform could express their interest in particular projects in many ways. Specifically, interested users could view

projects and put loves or favorites. In addition, they could download and modify the shared projects as they wanted. Many users found it interesting because they could make improvements by adding to the work of others. Our dataset has information about how many loves, favorites, downloads, and views each project received. Also, the dataset tells us whether the project has been remixed or modified by other users, and these measures were used as proxies for evaluation (i.e., project).

Method

We analyzed a dataset of 1,677,493 projects shared on the platform between 2007 and 2012. We used the Linguistic Inquiry and Word Count language analysis program (LIWC) to analyze the percentage of words within these project descriptions that could potentially signal ownership status. We draw upon a review of the literature on psychological ownership, developmental psychology, and communication (Hay, 2006; LeBarr & Shedden, 2017; Pennebaker et al., 2003; Sun, Schwartz, Son, Kern, & Vazire, 2020), and created a custom dictionary that captured how ownership status could be expressed. Specifically, the dictionary counted (1) the use of possessive pronouns 'my,' 'mine' and (2) the use of first-person singular pronouns 'I,' 'me.' A descriptive analysis shows that 22.1% of the projects shared on the platform contained words that could express ownership status.

Results

We used multiple measures as proxies for project evaluation to examine the effect of using ownership language on project evaluation. These measures include the number of loves, favorites, downloads, and views for each project and whether the project has been remixed or modified by other users (i.e., remixing likelihood).

Using a Tobit regression model and controlling for the project-level characteristics and time shocks, we find that the use of ownership language in project descriptions had a negative association with the project evaluation. To be specific, as more ownership language was used in project descriptions, the projects were viewed less ($\beta = -.74$, $SE = .01$, $t(1,677,471) = -72.92$; $p < .001$), given fewer loves ($\beta = -.25$, $SE = .003$, $t(1,677,471) = -70.03$; $p < .001$), fewer favorites ($\beta = -.20$, $SE = .003$, $t(1,677,471) = -66.19$; $p < .001$), and downloaded less ($\beta = -.36$, $SE = .004$, $t(1,677,471) = -85.18$; $p < .001$).

We also find a similar result for the remixing likelihood. Logistic regression was used to analyze the relationship between the use of ownership language in project descriptions and the remixing likelihood. The result shows that the odds of projects getting remixed by other users decreased by 3% (95% CI [-.029, -.026]) for one percentage increase in the use of ownership language, indicating the negative relationship between the use of ownership language in project descriptions and project evaluation.

STUDY 1B

Study 1B also examines our prediction using different field data. Specifically, we analyzed repositories (i.e., projects) on Github, a web-based platform where people can collaborate on public repositories. Like in Scratch.com, users of Github can express their interest in repositories by giving stars. Moreover, interested users can also download the repository and tweak it into a new one, which is called a fork.

Method

We analyzed a dataset of over 31,330,441 repositories on Github. As in Study 1A, we quantify the extent to which descriptions contain ownership-related words using the LIWC software.

Results

Next, we tested the effect of ownership language on the evaluation of repositories (i.e., projects) using two different measures. First, we use the number of stars each repository received within the three-month window after it was launched to GitHub. Receiving a star is akin to receiving a like or thumb-up on social media. Second, the number of forks (i.e., how many times a particular repository got modified by other users) is used as another proxy for evaluation.

We ran a Tobit regression analysis to examine how the use of ownership language in the descriptions affected the number of stars received. We controlled for the project-level characteristics. The result indicates that using ownership language had a negative influence on the number of stars repositories received ($\beta = -.67$, $SE = .026$, $t(31,330,421) = -25.60$; $p < .001$). This result didn't change when we use the six-month window instead of the three-month window ($\beta = -.77$, $SE = .029$, $t(31,330,421) = -26.53$; $p < .001$).

A separate Tobit regression analysis was conducted for the number of forks made. We find that the use of ownership language in project description negatively affected the number of forks made for repositories ($\beta = -.23$, $SE = .007$, $t(31,330,421) = -29.79$; $p < .001$). This result holds when we control for total word count and when only the percentage of possessive pronouns is counted (e.g., "my," "mine") as the use of ownership language.

To summarize, Study 1A and 1B provide initial evidence that our prediction holds in field settings. Using various measures of project evaluation, both studies found that using ownership language in the descriptions can negatively influence the evaluation of intangible products.

STUDY 2

The primary purpose of Study 2 is to replicate the findings of Study 1A and 1B in the controlled lab setting. In addition, unlike Study 1A & 1B, Study 2 focuses on the effect on the evaluation of tangible products (e.g., used sofa).

Method

120 US participants ($M = 39.21$ years, $SD = 10.31$ years, Female = 45.00%) were recruited on MTurk and assigned to one of the two conditions in a single factor (ownership language: control vs. used) between-subjects design.

We asked participants to imagine that they were considering purchasing a used sofa. Browsing a website where people listed their used sofa for sale, they found one they were interested in potentially purchasing. Then, we showed a description of the used sofa where we manipulated the number of ownership-related words included. Depending on the condition, a different percentage of ownership language was used in the product description.

In the control condition, we did not include any ownership-related words in the description, thus, resulting in zero percentage of ownership language used. In contrast, in the experimental condition, about 15.0% of total words were ownership-related (e.g., "I bought my sofa bed four months ago. My sofa bed can be converted into a sofa or a lounge. Buy my sofa bed to relax your body!").

Subsequently, participants were asked to answer three items assessing if the manipulation worked as intended (e.g., "the person seems to feel that the sofa bed belongs to him/her") and then to indicate their willingness to pay for the product. To be specific, we told them the listed price for the product was \$150 and that they were asked

to indicate the percentage of the price they wanted to pay for the sofa bed (Fedorikhin, Park, & Thomson, 2008).

Results

Our manipulation of ownership language ($\beta = 5.20$ (1.31) vs. $\beta = 5.98$ (.81)) worked as intended. Participants in the control (vs. used) condition reported they felt fewer (vs. more) ownership-related words used in the description ($\beta = .39$; $t(118) = 3.95$; $p < .001$).

We conducted a linear regression analysis to examine the effect of ownership language on the willingness to pay for the product. As predicted, ownership language used in the description significantly decreased consumers' willingness to pay for the used sofa ($\beta = -4.51$; $t(118) = -2.43$; $p = .016$). Specifically, participants in the control condition reported significantly higher WTP for the product than those in the ownership language used condition ($M = 78.15$ (14.07) vs. $M = 69.13$ (25.02), $p = .016$), suggesting the detrimental effect of ownership language on product evaluation.

Our results show that we successfully replicated the findings of Study 1A & 1B. That is, the more ownership language used in the description, the lower consumers' evaluation of the focal item. Importantly, in Study 2, our focal item was a used sofa, a tangible product. This suggests that the detrimental effect of ownership language occurs not only for intangible products (e.g., ideas, projects) but also for tangible ones.

STUDY 3

Study 3 aimed to test the mechanism by which the use of ownership language decreases product evaluation. We argue that the effect takes place because prospective buyers perceive barriers to future ownership, which, in turn, leads to decreases in evaluation. In order to test this, we introduced a new factor, the acquisition mode (Dustin Harding, Hildbrand, Kramer, & Lasaleta, 2019). The idea behind this is that prospective buyers would be less (vs. more) likely to be affected by ownership language when deciding to rent (vs. purchase) items. This is because when renting something, people expect to relinquish ownership of the items at some point in time. As a result, the use of ownership language may be less viewed as a barrier to future ownership when renting.

Method

Participants were 201 US participants ($M = 37.97$ years, $SD = 11.93$ years, Female = 40.80%) recruited on MTurk. Study 3 is almost identical to Study 2, except that we included another factor, acquisition mode. As a result, we used a 2 (acquisition mode: rent vs. purchase) X 2 (ownership language: control vs. used) between-subjects design. To manipulate acquisition mode, we told half of the participants that they were considering renting (vs. purchasing) a used guitar. We manipulated ownership language by using a varying number of ownership-related words in a product description, as we did in Study 2.

As our primary dependent variable, we measured consumers' evaluation of the used guitar using three items (e.g., "how good/appealing/favorable do you think the guitar is?"; $\beta = 5.13$ ($SD = 1.12$)). These items were summed and averaged to form an index of item evaluation. Then, participants answered the same manipulation check items as well as several demographic questions, and the survey ended.

Results

Manipulation checks were successful. We found only a significant main effect of ownership language ($\beta = .57$; $t(197) = 6.02$; $p < .001$; $M = 4.69$ (1.59) vs. $M = 5.85$ (1.04)). The main effect of acquisition mode ($\beta = -.05$; $t(197) = -.58$; $p = .565$) and the interaction between ownership language and acquisition mode ($\beta = -.16$; $t(197) = -1.64$; $p = .010$) were not significant.

In order to examine whether the detrimental effect of ownership language is moderated by acquisition mode, we ran a regression analysis in which the use of ownership language, acquisition mode, and their interaction served as independent variables and the index of item evaluation as a dependent variable. The results supported our prediction. The regression analysis revealed that none of the main effects were significant (ownership language: $\beta = .03$; $t(197) = .42$; $p = .678$; acquisition mode: $\beta = .04$; $t(197) = .45$; $p = .650$). However, the interactive effect of ownership language and acquisition mode on product evaluation was significant ($\beta = -.19$; $t(197) = -2.34$; $p = .02$). Specifically, in the purchase condition, using ownership language did not influence item evaluation ($\beta = -.15$; $t(197) = -1.36$; $p = .18$). In contrast, in the renting condition, ownership language increased item evaluation ($\beta = .22$; $t(197) = 1.96$; $p = .05$). The results are illustrated in Figure 1.

GENERAL DISCUSSION

Across four studies, this research shows that using ownership language can have a detrimental effect on consumer evaluation. Specifically, we found that the ownership language used in the description lowered the evaluation of intangible items (Study 1A & 1B) and tangible items (Study 2 & 3). We used various evaluation measures, including WTP, the number of favorites, loves, views, etc., and the remixing likelihood, suggesting that the effect is quite robust. Also, we tested our predicted mechanism (i.e., perceived barriers to future ownership) using a moderation study (Study 3).

There are, of course, still some questions to be answered. One such question is why respondents in Study 3 who were told that they were making renting decisions indicated increased item evaluation when ownership language was used. We speculate that they might take it as an indication of how knowledgeable the owner was about his/her possession, which could reduce the uncertainty associated with the decision itself. However, given that there's research showing that owners' expression of attachment can deter prospective buyers (Graul & Brough, 2021), future studies need to investigate how the expression of ownership/attachment may yield different outcomes.

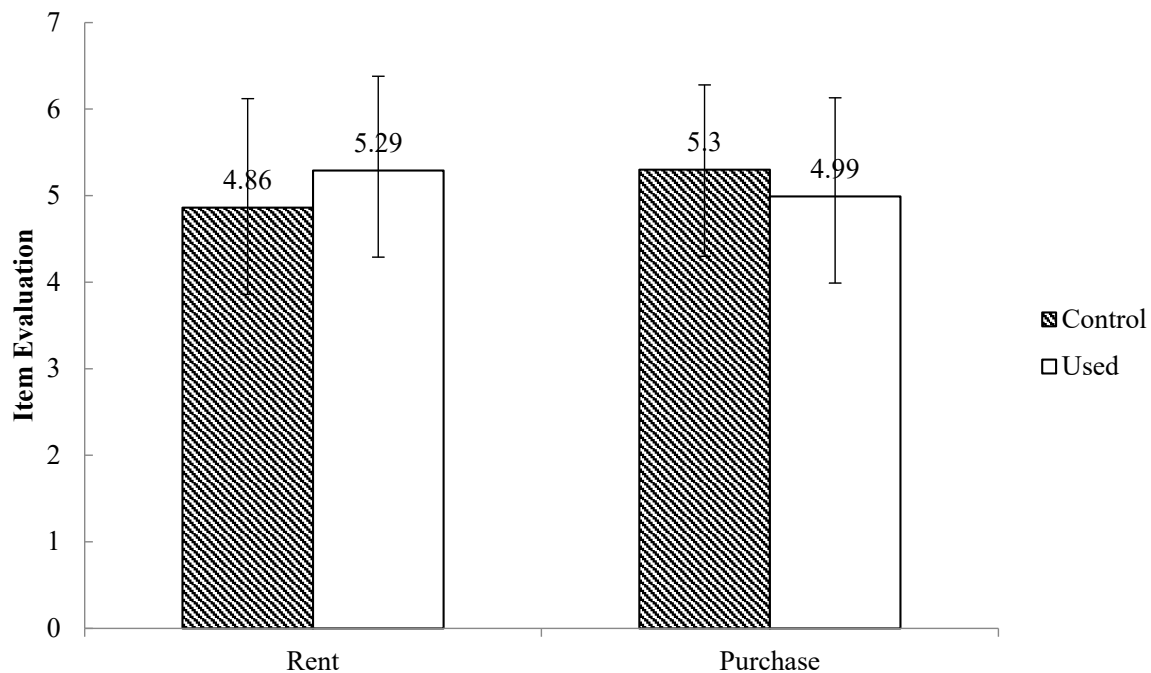
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TABLE 1. Results summary

Study	Method	Sample Size	Dependent Variable	Key Covariates	Main Findings
Study 1a.	Field Study.	1,677,493 samples.	# of views, # of loves, # of favorites, # of downloads, remixing likelihood.	Percentage of ownership-related words in the description.	Ownership language decreased (1) # of views ($\beta = -.74$, SE = .01, $t = -72.92$; $p < .001$), (2) # of loves ($\beta = -.25$, SE = .003, $t = -70.03$; $p < .001$), (3) # of favorites ($\beta = -.20$, SE = .003, $t = -66.19$; $p < .001$), (4) # of downloads ($\beta = -.36$, SE = .004, $t = -85.18$; $p < .001$), (5) remixing likelihood (The result shows that the odds of projects getting remixed by other users decreased by 3% (95% CI [.964, .973]) for one percentage increase in the use of ownership related words).
Study 1b.	Field Study.	31,330,441 samples.	# of stars, # of forks.	Percentage of ownership-related words in the description.	Ownership language decreased (1) # of stars ($\beta = -.67$, SE = .026, $t = -25.60$; $p < .001$), (2) # of forks ($\beta = -.23$, SE = .007, $t = -29.79$; $p < .001$).
Study 2.	Experiment.	120 respondents	WTP	The use of ownership language.	Using ownership language significantly decreased consumers' WTP for the used sofa ($\beta = -4.51$; $t(118) = -2.43$; $p = .016$).
Study 3.	Experiment.	201 respondents	Evaluation	The use of ownership language, acquisition mode (rent vs. purchase).	The use of ownership language interacts with acquisition mode to influence consumer evaluation ($\beta = -.19$; $t(197) = -2.34$; $p = .02$). Specifically, in the purchase condition, using ownership language did not influence item evaluation ($\beta = -.15$; $t(197) = -1.36$; $p = .18$). In contrast, in the renting condition, ownership language increased item evaluation ($\beta = .22$; $t(197) = 1.96$; $p = .05$).

FIGURE 1. Acquisition mode moderates the impact of the use of ownership language on item evaluation (Study 3).



Note: Item evaluation was measured using three items (e.g., how good/appealing/favorable do you think the guitar is?).

When Loneliness Impedes Compliance with COVID-19 Prevention Guidelines

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INTRODUCTION

To slow the spread of COVID-19, the CDC instituted a series of prevention guidelines, including urging individuals to physically distance themselves from people outside their immediate household, frequently wash their hands, and wear face masks. However, some individuals have been reluctant to comply with these guidelines. The current research investigates whether feelings of loneliness influence consumers' willingness to comply with COVID-19 prevention guidelines. The experience of loneliness is pertinent to the study of pandemics, as the physical distancing and quarantine efforts encouraged during them require people to stay home and limit face-to-face socialization. Furthermore, most scientists believe that COVID-19 is unlikely to disappear due to reduced immunity and the emergence of new COVID-19 variants. Thus, a holistic understanding of compliance may prevent further transmission of COVID-19 and provide insights into how to handle future pandemics.

Using reciprocal altruism theory as a guide, we suggest that investing in collective behaviors, like wearing a mask, washing hands vigilantly, and physically distancing from others, may be less worthwhile for lonely individuals (Trivers, 1971). Loneliness decreases one's ability to experience the social benefits of altruistic behavior such as higher social standing and increased access to shared group resources (Miller, 2000; Zahavi, 1975). As such, we might expect lower compliance with COVID-19 prevention guidelines among lonely individuals as opposed to non-lonely individuals because they have a lower sense of obligation to reciprocate.

Experiment 1 tested whether lonely (vs. non-lonely) individuals report lower willingness to comply with COVID-19 prevention guidelines. 147 undergraduate students participated in a lab study. The experiment was set up such that participants were told they would take part in two separate experiments, although in actuality, the experiments were connected. In the "first" experiment, participants were randomly assigned to one of two loneliness manipulations from Jiao and Wang (2018). In the lonely condition, participants wrote about a time in their life when they felt socially isolated, while in the non-lonely condition, participants wrote about a time when they felt socially connected.

In the "second" experiment, participants were asked in the next week, do you plan to... 1) practice social distancing; 2) thoroughly wash your hands with soap and water; and 3) wear a mask when you are around others (outside your immediate household) (1 = Never to 5 = Always). These items were combined to measure willingness to comply with COVID-19 prevention guidelines ($\alpha = .67$).

Analyses showed that individuals primed to feel lonely (vs. non-lonely) were less willing to comply with COVID-19 prevention guidelines ($M_{\text{lonely}} = 4.23$ vs. $M_{\text{non-lonely}} = 4.46$; $F(1, 145) = 4.74$, $p = .03$).

Experiment 2 examined the psychological mechanism (sense of obligation to reciprocate). 186 undergraduate students participated in a lab study. The experiment was set up such that participants were told they would take part in two separate experiments, although in actuality, the experiments were connected. In the "first" experiment, participants were randomly assigned to the loneliness manipulation (lonely vs. non-lonely) from Experiment 1. In the "second" experiment, participants answered the willingness to comply with COVID-19 prevention guidelines from Experiment 1. Afterward, participants answered the reciprocity scale ($\alpha = .92$) (from Jami et

al., 2021), which served as our mediator. Participants indicated how "obligated," "indebted," "appreciative," "thankful," and "grateful" they felt at that moment (1 = Feel very little to 7 = Feel a lot).

Analyses showed that individuals primed to feel lonely (vs. non-lonely) were less willing to comply with COVID-19 prevention guidelines ($M_{\text{lonely}} = 2.87$ vs. $M_{\text{non-lonely}} = 3.19$; $F(1, 184) = 6.43$, $p = .01$). To explore the underlying mechanism, we used Process Model 4 (Hayes, 2017). As expected, the pathway from loneliness to willingness to comply with COVID-19 prevention guidelines through obligation to reciprocate was not significant (indirect effect = $-.05$, 95% CI $[-.10, -.01]$), demonstrating full mediation. Thus, Experiment 2 demonstrated that lonely (vs. non-lonely) individuals experience a lower sense of obligation to reciprocate, which in turn, reduces their willingness to comply with COVID-19 prevention guidelines.

Experiment 3 tested whether the use of communal or agentic advertising appeals would impact consumers' willingness to comply with COVID-19 prevention guidelines. Given that we expected lonely consumers to experience a lower sense of obligation to reciprocate than non-lonely consumers, we also expected lonely consumers to be less persuaded by communal appeals that heighten the social aspect of compliance with COVID-19 prevention guidelines. Conversely, we predicted that when exposed to agentic-focused appeals, consumers both higher and lower in loneliness would show no difference in willingness to comply with COVID-19 prevention guidelines.

210 undergraduate students participated in a lab study. The experiment consisted of a between-subjects design with one manipulated factor (appeal type: agentic or communally focused) and one measured variable (loneliness). The experiment was set up such that participants believed they would take part in two separate experiments, although in actuality, the experiments were connected. In the "first" experiment, participants viewed an advertisement that used either an agentic or communally focused appeal type. In the "second" experiment, participants completed the same willingness to comply with COVID-19 prevention guidelines scale ($\alpha = .67$) from Experiments 1 and 2. Last, participants completed a filler task and loneliness scale (Russell et al., 1980) ($\alpha = .88$).

Analyses showed a significant two-way interaction of loneliness and the advertisement appeal type ($\beta = .23$, $t(1, 206) = 2.06$, $p = .04$). As an individual's level of loneliness increased, they were significantly less willing to comply with COVID-19 prevention guidelines when exposed to an ad using a communally focused appeal ($\beta = -.34$, $t = -2.24$, $p = .03$). Most importantly, though, when the ad used an agentic-focused appeal, the difference in willingness to comply with COVID-19 prevention guidelines between individuals higher and lower in loneliness was no longer significant ($\beta = .12$, $t = .73$, $p = .47$).

Overall, our results suggest that lonely individuals may be less inclined to comply with COVID-19 prevention guidelines, but that agentic advertising messages can encourage lonely consumers' compliance. We hope our findings will inspire additional research about loneliness and provide insights valuable to the current and future pandemics.

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What Is ‘Average’?

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INTRODUCTION

Consumers rely on their perception of what is ‘average’ to make several consequential decisions, including financial predictions, product choices, probability judgments, personal valuations of public goods, and evaluations of past experiences (Fisher, Newman, and Dhar 2018; Fisher and Keil 2018; Howard et al. 2022; Kahneman 2003). This begs the question, *what do consumers perceive to be average?* Intuition suggests that when people estimate an average they try to imagine the *mean* of the distribution of relevant outcomes. And indeed, research suggests that humans are adept at perceptual mean identification in contexts as diverse as numbers (André, Reinholtz, and de Langhe 2022), object size (Ariely 2001), gender (Haberman and Whitney 2007), and facial expressions (Haberman and Whitney 2009). However, very little research has systematically manipulated the skewness of sequential outcomes in a way that shows when consumers’ perceived average accurately represents the mean and when it might be biased. The goal of the present research is to address this gap in the literature by examining the effect of skewness on consumers’ perceived average of sequential outcomes.

We examine the effect of skewness on perceived average in several contexts, including plain numbers, percentages, expenses, and income. Our core hypothesis is that when consumers encounter a positively (negatively) skewed distribution of sequential outcomes, their perceived average systematically underestimates (overestimates) the true mean. The logic underlying this hypothesis is that a consumer’s perception of what is average overweight’s typical outcomes (Howard et al. 2022). Typical outcomes are represented by the mode of a distribution, so if this logic is correct, underestimation should occur when mode < mean, overestimation should occur when mode > mean, and estimates should be relatively accurate when outcomes are normally distributed with mode = mean.

We tested our hypothesis in a series of 20 pre-registered experiments ($N = 8,748$). In a typical study, participants were presented with 52 values, one at a time, every 1.2 seconds (André, Reinholtz, and de Langhe 2022). The primary manipulation was that the values were drawn in random order, without replacement, from either a positively skewed, normal, or negatively skewed distribution. Importantly, the mean, standard deviation, minimum value, and maximum value were held constant across conditions to let us isolate the effect of skewness on perceived average. After viewing the 52 values, participants answered the question “What is the average of the numbers you just saw?” using a free response text box. As per our pre-registrations, our primary analysis was a set of one-sample t-tests comparing the mean estimate in each condition to the true mean of each condition.

Studies 1–11 tested our core hypothesis with varying degrees of skewness. In each of these experiments participants were randomly assigned to one condition in a 3 cell between-subjects design (distribution: positively skewed vs normal vs negatively skewed). The true mean in each condition was 150, the minimum value was 110, and the maximum value was 190. Participants consistently underestimated the true mean in the positive skew conditions, accurately estimated the true mean in the normal conditions, and overestimated the true mean in the negative skew conditions.

Studies 12–16 tested the generalizability of our findings by changing study specifications like the number of values shown (26 rather than 52), interval width (130, 135, . . . , 170 instead of 110, 120, . . . , 190), display time (0.8s or 1.6s rather than 1.2s), and question wording (estimating the “mean” instead of the “average”). The

effect of skewness on perceived average was replicated in each of these studies.

Studies 17–20 examined the robustness of the effect by actively trying to make it go away. Study 17 was a 3 (distribution: positively skewed vs normal vs negatively skewed) \times 2 (forewarning: yes vs no) design. Participants in the no forewarning conditions received the same study instructions as in previous studies. In the forewarning conditions, we told participants we would be asking them to estimate the average before we presented them with the values. We did this because it is reasonable to ask if the effect will go away when participants know in advance what the focal task is. It did not.

Study 18 was a 3 (distribution: positively skewed vs normal vs negatively skewed) \times 2 (true mean = 150 vs 200) design. The shape of the distribution in each pair of true mean conditions was identical, but shifting the true mean of each distribution from 150 to 200 meant that most values in the true mean = 200 positive skew condition started with 2 (e.g., 200, 210, 220, and so on) whereas most values in the true mean = 200 negative skew condition started with 1 (e.g., 190, 180, 170, and so). In contrast, all values in each true mean = 150 conditions started with 1. We reasoned that the effect might go away when the true mean is 200, because consumers have a left-digit bias (e.g., Thomas and Morwitz 2005), which should draw their attention to higher (lower) values in the positive (negative) skew condition, and thus correct under (over) estimation in the skewed conditions. Nonetheless, the main effect was replicated in both the true mean = 150 and true mean = 200 conditions.

Study 19 was a 3 (distribution: positively skewed vs normal vs negatively skewed) \times 2 (estimate delay: yes vs no) design. Participants in the no delay conditions completed the study as usual. In the delay conditions, we made participants wait 30 seconds before estimating the average because a short delay in judgment can help people retain learned information (Posner and Keele 1970), which would presumably improve estimation accuracy. However, the effect was replicated in both the delay and no delay conditions.

Study 20 was a 3 (distribution: positively skewed vs normal vs negatively skewed) \times 2 (incentive: yes vs no) design. Participants in the incentive compatible conditions were told in advance that accurate estimates would be rewarded with entry into a draw to win one of three \$100 prizes. Participants in the non-incentive compatible conditions received the same information, but after they provided their estimate. Introducing an incentive did not improve accuracy.

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My Two Cents: Assistance During Financial Decision Making Increases Consumer Sentiment and Gamma Brainwaves

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INTRODUCTION

Financial decisions are arguably the most challenging tasks faced by consumers daily. Specialized skills are increasingly required to make decisions regarding household budgets, investment products, insurance plans, and many other aspects of our financial lives (Lusardi 2008). To address this need, an entire service industry exists for the sole purpose of providing consumers with financial advice as they navigate these complex, emotionally laden, and highly uncertain choices (Calcagno and Monticone 2015).

Behavioral finance and marketing researchers have repeatedly found that consumers benefit emotionally from receiving professional financial advice. Consumers of these advisory services report feeling happier and more confident regarding their financial decisions (Robb, Babiarz, and Woodyard 2012; Xiao and Porto 2016). Some economists even argue that impartial financial advice plays a critical role in protecting consumers (Inderst 2011).

Financial decisions present a unique interplay of biological processes, statistical calculations, and emotional preferences and biases (Bosschaerts 2009, Frydman and Camerer 2016). Research incorporating consumer psychology, neuroscience, marketing, and economics has resulted in additional tools to better study financial decision making (Peterson 2007; Bosschaerts and Murawski 2015).

This work seeks to further these interdisciplinary efforts, combining behavioral research with neuroscience techniques. Participants watched a video of hypothetical financial scenarios and answered survey questions while undergoing electroencephalography (EEG) sampling brain activity. The video varied whether each financial scenario was presented with or without advice to determine the impact assistance has on participants' subjective and neural responses.

Specifically, we measure the power of neural oscillations (i.e., brainwaves) in the gamma frequency range, which have been positively linked to numerous cognitive tasks (Fitzgibbon et al. 2004). Neuroscientists have associated gamma power with attention and visual information processing (Gruber et al. 1999; Müller, Gruber, and Keil 2000), working memory (Jokisch and Jensen 2007; Lozano et al. 2014), imagination of actions (De Lange 2008), and language comprehension (Wang, Zhu, and Bastiaansen 2012).

The purpose of this work is to better understand the emotional and neural effects of advice during complex decision making. We hypothesize that the presentation of financial advice will elevate gamma power in real time and lead participants to feel more financially secure, confident, and at ease with their decisions.

METHODS

Data Collection

The data analyzed here was collected as part of a corporate consulting project commissioned by Northwestern Mutual, a Fortune 500 company specializing in consumer financial services (The Northwestern Mutual Life Insurance Company, 2017). This section summarizes the methods ThinkAlike Laboratories utilized in the original data collection as well as our current analysis.

Participants

A participant recruiting service assembled a diverse sample ($N = 41$; 18 females) in terms of age (45.98 ± 11.12 years), ethnicity (76%

white, 15% black, 5% Asian, 2% Hispanic, 2% other), and marital status (68% married, 24% single, 5% divorced, 2% living with significant other).

Given the interest in likely consumers of financial services, all participants were required to have a college degree (37% additionally reported having post-graduate education) and two-thirds of the participants had annual incomes of \$100,000 or more. Additionally, participants were asked about the importance of managing their finances; on a Likert-style scale ranging from one to five, 95% selected five (i.e., extremely important) and 5% selected four (i.e., important).

Participants could fluently speak and read English and had normal (or corrected-to-normal) vision and hearing. Participants were paid for their participation and provided informed consent.

Task

Participants underwent EEG recordings while watching a narrated video of financial scenarios and answering questions when intermittently prompted. The scenarios were developed in consultation with Northwestern Mutual.

In total, the video was 52.57 minutes in length. After 30 seconds of baseline recordings (presentation of a fixation cross, followed by an extended period of eyelid closure), the video was broken into four financial decision-making scenarios commonly faced by consumers: (1) budget allocation (14.68 minutes), (2) college tuition investment (10.41 minutes), (3) home purchase (20.88 minutes), and (4) retirement planning (11.63 minutes).

Each scenario began with the narrator providing an overview of the hypothetical situation to be considered. For example, in the budget allocation scenario, participants were first presented with a monthly after-tax income of \$7,000 and a list of various monthly expense categories (housing, medical, transportation, entertainment, etc.) totaling \$6,455. Participants were intermittently prompted to make decisions in response to the scenario at hand (e.g., changing the amount of money allocated to a particular expense category), and they wrote their responses on paper. At some point during each scenario, the video presented optional advice (e.g., a decision-making framework).

In our analysis, we refer to the portions of the financial scenarios with and without advice as the "assisted" and "unassisted" conditions, respectively. The video did not explicitly distinguish between these assisted and unassisted conditions in order to make the decision-making processes as seamless and natural as possible for the participants. The first three scenarios each presented one unassisted condition and one assisted condition; the fourth scenario (retirement planning) presented one unassisted condition and two assisted conditions.

Subjective Data

Sentiment Ratings. Participants provided numerous survey responses regarding the financial scenarios presented by the video. In this work, we analyzed the participants' subjective feelings about their financial decisions (as opposed to the specific decisions themselves). Participants were asked to rate their sentiment in various ways following each scenario/condition pair (e.g., scenario: budget allocation; condition: unassisted). In two of the four scenarios, participants were asked how "financially secure" they felt after making their decisions. In the other two scenarios, the phrasing was varied to ask how "confident" they felt and how "difficult" the decisions were for them. Each

of these responses were rating on a Likert-style scale ranging from one to five.

Analysis. For each participant and scenario, we compared the reported sentiment from the unassisted versus assisted conditions using participant-matched (i.e., paired), single-tail t-tests.

Neural Data

Acquisition. Participants’ neural data were recorded using 32-channel EEG systems (Ag/AgCl scalp electrodes; Brain Products GmbH, Gilching, Germany) at a sampling rate of 250 Hz. The electrodes were distributed uniformly and symmetrically across the scalp in a commonly-used configuration (montage: actiCAP 64Ch Standard-2, green holders) with ground and reference electrodes at AFz and FCz, respectively. Washable conductive saline gel was placed on each electrode to minimize impedance during the data acquisition.

Processing. These neural data sets were imported into MATLAB (MathWorks, Natick, Massachusetts) via EEGLAB (Swartz Center for Computational Neuroscience, University of California, San Diego). We use a Short-Time Fourier Transform (STFT) to isolate the power of the gamma oscillations (32-100 Hz) at every one-second epoch from the raw neural data at each electrode. Next, for each participant and each second, we calculated the mean gamma power across all electrodes. Then, at each second, we calculated the median power value across participants, which yields a time series of the central tendency of the participants’ whole-brain gamma power. We further processed this aggregated time series by applying a ten-second span moving average. Finally, we normalized the time series values to an intuitively meaningful range (i.e., zero to one, reflecting the minimum to maximum observed aggregate gamma power; no effect on statistics).

Analysis. We calculated the mean and standard deviation of the normalized gamma power for each subset of the aggregate time series corresponding to each scenario/condition pair. We performed statistical comparisons between subsets of the normalized gamma power time series using independent (i.e., unpaired), single-tail t-tests.

RESULTS

We observed statistically significant differences between assisted and unassisted conditions with respect to both the neural and subjective data. The individual results from the four scenarios (budget allocation, college tuition investment, home purchase, and retirement planning) were consistent with each other as well as the combined results of all scenarios (see Summary Table at the end of this section).

Increased Gamma Power in Assisted Condition

For each scenario and in aggregate, normalized gamma power was significantly higher in the assisted condition compared to the unassisted condition ($p < .01$). Within each scenario, gamma power tended to be 26.41% ± 9.21% higher in the assisted condition versus the unassisted condition. Overall, normalized gamma power was significantly higher ($p < .01$) during assisted conditions (.48 ± .18) than during unassisted conditions (.39 ± .15).

Increased Positive Sentiment in Assisted Condition

We observed increased positive sentiment (indicated by increased ratings of “financial security” or “confidence” and decreased ratings of perceived “difficulty” of the decisions) for the assisted condition in each scenario.

For the budget allocation and home purchase scenarios, we found 6.91% and 8.21% increases in “feeling financially secure” (each statistically significant, $p = .02$) following the assisted condition versus the unassisted condition.

Regarding the college tuition investment scenario, we observed a statistically significant ($p < .01$) increase of 19.08% in reported confidence after the assisted condition versus the unassisted condition. We also saw a 9.22% decrease in perceived difficulty of the decisions, which was directionally consistent with the prior result, but statistically insignificant ($p = .15$).

In the retirement planning scenario, each participant was presented with one unassisted condition (as was the case with the other scenarios), but two different assisted conditions.

For the first version of the assisted condition, we observed statistically significant ($p < .01$) changes in both sentiment metrics, with a mean increase of 9.71% in confidence and a mean decrease of 26.97% in perceived difficulty. The reported confidence levels ($4.73 \pm .55$) were the highest of any scenario/condition pair in the study, near the maximum of the one-to-five scale. Similarly, the rated difficulty values (1.76 ± 1.28) were the lowest of any scenario/condition pair tested.

The second version of the assisted condition had directionally consistent, albeit weaker, results. Confidence increased by 2.84% and perceived difficulty fell by 1.66% relative to the unassisted condition (however, neither change was statistically significant; $p = .17$ and $p = .42$, respectively).

When combining all scenarios, there were statistically significant differences between the assisted and unassisted conditions for each sentiment metric. For the assisted conditions in aggregate (relative to the unassisted conditions in aggregate), financial security ratings were 7.27% higher ($p = .01$), reported confidence tended to increase by 14.58% ($p < .01$), and perceived difficulty decreased by 14.06% on average ($p = .03$).

High Correlation between Gamma Power and Sentiment

Figure 1 shows that normalized gamma power was highly correlated ($r = .87$, $p < .01$) with sentiment (combining the similar ratings of “financial security” and “confidence” into one complete set). Furthermore, we noted that the first scenario/condition pair (budget allocation, unassisted) had both the lowest sentiment values (rating of financial security: $3.18 \pm .69$) and lowest normalized gamma power levels ($.28 \pm .14$). Relatedly, for the first assisted condition in the retirement planning scenario, we recorded both the highest sentiment ratings (confidence: $4.73 \pm .55$) and highest normalized gamma power levels ($.61 \pm .18$).

Scenario	Condition	Neural Response	Subjective Response		
		Normalized Gamma Power	Financial Security	Confidence	Difficulty
Budget Allocation	Unassisted	.28 ± .14	3.18 ± .69	-	-
	Assisted	.35 ± .15	3.40 ± .67	-	-
College Tuition Investment	Unassisted	.36 ± .11	-	3.46 ± 1.10	2.71 ± 1.33
	Assisted	.48 ± .12	-	4.12 ± .81	2.46 ± 1.31
Home Purchase	Unassisted	.45 ± .12	3.41 ± .74	-	-
	Assisted	.51 ± .17	3.69 ± .65	-	-
Retirement Planning	Unassisted	.45 ± .14	-	4.22 ± .96	2.41 ± 1.41
	Assisted, Version 1	.61 ± .18	-	4.73 ± .55	1.76 ± 1.28
	Assisted, Version 2	.57 ± .12	-	4.34 ± .91	2.37 ± 1.51
All Scenarios (Average)	Unassisted	.39 ± .15	3.30 ± .72	3.84 ± 1.09	2.56 ± 1.37
	Assisted	.48 ± .18	3.54 ± .67	4.40 ± .81	2.20 ± 1.39

Summary Table: Increased Gamma Power and Positive Sentiment in Assisted Condition. For each scenario/condition pair, the means and standard deviations are presented for each metric. In the assisted condition of each scenario, bolded values indicate a statistically significant ($p < .05$) difference from that metric corresponding to the unassisted condition of the same scenario.

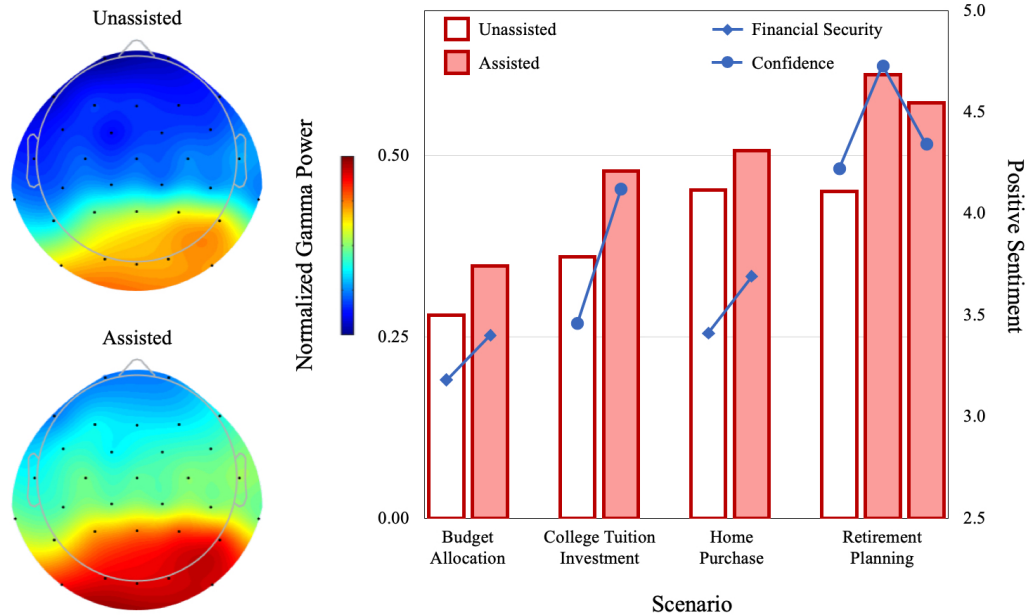


Figure 1: Relationships between Gamma Power, Assistance, and Positive Sentiment.

The right side of the figure graphs the normalized gamma power for each scenario/condition pair as vertical bars corresponding to the values on the left axis. The outlined bars represent the unassisted condition whereas the shaded bars represent the assisted condition. The blue markers correspond with the positive sentiment values on the right axis for each scenario/condition pair (diamonds for ratings of feeling “confident” and circles for ratings of feeling “financially secure”). The left side of the figure presents topographic maps (looking down at the top of the head) of the mean normalized gamma power for all scenarios in the unassisted and assisted conditions. The colors range from dark blue (.25) to dark red (.50).

DISCUSSION

Consistent with previous research (Robb et al. 2012; Xiao and Porto 2016), the results supported our hypothesis that assistance with financial decisions enhance consumers’ subjective experiences. Additionally, we observed sizable elevations in gamma power during scenarios with assistance, and these increases were highly correlated with the consumers’ positive sentiment ratings. Even just educating people about a decision-making framework had a measurably positive impact on both their neural activity and reported sentiment. Linking neural and subjective data provides base knowledge for researchers to incorporate EEG in future research on decision making.

Future Directions

The impact of financial advice on consumer behavior deserves more attention. This work furthers the notion that consumers indeed benefit from such services, both emotionally and cognitively, and that the effects can be observed in real time. This study offers a foundation for future research on financial advice and decision making. Specifically, researchers could measure moment-to-moment gamma power as a real-time proxy for the effect of financial advice on neural processing. Researchers could assess the effectiveness of various approaches to financial advice without interrupting participants to ask questions or

relying on potentially inaccurate subjective reflections. Furthermore, researchers could attempt to pinpoint the moment that a certain piece of advice “clicks” with consumers.

One natural extension to this work is to attempt the same paradigm with other categories of consumer decision-making tasks. Would an assisted condition for a simpler consumer choice, such as the selection between different tangible products (e.g., cell phones), have as strong of an effect?

Our results also support prior literature about the meaningfulness of gamma oscillations during conscious decision making. The gamma frequency spectrum is relatively understudied compared to lower-frequency oscillations (e.g., alpha waves), and given our findings of a potent correspondence between gamma power and complex cognitive tasks, further study is worthwhile.

Relatedly, there is little consensus in the literature regarding the precise frequency range that should be considered “gamma.” We utilized 32-100 Hz, but future work could refine this range into one or more tighter subsets. Likewise, we also computed gamma power across the entire scalp, but it will be fruitful to analyze smaller regions (e.g., posterior locations of the scalp where it appears that there is higher gamma power versus anterior locations; see left side of Figure 1).

Limitations

We recognize several limitations in this work. For example, since financial decisions are inherently complex, the presentation of each scenario was over ten minutes long, which ultimately limited the number of scenario/condition pairs (i.e., trials) that could be tested during the course of an hour (a reasonable amount of time for participants to engage with hypothetical financial decisions).

Although data was collected about participants’ educational background and income levels, we did not control for these variables in our analysis, preferring to study the full participant population ($N = 41$) rather than subdividing the participants’ into smaller segments.

However, such factors may have affected participants' familiarity with the tasks or receptivity towards financial advice.

It is also possible that participants learned, even subconsciously, that they would be offered assistance at some point during each scenario, which may have affected participants' effort. Effort was not directly measured (other than asking participants to report their perceived difficulty in making certain decisions), which could have confounded the behavioral or neural findings. Moreover, even asking about "difficulty" seemed less precise than other surveyed sentiment metrics. The "difficulty" ratings had higher standard deviations than those of "financial security" or "confidence," which may explain why we found fewer statistically significant differences among "difficulty" values.

Conclusion

In this study, we found that receiving advice improved consumers' subjective opinions about their decisions regarding hypothetical financial scenarios (rating that the decision-making processes seemed easier, and they felt more financially secure and confident after making their decisions). At the same time, we observed significant increases in gamma power across participants' brains. Interestingly, the advice was not actually recommending any specific decision nor did it present extensive reasoning behind the guidance. Rather, the assisted condition presented simple suggestions to help consumers approach the decision at hand in a more professional, organized manner. Consumers can make their own choices, even complex ones, but being offered a new way to consider a task improves confidence and impacts decision making, even at the neural level.

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Transforming Impoverished Consumer Subjectivity

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INTRODUCTION

The US federal poverty level (FPL) was developed in the 1960s to measure the degree of poverty experienced by US citizens. The FPL is a measure of the annual gross income a citizen requires to afford the basic consumption necessary for survival, and is used to track poverty reduction through qualifying federal aid programs such as food stamps, loan assistance, and other supports (Hauver, Goodman and Grainer 1981). According to recent data, roughly 13% of US households (approximately 16 million) are living at or below the FPL of \$25,100 (United Way 2020).

However, the FPL has not kept up with changing consumption conditions. For example, a mobile phone has become necessary to function in contemporary society but is not considered as essential under FPL standards. Further, the FPL does not accurately reflect the rising costs of essential goods or housing, nor does it reflect stagnation in wages. In 2018, the average budget for a US family with two adults and two children was greater than \$67,476, three times the FPL (United Way 2020). In other words, many consumers who do not qualify as living in poverty may still fall well short of being able to afford basic needs. Consumers in this category, referred to as Asset Limited, Income Constrained, Employed (ALICE) or more commonly “the working poor,” make up approximately 35 million households (29%) (United Way 2020).

In this project, we investigate an anti-poverty program, entitled *Getting Ahead in a Just Gettin’ By World* (hereafter *Getting Ahead*), which helps consumers in the ALICE population address and overcome their own impoverishment. *Getting Ahead* is not a support group, which typically presents a prescribed list of actions to change or a step-by-step program (Moisio and Beruchashvili 2010), nor is it a policy-driven subsistence program providing material resources to meet individuals’ immediate needs. *Getting Ahead* addresses poverty through a process of self-driven subjectivity transformation rooted in an entrepreneurial mindset (Sarasvathy 2001, 2022). In terms of policy, *Getting Ahead* is not a top-down approach to resource distribution that risks depleting the resource (as the CEO of the organization explained it to the researchers). It is a community-based program sponsored by social service organizations that receive funding from local, state, and federal governments that approaches poverty alleviation from the bottom up, addressing the needs and circumstances of individuals.

Getting Ahead is a type of educational program in which participants are encouraged to evaluate their current resources and use them to make decisions in the short term that contribute to longer term, sustainable goals. We draw inspiration from Reuber et al. (2016, 539) who note the possibilities for extending effectuation theory by examining how entrepreneurs might learn effectuation approaches in educational settings. Effectuation theory is a theory of entrepreneurial expertise that emphasizes decision making that focuses on the possible effects an entrepreneur can generate with current resource endowments (Sarasvathy 2001). Learning how to effectuate involves a subjectivity transformation by which individuals gain new understanding of their own capabilities and potential (Sarasvathy 2022). Understanding the process through which individual subjectivity is transformed can inform consumer research on how consumers may pursue and achieve self-sufficiency and sustainable well-being.

THEORY

The nature and transformation of consumer subjectivity is at the core of consumer research (Firat and Venkatesh 1995; Holbrook and Hirschman 1982; Vargo and Lusch 2004). In general, consumer subjectivity is thought of as a collective concept, with research focusing on ways in which subjectivity emerges. For example, empirical studies have explored how powerful entities such as marketers and governments shape subjectivity through mythologically-infused discourses (Coskuner-Balli 2020; Dion and Borraz 2017; Giesler and Veresiu 2014). Alternatively, studies of consumers explore the ways in which consumer groups acquire or pursue forms of subjectivity, often aligned with ideology or other collective belief systems (Crockett 2017; Crockett, Grier and Williams 2003; Crockett and Wallendorf 2004; Holt 1998, 2002; Mikkonen, Moisander and Firat 2011).

We argue that ALICE consumers exist within effectual problem spaces (Sarasvathy 2022, 63), wherein it is difficult for individuals to know what elements of their situations to focus on, the future is difficult to predict, and their own preferences are not necessarily well structured. As a theory of entrepreneurial expertise, effectuation focuses on so-called micro foundations, consisting of processes and mechanisms (Gross 2009; Stinchcombe 2005), that alter the subjectivity of the individual and that alter the scope of their social connections (Sarasvathy 2022). Rather than entrepreneurship from an evolutionary view, where entrepreneurs are important only to the extent that they create different types of goods or services through exploration or exploitation (March 1991), effectuation pays attention to individual level differences in expertise, both tacit and learnable (Sarasvathy 2022, 12), through which entrepreneurs create opportunities.

As a form of expertise, effectual approaches alter how reality is perceived, which in turn impacts how individuals construct their understanding of the problems they face, how they conceive of the types of alternatives available to them, and how they perceive the nature of their constraints (Sarasvathy 2022, 18). The emphasis is on how effectuating entrepreneurs “fabricate opportunities from mundane realities of their lives” (Sarasvathy 2022, 12).

CONTEXT AND METHOD

Getting Ahead is a 15-week curriculum designed to help individuals living in poverty or unstable situations. The program addresses micro-level issues by teaching participants, referred to as investigators, how to identify where they can make changes and create opportunities for personal growth and advancement. The course curriculum is structured in weekly meetings in which a small group of 15 investigators gather for a discussion led by a trained facilitator. Participants are referred to as investigators because the program encourages them to explore various dimensions of their own lives, including their finances, time usage, and social networks. It also addresses the more macro forces that shape their circumstances based upon education, race, gender, as well as social and family structures. There is no standardized process, but rather, investigators are expected to analyze their idiosyncratic challenges, and then form plans to address those challenges and pursue their own life goals.

In this study, we adopt a grounded-theoretic approach (Charmaz 2006; Glaser and Strauss 2017) to explore how consumers generate transformative change and alleviate various forms of poverty in their

lives. The primary data source is fieldwork with the Getting Ahead program, through participant observation and depth interviews with those who have experienced the program. The first author was a participant observer/investigator in the class, attending weekly, 2-hour class meetings, where she immersed herself in the experience. Following each class, the second author debriefed the first author about the experiences in that evening's class. Debrief interviews lasted between 40 and 65 minutes. Additionally, the first and second authors conducted depth interviews with Getting Ahead graduates, mentors, class facilitators, social service directors, and conducted a focus group with Getting Ahead graduates and mentors.

We adopt an iterative-interpretive approach consistent with hermeneutics (Arnold and Fischer 1994; Thompson 1997) whereby the authors work back and forth between data and theory to develop processual explanations (Giesler and Thompson 2016; Spiggle 1994). Both authors coded raw data and debated emergent themes using the 'devil's advocate' approach (McAlexander and Schouten 1998), evaluating themes for their power to explain ways in which the Getting Ahead program assisted with subjectivity transformation consistent with our conceptual framework.

FINDINGS

Our findings illustrate a process of subjectivity transformation, rooted in the development of an effectual entrepreneurial expertise (Sarasvathy 2001, 2022).

Step 1: The Power of "No"

In the first stage of the Getting Ahead process, investigators are prompted to identify the pressing challenges they are facing to meet immediate needs, and find ways to create time and space to see beyond the present. The class describes poverty as extending far beyond economics alone. It includes poverty of time, social connection, physical health, emotional health, spiritual well-being, etc. Participants identify the responsibilities or relationships that demand their time and keep them from moving beyond the current moment. The facilitators then encourage participants to engage in establishing symbolic boundaries to alleviate stress and expand their resources.

And I guess I was just thinking about how I don't even respond to (a friend's) calls anymore, in a lot of cases. And just, and then, like, it feels great. Just, like, "No, I'm not gonna answer." But I probably need to get better about just saying no instead of just not answering, because, like—not answering—all it does is, like, create more questions. But saying no is, like, a clear answer, you know?
(first author, investigator debrief interview)

In an effectual approach, the practice of creating symbolic boundaries is a mechanism (Gross 2009; Stinchcombe 2005) that transforms who an individual is and what they know. In the above verbatim, the first author reflects on her practice of not answering calls. This would be a typical avoidance coping strategy, whereas explicitly stating 'no' acts as a confrontational strategy (Mick and Fournier 1998). The latter solves a problem in ways the former does not, with the effect that saying no to others settles the issue, whereas avoiding the conversation leaves the caller to speculate and expect an eventual reply and explanation.

She explains that saying no is "a clear answer" that provides a definitive response, dealing with the problem in the current moment rather than passing it off to a future time. This opens up more temporal resources. Effectually this is helping the investigator understand the means they already have to create particular effects.

Step 2: Reflexive Interrogation

In the Getting Ahead text, participants are asked to complete something referred to as "page 19." This page is intentionally blank, and investigators are asked to reflect on their everyday choices in relation to their current circumstances. They write down all of the factors that contribute to the conditions that are holding them back as an exercise in identifying and accepting the issues as a first step to addressing them.

Overall, the goal is for people to realize that you are human, you have a past, you have a future, and you have a present. And in order for you to become a better you, there are some things that you have to acknowledge, talk about, and let go. Because, believe it or not, some of the things that we walk around and hold in keeps us kinda stuck. And in order for you to become unstuck, you gotta talk about it and let it go. And it's not always easy. (Serena, Getting Ahead graduate and facilitator)

Serena explains that part of the challenge of moving beyond the stuck is to identify and document their own barriers to change. This exhaustive list of issues serves as a reference which they may use to understand what the class calls the "tyranny of the moment." For investigators, acknowledging the disparate challenges that are being faced at the same time can be an enlightening and even shocking revelation. In most cases, this forces investigators to acknowledge that their limited resources could never allow for them to address all of these issues at once, explaining their discouragement and fatigue.

From their "page 19," investigators begin to identify how to tackle their issues, and what they must put aside or let go of altogether. In effectual terms, investigators are establishing affordable loss – investigators commit in advance to what they are willing to lose – which serves as the beginning of subjectivity transformation. In contrast to consumers who avoid reflexivity in order to pursue "regenerative escapes from the self" (Scott, Cayla and Cova 2017, 22), here reflexivity is pursued critically (Thompson, Henry and Bardhi 2018) by investigators, with the intention of revealing barriers and the forms of loss required to become "unstuck."

Step 3: What Can I Do With What I Have Now?

Through identifying acceptable losses, investigators generate resources by freeing up time and space. The next step is to identify achievable actions that help pursue desired outcomes, as Serena, a Facilitator and Getting Ahead graduate explains:

Serena: And so what we suggest is that you don't do it all at once. Because I had somebody, "Oh, I wanna go to school. I wanna buy a car. I wanna buy a house." Fine. We're great and we're happy, but you gotta do it in stages. You can't do it... What is most important, do that first. And then what's next, and then do that. Because if you try to do it all at once, you become overwhelmed and you do nothing, and nothing gets accomplished.

Interviewer: So how do you help them...or do you help them identify what to do first then or, like, what could be in stage one?

Serena: We ask them how.

In establishing an entrepreneurial approach to transformation, Getting Ahead investigators are not given a generalized series of steps or practices to use to guide them toward their goals. Instead, they are asked to present their goals and then are pushed to think through how they will begin. Serena explains here the simple, per-

sistent way the facilitators teach investigators to proceed in their change process. By repeatedly asking, “How?,” they apply the effectual principle known as “the bird in the hand principle,” where they force investigators to generate and prioritize the next actionable task on their way to change.

Step 4: Interpreting the Social Arrangements of Class

Once investigators have assessed their current circumstances and the challenges that they believe are holding them back, the curriculum begins to explore the macro structures that shape the environments and circumstances in which investigators find themselves. This includes discussions on social class, race, gender, and politics, and how these social distinctions have been sources of inequality, discrimination and exclusion.

By taking this perspective, the class acknowledges the barriers to social mobility that investigators may have faced in the past, and may continue to face going forward. This is in contrast to a responsabilizing approach (Giesler and Veresiu 2014) in which investigators would be largely implicated in creating their own impoverished circumstances. The curriculum focuses on the socio-historic patterning of class norms and behaviors (Allen 2002), including the composition and scope of class-based social networks. In this way, the course develops expertise in the form of “domain-specific heuristic principles,” (Saravathy 2022, 14) which investigators can use to chart their own idiosyncratic change projects.

Step 5: Making Sense of the Future

In contrast to the emerging adults of Weinberger et. al. (2017) whose resource endowments afford them opportunities to voraciously consume in the present and allow for a clearer sense of their futures, ALICE consumers are mired in the tyranny of the moment. However, by step 5, investigators are able to imagine a pathway forward. The final step involves investigators laying out a more formal plan for their future, including what steps will come next, how this accumulation of steps can help them reach their goals, and how they can leverage their stakeholder networks to co-create desired outcomes. Consistent with effectual expertise, the future story they imagine is organized with an understanding that it is co-created with their economic, social and cultural environments.

DISCUSSION

This ongoing research project offers insights into transforming consumer subjectivity. The Getting Ahead process assists investigators in the pursuit of idiosyncratic life projects by way of subjectivity transformation. This approach to poverty alleviation has implications for policy and theory.

For theory, this study explores subjectivity reconstruction through developing the expertise of the individual rather than large-scale programs that require adherence to ideological or moral commitments (Giesler and Veresiu 2014). We interpret this process using an entrepreneurial framework (Saravathy 2022) to explore how participants develop skills in establishing symbolic boundaries, acquire domain-specific heuristics to help with prioritizing choices and problem-solving, and gain insights into the ways in which macro and meso social arrangements contribute to limiting social mobility. In developing these skills, participants expand their possibilities and learn how to manifest immediate changes – create outcomes from means already at their disposal – to work in the direction of longer term goals.

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Competitive Papers—Extended Abstracts

Consumer Cynicism Through The Lens Of Bourdieu

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EXTENDED ABSTRACT

Over time, consumers have become increasingly distrustful of the businesses and the marketplace. Many researchers have focused on various negative attitudes a consumer develops towards a firm or the marketplace to study this trend. Consumer cynicism (CC) that a consumer might harbour for the marketplace actors is one of the emerging areas of study in this domain (Helm, Moulard and Richins, 2015).

CC is conceptualized as a negative attitude that a consumer develops toward a firm (Chylinski and Chu, 2010) or the whole marketplace (Helm, Moulard, and Richins, 2015) due to the attribution of some hidden motives behind its actions. Due to the severity of the consequences of a cynical consumer's behavioural outcomes, it becomes imperative to understand the concept of CC, its driving factors, and its resulting behaviours.

RESEARCH GAP

To date, researchers have studied CC as either a personality trait or an individual's attitude. Both conceptualizations have given more importance to the individual, i.e., the subject, rather than the surrounding circumstances, i.e., the object of the study. This indicates a subject-object dichotomy prevalent in the literature. Though both subject and object are essential aspects and can be studied individually, scholars have called for an integrated approach to understanding any phenomenon in its entirety (Overton, 1997).

RESEARCH OBJECTIVE

We take the help of Bourdieu's concepts of habitus, field and capital (Bourdieu, 1987) to study CC in an integrated subject-object approach. Fields are social arenas that specify precise guidelines of conduct that require an individual to acquire specific skills to traverse the same (Holt 1997). The individuals gain these skills as various economic, social, and cultural capital to compete for status within fields (Holt 1997). Automatic internalization of the interaction between the capital and the field dynamics results in habituated tendencies and generative predispositions in an individual, defined as habitus by Bourdieu (Saatcioglu and Ozanne, 2013; Wacquant, 2016).

We propose that an individual's habitus, which evolves continually due to various life experiences, will determine the type of inter-field movement a person resorts to when moving between the social and consumption fields. The inter-field movement (Coskuner-Balli and Thompson, 2013) is also predicted to be determined by the person's cultural capital. Cultural capital combines "tastes, skills, knowledge, and practices" that distinguish individuals from others (Holt, 1998). Individuals are classified as high cultural capital (HCC) or low cultural capital (LCC) person based on the amount of cultural capital they possess (Holt, 1998; Saatcioglu and Ozanne, 2013).

As already established in the existing literature, inferring negative motives behind someone's actions is the defining characteristic of a cynical person. 'Negative Inferred Motive' (NIM) is conceptualized as the belief that a firm will try to take leverage of the customer and increase its earnings (Balaji et al., 2018). Unless someone

suspects negative motives behind the market player's actions, they won't turn cynical towards it (Indibara and Varshney, 2020). Hence, we posit that individuals develop CC when they infer negative motives while undergoing adverse inter-field movement experiences.

Borrowing from the extant literature (Helm 2004; Chylinski and Chu, 2010; Odou and Pechpeyrou, 2011 and Helm, Moulard and Richins, 2015), four different types of behaviour are predicted as a consequence of CC – defensive, offensive, subversive and withdrawal. While defensive behaviour leads a person to protect themselves from the marketplace, offensive behaviour results in the consumer trying to take advantage of the firm by displaying opportunism. Subversive behaviour motivates the person to treat firms and the market with sarcasm, thus creating negative word-of-mouth communication for others. And withdrawal behaviour results in complete withdrawal from the marketplace (Odou and Pechpeyrou, 2011).

METHODOLOGY

A mixed-method approach was adopted to understand the effect of habitus on CC and its consequent behaviours. Two studies, one qualitative and the other quantitative, were conducted for the same.

Study 1

The qualitative study using fourteen in-depth interviews was conducted to understand the phenomenon. The interviewees were purposely sampled to target consumers falling under LCC and HCC groups to better understand the distinct behaviours an individual displays according to their social upbringing. The approach was exploratory, with questions on respondents' upbringing and their social and consumption experiences. The interviews were conducted in English, Hindi and Odiya, averaging 75 minutes. All interviews were digitally recorded and transcribed to ensure trustworthiness, and guidelines were followed as suggested for in-depth interviews (Strauss and Corbin, 1990; Fournier, 1998). Collectively, 195 consumption stories were generated for analysis.

The life incidents were first arranged chronologically for each respondent to understand how childhood experiences get manifested in habitus, which then determines subsequent consumption decisions. Open, axial and selective coding was done in phases focusing on increasing levels of analysis, similar to the process recommended by McCracken (1988). Individual mind maps were also created for each respondent. The second level of interpretation involved across-person analysis, which was to discover patterns across consumption episodes and individuals. The consolidated framework was proposed after analyzing all fourteen interviews and mind maps, as shown in Figure 1.

Findings (Study 1)

It was found that an individual's childhood experiences and the resulting habitus significantly impact their adulthood consumption patterns. Depending on the childhood notions of justice and social comparisons, respondents displayed varying levels of social aspirations. The successful or unsuccessful achievement of the social growth and the reasons attributed for the same determine the type of movement between the social and the consumption field (horizontal, upward or downward) that a person usually resorts to. The

eight types of inter-field movements based on a person's social field habitus (HCC or LCC) and the type of consumption they resort to (HCC or LCC) are represented in Table 1.

If individuals cannot fulfil their desired social aspirations, they attribute the failure to society or their fate. Respondents who attributed their present LCC state to Karma or fate went for a status-quo consumption per their LCC habitus (voluntary horizontal inter-field movement). They seldom purchased anything aspirational. If these individuals were forced to overspend on their self-consumption (involuntary upward movement), they developed NIM and CC towards the particular market player and resorted to defensive behaviour due to the feeling of powerlessness.

But people who blamed society for their thwarted social growth continuously aimed to fulfil their aspirations in the consumption field, displaying a voluntary upward inter-field movement. If their upward movement in the consumption field was blocked, they inferred negative motives behind the market player's actions, turned cynical and displayed offensive behaviour towards the market player.

Suppose the individuals were not blocked in the social field while trying to fulfil their aspirations and could achieve their desired HCC social position. In that case, they tend to display voluntary simplicity (voluntary downward movement) and withdrawal behaviour in the marketplace.

In contrast, the individuals who were never blocked in the social field but are yet to fulfil their social aspirations see the consumption field as a signalling strategy for their achieved HCC status. Most of the time, they display a status-quo HCC consumption (voluntary horizontal movement), symbolizing their social growth. If these respondents faced any negative experience in the marketplace, they resorted to subversive behaviours.

Thus, it was found that an individual's voluntary or involuntary inter-field movement, upward, downward or horizontal, determines whether successful incorporation of consumption experience will occur or not in the person's habitus. And suppose the negative consumption experience led to inferring negative motives behind the market player's actions. In that case, CC is developed, resulting in four types of behaviour: defensive, offensive, withdrawal, and subversive.

Study 2

The second study was a scenario-based experiment designed to test the findings of Study 1 in two stages. The online surveys of both stages were shared with the students, alumni, and faculty members of two premier management institutions in India. The offline survey was conducted through personal face-to-face interaction with low-income employees of three organizations in India. A convenience sampling method was used, and the respondents were selected due to their accessibility to the researcher.

Stage 1

The first stage was a survey to capture the respondents' demographic information. The socio-economic classification (SEC), both childhood and present-day, was done for the respondents following the latest Indian SEC classification criteria depending on the education of the family's primary earner and the consumer durables that the family possesses.

The cultural capital of the respondents was calculated using the formula:

$$\text{Cultural Capital} = (\text{Respondent's Education} + \text{Respondent's Occupation}) + (\text{Father's Education} + \text{Father's Occupation})/2 + (\text{Mother's Education} + \text{Mother's Occupation})/2$$

The respondents were categorized into two groups – high and low based on the median values of the cultural capital, childhood

SEC and current SEC scores. Those individuals who belonged to at least two high groups among the three median split categorizations were considered the HCC individuals. Others, who had all the low categorizations in the three cases or had only one high score and two low categorizations, were considered LCC individuals for further analysis.

The respondents were also asked to choose between a high-priced branded t-shirt (HCC product) and a low-priced unbranded t-shirt (LCC product) to understand their default consumption choice. Of the 545 responses collected in the first stage, 384 respondents chose the LCC product, and 161 chose the branded HCC product.

The respondents' inherent CC level was also captured, along with the above information. The scale developed by Helm, Moulard and Richins (2015) was used to operationalize the CC construct.

Stage 2

The second stage was a factorial design survey-based experiment. The 545 respondents were assigned to four experimental scenarios (two voluntary consumption groups treated as the control groups and two involuntary consumption groups treated as the manipulation groups). In the two voluntary consumption scenarios, the respondents were allowed to freely consume their desired cultural capital product – high or low as chosen in the first stage. In the two involuntary scenarios, respondents were asked to assume that they would consume their unpreferred consumption choice.

Out of the 161 individuals who had chosen the HCC product in the first stage, 80 were assigned to the involuntary LCC consumption scenario (Scenario 1), and 81 were assigned to the voluntary HCC consumption scenario (Control Group 1). Similarly, out of the 384 respondents who had chosen the LCC product in the first stage, 192 were assigned to the involuntary HCC consumption scenario (Scenario 2). The rest, 192, were assigned to the voluntary LCC consumption scenario (Control Group 2). Based on the social field HCC or LCC classification and the consumption choice assigned in the experiment, eight inter-field movements are captured, as shown in Table 1.

The second stage survey was sent to the 545 respondents after one month to reduce the recollection bias they might display due to the repetitive nature of the CC scale. Out of the 545 respondents who had filled the questionnaire in the first stage, 505 respondents reverted in the second stage of the study, indicating a response rate of 92.66%. 78 of these responses were from scenario 1 respondents, 79 from control group 1, 175 from scenario 2 and 173 from control group 2.

NIM (Joireman et al., 2013) and CC (Helm, Moulard and Richins, 2015) were measured with the help of established scales. Further, we developed a scale to measure the individual's behavioural intention (BI) and the same was tested for reliability and validity. Four categories of consequent behaviour proposed in the study were defensive, offensive, withdrawal and subversive. Statements that captured these behaviours were selected from the literature, and the BI questionnaire consisted of 21 questions.

Findings (Study 2)

Using a one-way ANOVA test, we found that the participants' NIM, CC, defensive, offensive, withdrawal, and subversive BI significantly vary across the eight consumption groups. Individuals who consumed a product of their choice (voluntary movement) inferred significantly lower negative motives behind the firm's actions and displayed a significantly lower level of CC and defensive, offensive, withdrawal and subversive BI than participants who had to consume a product unwillingly (involuntary movement).

The data analysis indicates that the LCC individuals displayed a significantly higher level of NIM, CC, and defensive, offensive, withdrawal and subversive BI when experiencing the adverse scenario despite having a significantly lower CC than the HCC persons before the experiment. This indicates that the LCC individuals have a higher sensitivity toward the negative experiences in the marketplace. LCC individuals whose desired HCC consumption was thwarted in the experiment and who were forced to consume the LCC product unwillingly displayed the highest NIM, CC and defensive, offensive, withdrawal and subversive BI among the eight groups.

Regression analysis was done to test the effect of NIM on CC and of CC on four BIs. NIM was established as a significant predictor of CC, the beta value was 0.558, and the model R-square value was 0.393. CC was found to impact the four BIs significantly in the case of involuntary consumption scenarios. The beta values for defensive, offensive, withdrawal and subversive BI were 0.464, 0.589, 0.11 and 0.484, respectively. The above findings prove the causative effect of NIM on CC and CC on the four BIs in involuntary consumption situations as a support for our hypotheses.

IMPLICATIONS

Our study contributes to the stream of research that analyses consumption as a practice using Bourdieu's concepts of field, capital and habitus. CC, to date, studied as an individual's personality or attitude was looked at from a socio-cultural perspective. This helped us transcend the subject-object dichotomy that exists in the literature.

Gaining insight into how the childhood habitus and subsequent life experiences shape the consumption pattern of individuals and how the inter-field movement between the social and consumption fields results in CC will help the marketers take care of their actions that result in an involuntary downward, upward or horizontal movement.

For example, the focus should be on bridging the gap between the two fields, i.e., the firms should try to provide product and pricing options that match the mental schemas and habitus of the HCC and LCC individuals. However, at the same time, care should be taken about providing aspirational products to LCC consumers and low-priced options to HCC voluntary simplifiers.

Since CC can result in severe negative consequences (Helm, 2006; Chylinski and Chu, 2010; Odou and Pechpeyrou, 2011; Helm, Moulard and Richins, 2015), identifying instances when defensive, offensive, withdrawal and subversive behaviours get triggered will help the firms control the adverse impact of negative behaviours to a great extent.

LIMITATIONS AND FUTURE RESEARCH

Restrictions can be imposed on the findings because of the sample characteristics because the study was done in India. Cross-cultural research is suggested to test how developed economies differ from emerging markets in this context.

The conditions under which the four types of BI get converted into actual behaviour need to be studied, focusing on the role and importance of an individual's perception of 'powerlessness' in the marketplace.

Though manipulating the price and brand of the product was found to have a significant effect on the experimental groups, future studies should consider additional variables like individuals' consumption baskets and usage habits while studying the impact of the inter-field movement on CC and consequent behaviours.

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Emotions as Drivers of Empowerment and Destigmatization in Disability Sport

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EXTENDED ABSTRACT

This study examines destigmatization of disability in sport. We interviewed 12 disabled athletes and analyzed 221 comments on a paralympic advertising. Our results show that athletes and consumers use emotions as discursive resources to empower themselves and each other, facilitating their identity projects and reducing the stigma related to disability.

Many individuals possess social identities that carry a stigma. Research shows that the stigma associated with certain social identities, such as disability, tends to elicit unpleasant emotional responses such as pity and sadness, accentuating the sense of ‘otherness’ (Mick & Buhl, 1992). Although previous studies have explored the motivations for disability sports consumption (Cottingham, et al. 2014), we do not know how consumers and disabled individuals mutually and interactively empower each other and further their identity projects, thus serving to destigmatize disability. Further, little is known about the role marketing communications play in the destigmatization of stigmatized populations. This study aims to fill this gap, by shedding light on the narrated experiences and emotions of individuals with stigmatized social identities and of consumers who view advertising related to this social stigma.

Our two studies were based on an interpretative approach, which is particularly useful in research that aims to understand the subjective meanings of experiences and emotions (Ahuja et al., 2019; Holbrook & O’Shaughnessy 1988; Spiggle, 1994). Study 1 consists of 12 in-depth interviews with disabled athletes. The purpose of the interviews was to capture narratives of the personal experiences and emotions associated with participating in disability sports activities as well as the athletes’ perceptions of how their engagement in these activities resonates with viewers. Study 2 is based on archival social media data collected from YouTube comments on the ‘Yes I Can’ ad for the 2016 Paralympic Games in Rio, extracted in July 2018. The International Paralympic Committee adopted the ‘supercrip’ narrative in the conception of the advertising for the Rio 2016 Paralympic Games, where Paralympic athletes were represented as having superhuman qualities. The ad shows people with various backgrounds and disabilities, including Paralympic athletes, performing many activities (e.g., playing instruments, competing in sports, doing ordinary tasks).

The findings from our in-depth interviews and consumer comments reveal that disability sports athletes and consumers of disability sports advertising interactively empower themselves and each other through the experience of emotions, furthering their respective identity projects and leading to the destigmatization of disability. From the ad viewers’ perspective, watching and commenting on a disability sports ad can elicit a range of emotions, such as gratitude, pride, admiration, and inspiration. As the consumers shared their feelings and sometimes personal stories in the form of comments on YouTube, they emotionally connected with the disabled athletes depicted in the ad. Through these feelings of similarity and closeness, the commenters felt inspired and determined to act, dare and try. This is in line with previous research showing that social media viewers are inspired by portrayals of triumph over obstacles and exceptional successes (Dale et al., 2020; Uetake and Yang 2020).

Similarly, from the athletes’ point of view, our findings show that disabled athletes experienced emotions such as joy/happiness, pride, and feelings of belonging. Their achievements not only enhanced their self-confidence but also gave them a new, positive social identity to draw on, which aligns with previous research (Askegaard & Linnet, 2011). The positive comments on YouTube reinforced these emotions. In addition, the sports identity of the disabled athletes helped them restore their sense of self or overruled their stigmatized identity as a disabled person, and the consumers were also able to develop their identity projects as a result of their emotional connection with the individuals depicted in the ad.

We make two theoretical contributions. First, we contribute to the literature on stigma by showing how consumers indirectly contribute to the destigmatization of disability, even if they are not personally affected by this stigmatizing attribute. Second, we contribute to the emotions literature by highlighting the role of emotions in the process of empowerment. Consumers of media content and the individuals depicted in the ad indirectly empower themselves and each other in a mutual manner through joy, pride, inspiration, admiration, and feelings of belonging.

Our research has implications for social marketing managers who use advertising as a means of changing public opinion about stigmatized groups. The findings show that it is through sharing similar concerns, objectives, or personal experiences that consumers create emotional bonds. Whereas most research on advertising focuses on whether an ad elicits positive or negative emotions, our study reveals that the emotions in themselves are less important than the emotional bonds an ad can create. Thus, the success of an ad in this context should be evaluated on the basis of its ability to establish emotional bridges with the group represented in the ad. We suggest the use of ad narratives that focus on goals such as empowerment, self-realization, and belongingness.

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Givers eschew gifts that are inferior to their own: How social norms, regulatory focus, and concerns about offending lead givers astray

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EXTENDED ABSTRACT

We show that gift-givers avoid giving gifts that compare unfavorably to their own possessions more often than recipients prefer. Further, we demonstrate that this arises because givers (recipients) are relatively more prevention-focused (promotion-focused), which leads them to overestimate how offended recipients feel receiving gifts that compare unfavorably to givers' products.

In the present research, we compare gift-givers' choices and gift-recipients' preferences when givers are considering a gift that is an inferior version of a product they own themselves (along with another gift). We show that givers are less likely to give gifts that are inferior versions of their own products than recipients prefer. Moreover, we show that this occurs because givers are more prevention-focused (less promotion-focused) than recipients, which leads them to overestimate how offended recipients feel receiving gifts that are inferior versions of givers' products.

Theoretical Development

As mentioned, we explore givers' and recipients' preferences when givers are considering a gift that is an inferior version of a product they own themselves. How might givers and recipients construe these decisions? According to regulatory focus theory (Higgins, 1998), consumers can approach a decision with either a prevention-focus (i.e., a concern about the negative) or a promotion-focus (i.e., a fixation on the positive). We suggest givers are more prevention-focused (less promotion-focused) than recipients, because givers, unlike recipients, are *accountable* for their choices (Teigen et al., 2005). That is, givers are both responsible for the consequences the gift has on the recipient and the ones who need to justify their decision in the event the gift misses its mark. And, critically, when consumers are held accountable, attention is drawn to prevention-focused information (Crowe & Higgins, 1997).

As a consequence of givers being more prevention-focused (less promotion-focused) than recipients, they could overestimate how *offended* recipients feel receiving gifts that compare unfavorably to givers' products. Said otherwise, there is a clear potential negative outcome associated with gifts that are inferior versions of givers' products: they could offend the recipient. But since givers are more prevention-focused (less promotion-focused) than recipients, they should concentrate more on this prospective negative outcome compared to recipients and, in turn, overestimate just how offended the recipient would feel receiving it.

Our theorizing suggests that givers overestimate how offended recipients feel receiving gifts that are inferior versions of givers' products, which leads them to shun such gifts more often than recipients prefer. If this is indeed the case, then we would expect givers' aversion to giving these sorts of gifts to have its limitations. Specifically, when a giver is considering a gift that is an inferior version of one of their own products but is aware the recipient *does not know of the giver's version of the product*, they should be relatively more likely to give that gift, because they do not have to worry about offending the recipient.

Below, we present three studies that tested the predictions outlined above.

Study 1

Participants listed a friend and then read about a website that sold two models—Model Y and Model X—of two products—air fryers and

coffee makers. The Model Y versions cost \$75 and were rated 4-stars by user reviews, whereas the Model X versions cost \$100 and were rated 5-stars. Participants assigned to the [*Giver/ Recipient*] condition indicated which of the two Model Y products [their friend/they] would like better.

Participants in the *Giver* condition then read a vignette in which they visited a website in search of a gift for their friend. The websites' air fryers and coffee makers caught their eye, as their friend had told them that they could use a new one of each. The air fryers and coffee makers were the models from earlier in the study (Model Y and Model X). The vignette explained they had a \$75 budget and thus were considering the two Model Y products. The vignette also explained they owned one of the two Model X products; specifically, they owned the Model X product that was from the same product category as the Model Y product they indicated earlier their friend would like better (e.g., if they indicated their friend would like the Model Y air fryer, the vignette explained they owned the Model X air fryer). The vignette further explained that their friend was aware they owned that Model X product. Givers then indicated which Model Y product they would give. Participants in the *Recipient* condition read the same vignette from the recipient's perspective and indicated which Model Y product they would rather receive. Givers were less likely to choose the gift that was an inferior version of the giver's product (*Giver*: 31% vs. *Recipient*: 48%; $p = .01$).

Study 2

The study was like Study 1, but with two differences. First, participants also completed two measures that assessed the extent to which they were prevention-focused versus promotion-focused during their decision (1-7 scale; combined to form a "Regulatory Focus Index," with higher scores indicating more promotion-focus). Second, participants also completed a set of three measures about how offended the recipient would be if the giver gave the gift that was an inferior version of the giver's product (1-7 scale; combined to form an "Offensiveness Index").

Givers were less likely to choose the gift that was an inferior version of the giver's product (*Giver*: 33% vs. *Recipient*: 56%; $p < .001$), responded higher on the Offensiveness Index ($M_{Giver} = 2.48$ vs. $M_{Recipient} = 1.85$; $p < .001$), and had lower Regulatory Focus Indices ($M_{Giver} = 1.61$ vs. $M_{Recipient} = 2.80$; $p < .001$).

Study 3

The study was like Study 1, but with three differences. First, the two product categories were sunglasses and headphones. Second, there was an additional condition (*Giver – Recipient Is Unaware*) wherein the friend did not know of the participant's Model X product. Last, participants also completed the Offensiveness Index from Study 2.

Participants in the *Giver* condition were less likely (30%) to choose the gift that was an inferior version of the giver's product than participants in the *Recipient* (63%; $p < .001$) and *Giver – Recipient Is Unaware* (62%; $p < .001$) conditions. Participants in the *Giver* condition responded higher ($M_{Giver} = 2.66$) on the Offensiveness Index than participants in the *Recipient* ($M_{Recipient} = 1.70$; $p < .001$) and *Giver – Recipient Is Unaware* ($M_{Giver - Recipient Is Unaware} = 1.95$, $p = .001$) conditions.

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The Impact of Financial Infidelity Asymmetry on Couples' Financial and Relationship Well-Being

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EXTENDED ABSTRACT

Financial infidelity (FI) is common within marriage. We examine how couple-level dynamics in FI-proneness influence couples' well-being. Three studies demonstrate that couples with greater FI asymmetry (greater divergence in the two partners' FI-proneness) report having misaligned financial goals, which predicts negative financial communication and, ultimately, lower financial and relationship well-being.

Recent research identifies a new type of prevalent infidelity among married consumers—*financial infidelity* (FI), defined as “engaging in any financial behavior expected to be disapproved of by one’s romantic partner and intentionally failing to disclose this behavior to them” (Garbinsky et al. 2020, p. 1). Although Garbinsky et al. (2020) propose that FI *potentially* poses harm to one’s partner or the couple as a whole, the authors remained agnostic as to the nature and amount of harm inflicted. The current research examines this question directly by considering FI dynamics within married couples. Within each couple, two spouses may have similar or dissimilar predispositions toward engaging in FI (“FI proneness”). Thus, we examine the effect of *FI asymmetry* on couples’ financial and relationship well-being. FI asymmetry refers to the degree of divergence in two partners’ FI proneness. In a couple with FI asymmetry, one partner might be willing to hide spending, debt, savings, and income from their spouse, while the other partner would not. Conversely, in a couple with FI symmetry, both spouses might exhibit equally low or equally high levels of FI proneness.

We propose that greater FI asymmetry predicts greater financial goal misalignment between two partners, which ultimately strains their communication about financial matters and, as a result, predicts lower financial and relationship well-being. First, we argue that greater partner divergence in FI-proneness impairs the couple’s ability to strive toward unified financial goals. This prediction is grounded in prior research showing that trait similarity enhances relationship cohesiveness and coordination of partners’ behaviors, which facilitates goal-directed behavior (Anderson et al., 2003; Gonzaga et al., 2007; Hatfield et al., 1994; Kenny & Kashy, 1994). Second, we propose that financial goal misalignment within couples impacts negatively their communication about financial matters (Gere & Schimmack, 2011; Gere et al., 2011; Jang & Danes, 2013). Within interdependent unions such as a marriage, financial goal misalignment poses a challenge because each partner is drawing upon a shared pool of financial resources (Fitzsimons et al., 2015). If one partner values saving for retirement, achieving that goal is compromised when the other partner values indulgences. Thus, misaligned financial goals may prompt challenging conversations and lack of coordination in conversations about financial matters. Finally, we propose that negative financial communication ultimately impacts couple-level outcomes. Within the financial realm, longitudinal evidence among entrepreneur-couples found that venture-related communication quality predicted better investment decisions (Jang & Danes, 2013). Furthermore, “high-maintenance interactions” are depleting and impair self-regulatory success on other, unrelated tasks (Finkel et al., 2006). Moreover, couples may be willing to compromise decision quality to smooth interactions and avoid confrontation (Dzhogleva & Lamberton, 2014). Thus, we propose that negative

financial communication may challenge a couple’s ability to make unified financial decisions like saving for their future, and result in lower financial and relationship well-being.

We provide evidence for our predictions across three studies featuring married couples, including via field data where we collect real financial account information from a money management mobile application. In studies 1-2, FI asymmetry is operationalized as the absolute difference between the two spouses’ FI proneness scores (Garbinsky et al. 2020); study 3 operationalizes FI asymmetry using objective bank account information (the absolute difference in the proportion of hidden accounts of two partners). We capture relationship well-being by the average relationship satisfaction of the two partners (Rusbult, Martz, and Agnew 1998). We measure financial well-being using the couple’s total accumulated assets and subjective financial well-being (e.g., “Are you happy with the amount you and your partner together are saving for the future?”).

Study 1 ($n = 165$ married couples) showed that couples’ FI asymmetry is a negative predictor of their relationship satisfaction ($b = -.44$, $SE = .11$; $t(163) = -4.04$, $p < .001$), total assets ($b = -.74$, $SE = .24$; $z = -3.09$, $p = .002$), and subjective financial well-being ($b = -.57$, $SE = .11$; $t(163) = -5.24$, $p < .001$). Financial goal misalignment mediated the effect of FI asymmetry on all three variables ($b = -19,300$, $SE = 8,808$, 95% CI = [-37,000, -2,000]; $b = -.24$, $SE = .07$, 95% CI = [-.369, -.115]; $b = -.45$, $SE = .09$, 95% CI = [-.627, -.276] respectively). Study 2 ($n = 307$ married participants) replicated the effects of FI asymmetry on relationship satisfaction ($b = -.91$, $SE = .13$; $t(306) = -6.86$, $p < .0001$) and subjective financial well-being ($b = -.26$, $SE = .08$, $t(306) = -3.27$, $p = .001$). Importantly, study 2 provides evidence of serial mediation through financial goal misalignment and negative financial communication on both DVs ($b = -.18$, $SE = .05$, 95% CI: [-.290, -.097]; $b = -.08$, $SE = .02$, 95% CI: [-.140, -.048] respectively). Study 3 ($n = 622$ married couples) used bank account data obtained from a couple’s money management app to capture both FI asymmetry (i.e., how many accounts partners hide from each) and total accumulated assets. Results again demonstrated that couples with higher FI asymmetry had lower accumulated assets ($b = -.42$, $SE = .12$, $z = -3.36$, $p = .001$) and marginally lower relationship satisfaction ($b = -.13$, $SE = .065$; $t(620) = -1.96$, $p = .051$).

Our research makes several contributions. First, we respond to calls for increased attention on dyad-level predictors of marital outcomes (Gottman & Notarius, 2002). While Garbinsky et al. (2020) examined FI-proneness as an individual-level variable, we examine the effect of FI asymmetry as a dyad-level variable on dyad-level outcomes. Importantly, our work demonstrates that it is not just the presence of FI, per se, but the differential levels of partners’ FI-proneness that pose harm to the couple. Second, our research is among the first to examine the effect of trait similarity on financial well-being. Lastly, while money is a major source of marital conflict (Dew et al., 2012), little is known about the antecedents and consequences of financial communication. We identify FI asymmetry as an important precursor to misaligned financial goals and negative communication, which ultimately predicts lower couple well-being.

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Consumers' Support for Small Brands through Positive Electronic Word of Mouth

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EXTENDED ABSTRACT

While brands seek to become big in terms of market share and awareness, we show that increasing brand size negatively affects electronic word-of-mouth valence. This effect is driven by a stronger desire to help small brands and a perception of increased directness when sharing opinions about small brands.

Although marketing scholars and practitioners have spent significant time studying what drives consumers to express their opinions about products, services, and brands online in the form of electronic word-of-mouth (eWOM), little information is available on how specific brand attributes influence consumer review behavior. While gut instinct suggests that big brands receive a higher volume of eWOM due to bigger market share and consumer awareness, we wonder about the valence of these expressed consumer opinions and ask: Do big brands receive more positive or more negative eWOM ratings compared to their smaller competitors?

We find evidence that brand popularity is bought with negative valence in brand-related social media posts and lower star ratings on online review platforms and show that increasing market share and awareness, as well as being viewed favorably by consumers' eWOM articulations, are mutually contradictory objectives.

Hydock et al. (2020) showed that unhappy customers are unlikely to share their opinions directly "with" brands, while they are more likely to share indirectly "about" brands. Anticipated discomfort from conveying bad news (Tesser and Rosen 1975) may explain this tendency as trying to make unpleasant messages palatable is common for people (Sussman and Sproull 1999) and concerns on the recipient's well-being cause reluctance to transmit bad news (Folger and Skarlicki 2001). Consumers are therefore likely to experience negative emotions when sharing negative experiences directly with brands. The aversion to criticizing small brands directly should be stronger (than with big brands) if consumers have a feeling of direct communication.

Moreover, feeling that it is important to help others who are in need and being motivated by a desire to help the company (Hennig-Thurau et al. 2004), consumers intend to help brands they assume to have less market power. This can manifest in a higher likelihood of sharing a positive experience or a lower likelihood of sharing a negative experience. In light of these relationships, we expected more positive eWOM ratings for small (vs. big) brands on average.

To test our hypotheses, we conducted three field studies and two lab experiments. We first investigated the relationship between brand size and eWOM ratings in real-world settings while controlling for brand ratings. We derived brand size and brand rating for chain restaurant brands from YouGov's representative US brand panel. We measured eWOM rating by averaging the sentiment of all Twitter and Instagram posts related to the brands in 2019 and collected all Yelp reviews for a sample of major US cities for each brand. Brand size had a strong significant negative effect on eWOM rating. We replicated the findings for a second product category (i.e., hotel brands). By matching all brands tracked by YouGov and a public dataset on hotel ratings on TripAdvisor, we found a marginal significant negative effect of brand size on eWOM ratings. Afterwards, we replicated the effect in a within-brand setting (i.e., brand size chang-

ing over time). Estimating a panel model with year- and brand-fixed effects and brand rating as a control variable, we found a significant negative effect of brand size on eWOM rating.

In Study 2, we sought to test the relationship between brand size and brand rating on eWOM-sharing intention. Thus, we conducted an online experiment with a 2 (brand size: big vs. small) \times 2 (brand rating: positive vs. negative) between-subjects design. We showed a detailed description of a restaurant chain brand framed as either a big or a small brand. After describing an either positive or negative experience with the described brand, participants were asked to indicate their intention to share their (positive / negative) experience with the brand on social media or by posting an online review. We identified a significant negative interaction effect between brand size and brand rating for social media posts and online reviews, indicating that a positive rating is less likely to be articulated for big brands than for small brands.

With Study 3 we scrutinized the underlying cognitive process by including two possible mediators: Perceived need for help and perceived directness. Participants of this second online experiment which followed the same experimental design as Study 2 indicated perceived directness when interacting with the brand via social media or a review site and the valence of their articulation in the case of eWOM contribution for both venues. Participants in the small brand size condition stated to intend contributing eWOM with more positive valence. This effect was not found for social media eWOM under the negative brand rating scenario. We further showed a negative total effect of brand size on eWOM valence for both social media posts and online reviews. Perceived need for help was significantly lower for big brands and increased eWOM valence for small brands in a significantly positive way. In both cases, perceived need for help significantly mediated the effect of brand size on eWOM valence. Additionally, perceived directness was lower when contributing eWOM about big brands. Perceived directness only slightly affected eWOM valence on social media and, as a result, only slightly mediated the effect of brand size on eWOM valence for social media. For online reviews, we observed a positive effect of perceived directness on eWOM valence and a significant mediation.

In summary, we contribute to previous research on the relationship between brand size and eWOM (Paharia et al. 2014) by showing a negative effect of brand size on eWOM ratings. Perceived need for help explains this relationship in both cases, while perceived directness seems to play a more significant role for online reviews. Thus, variations in brand size might lead to misleading observations and conclusions, when using eWOM data for information. Therefore, companies should control for brand size if the analyzed data contains average eWOM ratings. The perception of direct communication when sharing eWOM about small brands discourages consumers from sharing negative feedback. Big brands should take advantage of this consumer aversion to direct criticism by communicating their commitment to processing the eWOM contributions they receive.

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It's the Heart that Matters: The Effect of Benefactor Income on Perceived Motivation, Moral Elevation, and Donation Behaviors

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EXTENDED ABSTRACT

This research examines how people respond to observing a low- (vs. high-) income benefactor's donation behavior by donating themselves. We show that donations from a low- (vs. high-) income benefactor elicit greater generosity among observers and this effect is driven by perceived altruistic motivations, which enhances feelings of moral elevation.

The current research examines how observing a low- versus high-income benefactor's donation behavior influences observers' own charitable deeds. Charities often feature others' helping behaviors in their charity appeals and consumers' prosocial actions are often influenced by others (White, Habib and Dahl 2020). In this research, we study a specific benefactor characteristic—benefactor income. We propose that donations from a low-income benefactor elicit greater generosity than one from a high-income benefactor. We further suggest that this effect is driven by perceived altruistic motivations, which enhances feelings of moral elevation (i.e., a warm, uplifting feeling people experience after observing others' human kindness and goodness; Haidt 2000).

We further posit that observers' donation behavior in response to a low-income versus high-income benefactor depends on the perceived benefactor's donation motivation, such that the presence of high-income benefactor's altruistic motivation should elevate the feelings of moral elevation among observers and attenuate the effect of benefactor income bias on donations. Additionally, we suggest that revealing a high-income benefactor's personal connection to the cause (vs. not) would increase the perceived altruistic motivation of the benefactor, eliciting greater levels of moral elevation and donations.

Experiment 1 provides an initial test of the role of benefactor income on donations and the underlying mechanism of moral elevation. Students ($N = 1,037$) participated in a 3 benefactor income (low vs. high vs. control) X 3 types of charity cause (children charity vs. animal charity vs. environmental charity) between-subject design. Results revealed only a main effect of benefactor-income on donation likelihood ($F(2, 1028) = 91.66, p < .001$). No interaction effect ($p = .54$) or effect of charity ($p = .89$) was found. Participants were more likely to donate after observing a low-income benefactor donating than a benefactor in the control condition ($p < .001$) or a high-income benefactor ($p < .002$). No donation intention difference was found between the high-income benefactor and control conditions ($p = .62$). Mediation analyses (Hayes 2019, model 4) revealed significant indirect effects of moral elevation (low-income vs. control: 95% CI: -1.003, -.696; low-income vs. high-income: 95% CI: -.646, -.368).

Experiment 2 examines the serial mediation. Undergraduate students ($N=168$) read a scenario about a benefactor who was described as either being low-income or high-income. Consistently, results indicated a main effect of income on both donation likelihood ($F(1, 166) = 6.25, p = .013$) and donation amount ($F(1, 166) = 10.32, p = .002$). Participants were more likely to donate/donated more in response to a low-income versus high-income benefactor. Serial mediation models using benefactor income as the predictor, perceived motivation of the benefactor (M1) and the level of moral elevation observers experience (M2) as serial mediators were significant for both donation likelihood (95% CI: -.537, -.180) and donation amount (95% CI: -1.493, -.422).

Experiment 3 explores resource type as a possible boundary condition. MTurk participants ($N = 402$) participated in a 2 benefactor income (high vs. low) X 2 resource type (money vs. time) between-subject design. Results showed only main effects of benefactor income on both donation likelihood ($F(1, 398) = 12.22, p = .001$) and donation amount ($F(1, 398) = 7.95, p = .005$). Regardless of the resource type, participants who observed a low-income benefactor donating reported being significantly more likely to donate/donated more than those who observed a high-income benefactor donating. No interaction effect ($p = .48$) or effect of resource type ($p = .44$) was found. For mediation, consistently, the indirect effects of moral elevation were significant for both donation likelihood (95% CI: -.77, -.37) and donation amount (95% CI: -.07, -.03).

Experiment 4 (preregistered) tests benefactor's personal connection to the cause. MTurk participants ($N = 404$) participated in a 2 (benefactor income: high vs. low) X 2 (benefactor personal connection: present vs. absent) between-subject design. Results on donation likelihood showed no interaction ($p = .86$) but only a main effect of benefactor income ($F(1, 400) = 5.44, p = .02$), such that observing a low (vs. high) income benefactor donating led to greater donation likelihood. For donation amount, results showed a significant interaction ($F(1, 400) = 4.00, p = .046$), and a main effect of benefactor income ($F(1, 400) = 8.76, p = .003$). When benefactor personal connection was absent, people donated more money after observing a low (vs. high) income benefactor donating ($p < .001$). No donation amount difference was found when benefactor personal connection was present ($p = .50$). A moderated serial mediation analyses (model 85) using perceived benefactor motivation as the first mediator, moral elevation as the second mediator, and benefactor personal connection as the moderator was significant (95% CI: .002, .030).

In experiment 5 (preregistered), we directly manipulated the perceived motivation of the benefactor. Students ($N = 561$) participated in a 2 (Benefactor income: low vs. high) X 2 (Benefactor's altruistic motivation information: absent vs. present) between-subjects design. Results revealed a significant interaction between benefactor income and the availability of benefactors' altruistic motivation information ($F(1, 557) = 4.79, p = .029$) on donation likelihood. When the information about benefactor's altruistic motivation was absent, people donated more money after observing a low (vs. high) income benefactor donating ($p < .001$). This effect was attenuated when benefactor's altruistic motivation information was present ($p = .19$). Results also indicated a significant moderated mediation (Index = .496, 95% CI: .160, .836), such that the indirect effect of benefactor income (X) on donation likelihood (Y) via moral elevation (M) was moderated by benefactor's altruism motivation information (W).

Taken together, we show that a low income (vs. high) benefactor is more effective in eliciting donations among observers. The effect is driven by the perceived altruistic motivation of the benefactor and the level of moral elevation experienced among the observers. We demonstrate that the effect of benefactor income on donations can be attenuated by revealing the altruistic motivation of the benefactor. We contribute to research on moral elevation, build upon work examining moral judgments and provide insights to charities about what type of benefactor they should feature in motivating others to donate.

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Owner Attribute Label Increases Perceived Competence for Marginalized Populations

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EXTENDED ABSTRACT

Women-owned businesses now account for 36% of small businesses worldwide (Kuadli 2021). Although women-owned businesses are a rapidly growing sector, being a female business owner remains a challenge. Between 2014 and 2019, women-owned enterprises increased by 21%, leading market growth relative to all other businesses (American Express 2019b). Despite these trends, studies have shown that female business owners face many challenges, including accessing capital and markets and overcoming negative perceptions of working women (Bosse and Taylor III 2012). Women entrepreneurs also face challenges from consumers. Consumer attitudes toward this group have been shown to be generally negative and prevalent, illustrating “problematic stereotypes, perceptions and expectations of business and government leaders” (Hadary 2010).

While there have been growing calls for consumer behavior researchers to study topics that promote the interests of marginalized populations (Chandy et al. 2021; Wooten and Rank-Christman 2021), scant research has investigated strategies that individuals can implement to overcome barriers they will likely face in the consumer marketplace. Here, we examine one intervention—what we term owner attribute labels, such as “woman-owned business”—to help market women-owned businesses and benefit female entrepreneurs.

On one hand, making their gender identity salient could incite adverse outcomes for women. It could remind observers of the negative attributes stereotypically associated with this identity. Past research has also shown that individuals belonging to marginalized groups can face discrimination when observers infer their social groups based on cues such as names and extracurricular activities (Doleac and Stein 2013; Edelman, Luca, and Svirsky 2017; Milkman, Akinola, and Chugh 2015). These results suggest that women would benefit from concealing, rather than revealing, their demographic identity (van Veelen et al. 2020).

Here, we propose an alternative perspective. Drawing on prior work on social perception and impression management, we posit that the very act of asserting that one’s business is woman-owned can counteract traditional stereotypes of women as low in competence (Fiske et al. 2002) and engender positive business outcomes for female business owners. Across five preregistered studies involving 3,110 respondents, we study the impact of affixing an owner attribute label to marketing communications on consumer evaluations of the business, focusing specifically on consumer perceptions and evaluations of its competence and service quality.

We empirically test our theory across five preregistered experiments by applying an owner attribute label as a treatment in marketing appeals. We show that the label increases perceptions of competence, resulting in increased firm outcomes (Studies 1-4). In addition, we examine two moderating factors: industry experience (Study 3) and industry type (Study 4), and demonstrate the generalizability of the findings (Study 5).

We began by examining whether affixing an owner attribute label (e.g., “woman-owned business”) versus no label will improve perceptions of brand competence and therefore service quality. We recruited 200 participants on Amazon’s Mechanical Turk (46% Female, $M_{age} = 49.96$, 84% White, <https://tinyurl.com/5xxcxyt4>). The study was a two-condition, between subjects (label vs. no-label) design. Participants were randomly assigned to one of the two conditions and then presented with a description of a business owner and the accompa-

nying logo. Participants then completed a four-item service quality scale including items such as “Is this a service that you would want to use?” and “How willing are you to pay for this service?” ($\alpha = .89$). Next, participants rated the warmth (warm, sincere, and good-natured; $\alpha = .92$) and competence (competent, confident, and competitive; $\alpha = .86$) of the brand (Fiske et al. 2002). All items were administered on a 1-7 Likert scale.

Results revealed that perceptions of service quality was significantly higher for the brand with the label ($M = 4.99$) relative to no label ($M = 4.43$; $t(198) = -3.125$, $p = .002$, $d = .44$). Perceived competence also was significantly higher for the brand with the label ($M = 5.38$) relative to no label ($M = 4.84$; $t(198) = -3.263$, $p = .001$, $d = .46$). There was no significant effect of condition on warmth ($t(198) = -.482$, $p = .63$), suggesting that affixing an owner attribute label does not harm perceptions of warmth while allowing female founders to boost perceptions of competence. A mediation analysis using PROCESS Model 4 (Hayes 2018) with 10,000 resamples revealed that competence significantly mediated the increase in service quality (indirect effect = .47, $SE = .14$, 95% CI = [.18, .75]). These findings provide initial support for our account that affixing an owner attribute label increases perceptions of service quality, and that this effect is driven by an increase in perceived competence of the brand.

In Study 2, we test whether the effectiveness of our proposed intervention would vary by race or remain robust across different racial categories. Stereotyping literature has shown that competence judgements can fluctuate based on race (Fiske et al. 2002; Fiske 2018). Six hundred and two participants (50.3% Female, $M_{age} = 40.64$, 81.8% White, <https://tinyurl.com/yfd7wnad>) were randomly assigned to one of six conditions in a 2 (label vs. no-label) x 3 (race of woman: White vs. Black vs. Asian), between-subjects design. The design was similar to that of Study 1. Those in the no-label condition read about a female business founder along with her company logo, while those in the label condition read, in addition, that the founder has decided to affix a “woman-owned business” label on her marketing materials. We varied the race of the business owner by including a head shot of a founder who is White, Black or Asian and included their race in the description. We measured service quality, competence, and warmth of the business using the same measures from Study 1. Participants also rated the attractiveness of the founder.

A 2 x 3 between-subjects ANOVA revealed that there was no main effect of race ($F(2, 596) = .29$, $p = .75$) and no significant interaction ($F(2, 595) = .02$, $p = .98$). Importantly, there was a main effect of label condition, such that service quality was higher for those in the label condition ($M = 5.00$) than those in the no-label condition ($M = 4.52$; $F(1, 595) = 23.50$, $p < .001$, $\eta_p^2 = .038$). We found the same pattern for perceived competence such that there was no significant main effect of race ($F(2, 596) = .12$, $p = .89$) and no significant interaction ($F(2, 596) = .07$, $p = .94$). Importantly, there was a main effect of label condition, with participants perceiving the firm that included a label to be more competent ($M = 5.56$) than the firm without the label ($M = 5.11$; $F(1, 596) = 22.22$, $p < .001$, $\eta_p^2 = .036$). As for warmth, there was no significant main effect of race ($F(2, 596) = 1.62$, $p = .20$), no main effect of condition ($F(1, 596) = .45$, $p = .51$), and no significant interaction ($F(2, 596) = .83$, $p = .44$). As in Study 1, competence mediated the relationship between the owner attribute label and service quality (indirect effect = .36, $SE = .08$, 95% CI = [.21, .52]). In sum, the effectiveness of an owner attribute label on expected service quality of the brand

persisted across different racial groups. Controlling for attractiveness revealed the same patterns of results.

Study 3 explored industry experience as a moderator. We suspected that presenting an owner attribute label can serve as an effective signal of one's competence, especially in situations where other signals of competence are absent (e.g., there is no indication of the founder's industry experience). However, in situations where such signals of the founder's competence are present, affixing an owner attribute label should not serve as an effective intervention to boost consumers' perceptions of the founder's competence.

Eight hundred and three participants (49.8% Male, $M_{age} = 36.97$, 80.7% White, <https://tinyurl.com/bdctcjjw>) were randomly assigned to one of eight conditions in a 2 (label: label vs. no-label) x 4 (industry experience: no information vs. 1 year vs. 5 years vs. 15 years) between-subjects design. Those in the no information condition were simply given a description about a female founder who owns an interior decorating business. Those who were given information about the business owner's experience (i.e., 1 year, 5 years, and 15 years conditions) were also informed: "She currently has (1 year, 5 years, or 15 years) of experience, which is (below average, average, or above average, respectively) for an interior decorator in her area." In the label present condition, participants were also informed that the founder "has decided to make it known that her business is a woman-owned business". We assessed service quality and competence using the same items from Studies 1 and 2. As there was consistently no effect of warmth in previous studies, we did not measure warmth in subsequent studies.

A 2 x 4 ANOVA revealed a main effect of label ($F(1, 795) = 50.76$, $p < .001$, $\eta_p^2 = .060$) and a main effect of industry experience ($F(3, 795) = 18.78$, $p < .001$, $\eta_p^2 = .066$) for service quality. Importantly, these effects were qualified by a significant interaction ($F(3, 795) = 4.26$, $p = .005$; $\eta_p^2 = .016$). Service quality was higher for those in the label condition than the no-label condition when participants (1) were not given any information about the founder's industry experience ($M_{present} = 5.01$ vs. $M_{absent} = 3.95$; $F(1, 795) = 36.63$, $p < .001$, $\eta_p^2 = .044$), (2) read that the founder's industry experience was below average ($M_{present} = 4.33$ vs. $M_{absent} = 3.62$; $F(1, 795) = 17.02$, $p < .001$, $\eta_p^2 = .021$), and (3) read that the founder's industry experience was average ($M_{present} = 4.86$ vs. $M_{absent} = 4.35$; $F(1, 795) = 8.54$, $p = .004$, $\eta_p^2 = .011$). However, when industry experience was above average (i.e., 15 years), the difference between the label ($M = 4.97$) and no-label was not significant ($M = 4.78$; $F(1, 795) = 1.31$, $p = .25$, $d = .15$).

We conducted the same analysis on competence. The analysis revealed a main effect of label ($F(1, 795) = 62.24$, $p < .001$, $\eta_p^2 = .073$) and a main effect of industry experience ($F(3, 795) = 25.64$, $p < .001$, $\eta_p^2 = .088$) for perceived competence. Importantly, these effects were qualified by a significant interaction ($F(3, 795) = 4.69$, $p = .003$; $\eta_p^2 = .017$). Competence was higher for those in the label present condition than the label absent condition when participants (1) were not given any information about the founder's industry experience ($M_{present} = 5.48$ vs. $M_{absent} = 4.39$; $F(1, 795) = 43.41$, $p < .001$, $\eta_p^2 = .052$), (2) read that the founder's industry experience was below average ($M_{present} = 4.82$ vs. $M_{absent} = 4.08$; $F(1, 795) = 20.42$, $p < .001$, $\eta_p^2 = .025$), and (3) read that the founder's industry experience was average ($M_{present} = 5.39$ vs. $M_{absent} = 4.87$; $F(1, 795) = 10.31$, $p = .001$, $\eta_p^2 = .013$). However, when industry experience was above average (i.e., 15 years), the difference between the label present ($M = 5.55$) and the label absent was not significant ($M = 5.32$; $F(1, 795) = 2.12$, $p = .15$, $\eta_p^2 = .003$).

We conducted a moderated mediation analysis (PROCESS Model 8; Hayes 2018) using label as the independent variable, competence as the mediator, and industry experience as the moderating factor (dummy-coded; moderating the path from the independent variable to the mediator). Differences in competence mediated the effect of label

presence on service quality, but this effect decreased as the years of industry experience increased. Specifically, the indirect effect in the no-information condition was .84 ($SE = .13$, 95% CI = [.59, 1.09]), while it was .57 ($SE = .13$, 95% CI = [.31, .84]) and .41 ($SE = .14$, 95% CI = [.14, .68]) for the 1-year and 5-years conditions, respectively (moderated mediation indices: no information vs. 1 year = $-.27$ ($SE = .18$, 95% CI = $[-.62, -.07]$); no information vs. 5 years = $-.43$ ($SE = .19$, 95% CI = $[-.79, -.08]$). Importantly, the indirect effect was the smallest in the 15-years condition at .19 ($SE = .12$, 95% CI = $[-.06, .42]$); moderated mediation index: no information vs. 15 years = $-.65$ ($SE = .17$, 95% CI = $[-1.00, -.32]$).

Study 3 found that affixing an owner attribute label can be an effective intervention when there are no other signals of competence present. In Study 4, we explored industry type as another moderator. While both warmth and competence are important to consumers, consumers may especially value competence when choosing a service in certain industries (e.g., white collar businesses such as interior design) than others (e.g., blue collar businesses such as house cleaning). If so, an owner attribute label might be very effective for women-owned businesses operating in industries where competence is highly valued. Study 4 tested this idea.

One thousand and four participants (50.3% Female, $M_{age} = 39.68$, 80.4% White, <https://tinyurl.com/2p8ju9sf>) were randomly assigned to one of four conditions in 2 (label: no label vs. label) x 2 (industry: house cleaning vs. interior decorating) between-subjects design. We measured service quality and competence of the business using the same measures from the previous studies.

A 2 x 2 ANOVA revealed significant main effects of label ($F(1, 1199) = 53.76$, $p < .001$, $\eta_p^2 = .043$) and industry type ($F(1, 1199) = 21.67$, $p < .001$, $\eta_p^2 = .018$). Importantly, these main effects were qualified by a significant interaction ($F(1, 1199) = 5.08$, $p = .024$, $\eta_p^2 = .004$). Specifically, amongst participants in the interior design condition, service quality was higher in the label condition ($M = 4.91$) than the no-label condition ($M = 4.21$; $F(1, 1199) = 46.06$, $p < .001$, $\eta_p^2 = .037$). This gap was smaller amongst participants in the house cleaning condition such that service quality was higher in the label condition ($M = 5.09$) relative to the no-label condition ($M = 4.72$; $F(1, 1199) = 12.86$, $p < .001$, $\eta_p^2 = .037$); however, affixing an owner attribute label for a house cleaning service was still effective in boosting service quality of the business.

For competence, perceptions of competence increased for the label condition ($M = 5.43$) relative to the no-label condition ($M = 4.83$; $F(1, 1199) = 72.33$, $p < .001$, $\eta_p^2 = .057$). There was also a significant main effect of industry. Perceived competence was higher in the house cleaning condition ($M = 5.21$) than in the interior decorating condition ($M = 5.05$; $F(1, 1199) = 6.15$, $p = .013$, $\eta_p^2 = .005$). However, the interaction was not significant ($F(1, 1199) = 1.97$, $p = .16$). Competence mediated the relationship between the owner attribute label and service quality (indirect effect = .48, $SE = .06$, 95% CI = [.37, .59]), suggesting that while an owner attribute label may be notably effective for certain industries inherently more associated with competence such as interior decorating than house cleaning, it still serves as an effective intervention to boost perceptions of competence, and therefore, service quality of the business.

Finally, in our last study we demonstrate the generalizability of owner attribute labels by examining "Black-owned" and "minority-owned" in addition to "woman-owned" relative to no label across five different industries. Our theory hinges on the notion that the very act of affixing a woman-owned business label serves as a display of competence; if so, we should also observe affixing other types of owner attribute labels to improve business outcomes as well. The results demonstrate that the very act of affixing an owner attribute label sig-

nals attributes associated with competence. In sum, all owner attribute labels boosted perceived competence of the business relative to using no label across five industries.

While previous work has primarily focused on documenting workplace barriers for women and intervention that organizations can utilize to reduce those barriers, we join a small but growing number of researchers focused on identifying interventions at the individual-level (e.g., Kirgios et al. 2022). We also respond to the recent and growing calls for consumer behavior researchers to study topics that promote the interests of marginalized populations (Chandy et al. 2021). Finally, we provide practical take aways for female business owners that aim to abridge traditional gender stereotype perceptions by implementing a WOB label as an interceding marketing strategy.

TABLE 1. SUMMARY OF STUDIES

	Study1	Study2	Study3	Study4	Study5
Sample Size	200	602	803	1,004	501
Mean Age	49.96	40.64	36.97	39.68	34.98
Gender	46%Female	50.3%Female	49.8%Male	50.3%Female	64.3%Female
t-value	-3.125*				
F-statistic for main effect					55.42**and 103.85**
F-statistic for interaction		22.22*	8.54*	5.08**	
Summary of findings	Affixing an owner attribute label increases expected service quality of the business. This effect is driven by an increase in perceived competence of the brand.	The effectiveness of an owner attribute label on service quality of the brand persists across different racial groups and is mediated by perceived competence.	Affixing an owner attribute label can especially be an effective intervention when there are no other signals of competence present.	While an owner attribute label may especially be effective for certain industries inherently more associated with competence such as interior decorating than house cleaning, it still serves as an effective intervention to boost perceptions of competence, and therefore, service quality of the business.	Owner attribute labels increase perceptions of competence and warmth across five different industries and across three different owner attribute labels.

* $p < .05$, ** $p < .001$

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A Consumer Perspective on the Implications of Contrived Electricity Scarcity

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EXTENDED ABSTRACT

This study examines extended Public Safety Power Shutoffs from a consumer perspective. Electricity is a taken-for-granted utility, which when disrupted negatively impacts consumers' wellbeing. Findings reveal that consumers' intersectional vulnerabilities influence their level of electricity dependency and increase their powerlessness in their ability to navigate the disruptions in the marketplace.

In 2019, 639,000 Californians and 93,000 businesses experienced the state's largest planned electricity disruption. Noting that the increasing frequency and intensity of wildfires makes pre-planned disruptions a necessity, utility companies frame them as proactive de-energization or Public Safety Power Shutoffs (PSPS), which are safety measures undertaken during extreme weather conditions that exacerbate wildfires (e.g., high winds, high temperatures). Critics note that beyond weather challenges, PSPS are partly precipitated by utility companies' failure to maintain their infrastructure. Becoming a part of consumers' lived experience, planned disruptions impact market actors' ability to provide and access food, safety and shelter (Baker 2009). While manipulated scarcity is widely accepted and economically justified in some industries, scarcity of essential utilities necessary for everyday consumption practices (Arnould 2007) and survival (Hill and Sharma 2020) is ethically problematic. There is limited research on PSPS from the perspective of consumers' lived experiences. Situating this research within the vulnerability, resilience, and scarcity literature streams, we examine the following research questions: How do customers respond to and cope with contrived (e.g., manipulated) scarcity of an essential service? What strategies do consumers employ to self-protect and minimize vulnerability and dependence on utility service providers?

Circumstances that affect essential services like electricity may exacerbate consumers' vulnerabilities. While vulnerability can be experienced as a result of conditions, capacities, and internal factors (e.g., physical and mental states) (Hill and Sharma 2020), external factors such as those occurring in the changing marketing environment can create situational vulnerability. In this study, situational vulnerability stems from utility companies disrupting electricity supply thereby affecting businesses' ability to provide goods and services, coupled with individuals' personal characteristics (e.g., age, economic standing, health condition), which exacerbate the effects experienced. Studies examining vulnerability during crises, often regard those affected as having homogenous identities. Intersecting characteristics, which introduces variability into how a crisis is experienced, are unexplored. Resilience for example, which entails physical and mental toughness, the capacity to avert danger and rebound from damage should it occur, adds variability to the lived experience. Vulnerability and resilience are not interdependent, rather they are discrete entities though they exist side by side (Turner et al. 2003).

Data collection began with the compilation of archival data (e.g., news media, company reports, Facebook posts). Semi-structured interviews, conducted via telephone and video-conferencing, were digitally recorded and transcribed. Data analysis utilizing MAXQDA software followed prescribed qualitative methodology (Bradford 2021). Coding was based on a combination of emic themes from the data and terms from extant literature including con-

sumer research, and news sources. Member checks with select informants were conducted.

Findings and Discussion: Consumer Resilience during PSPS

Much of the scarcity literature focuses on physical products, including luxury goods. With manipulated scarcity of resources such as electricity, those affected cannot change the outcomes through their efforts, nor can they pre-plan (e.g., cannot store electricity for future use). Unable to satisfy the desire to access resources through typical means, consumers innovate and adapt (e.g., siphon petrol, creatively use equipment to circulate heat, rely on spirituality) As alternative sources are sought (e.g., gasoline powered generators or ice as means of refrigeration), sometimes, scarcity of one resource creates others. For instance, scarcity of electricity exposes scarcity related to finances, fresh air (pollution from gasoline powered generators), water (accessed through electric water pumps), thereby increasing their importance to consumers (Mardon and Belk 2018).

Strength Together: Rural and remote regions are especially vulnerable to manipulated scarcity and the collective resilience of the community is instrumental in surmounting challenges. Indicative of community unity (Albinsson et al. 2021), analysis indicates that area residents used resources efficiently through sharing. Further, community members checked in on one another, and formulated plans to become more self-sufficient and less reliant on external parties including PG&E (e.g., energy alternatives, food gardens).

Accumulated Strength to Fight Power Dynamics: Based on their inability to effect change in PG&E's decision making, informants' accounts conveyed a sense of powerlessness. While residents of high-risk geographical areas are disproportionately affected by climate change, decisions made by corporations (Mehta 2001) that may not prioritize customer/ societal wellbeing (Griffiths et al. 2019) makes them more vulnerable. Some claim that PSPSs are partly necessitated by PG&E's neglect of infrastructure maintenance. Subpar systems that create contrived scarcity of essential services, counters duty of care and corporate social responsibility claims. Thus, policy makers, businesses, and civil servants have a responsibility to identify and mitigate risks and reduce vulnerability through preventative management of hazardous events (e.g., disaster management).

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Word-of-Mouth Marketing Can Backfire for Luxury Products: Diminished Feelings of Uniqueness Lower Luxury Product Attitudes

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EXTENDED ABSTRACT

Luxury products encountered through word of mouth (WOM) recommendations are evaluated more negatively than luxury goods encountered absent a recommendation (e.g., through consumers' own discovery), because WOM reduces feelings of uniqueness, an essential characteristic of luxury products. Notably, factors that shift attention away from uniqueness attenuate the effect.

As an informal consumer-to-consumer communication on products, services, or brands, word of mouth (WOM) has been widely touted as a powerful form of marketing (Berger 2014). However, the current research highlights one area where the influence of WOM might be less effective. People develop less favorable attitudes toward *luxury products* encountered through a recommendation (vs. in the absence of it), because WOM reduces the feelings of uniqueness experienced from luxury goods.

Consumers' luxury product purchase motivation is partly explained by the items' symbolic role in expressing different aspects about the owners' identity (Belk 1988; Berger and Heath 2007; Hudders and Pandelaere 2012). One aspect with particular relevance to WOM is signaling uniqueness: consumers often buy luxury products to fulfill their need for uniqueness and to differentiate themselves from others (Dubois and Duquesne 1993; Dubois et al. 2001). In other words, one of the consumption goals of luxury products is centered around product uniqueness and how these offerings allow the owners to feel unique. We predicted that if a luxury product is introduced to consumers through a WOM recommendation, its feelings of uniqueness will be dampened, consequently leading to negative attitudes toward the item.

Past research suggests the positive effects of WOM on consumer attitudes result from WOM providing assurance of product quality (e.g., Lee and Lee 2009). However, as quality is generally assured for luxury products (Vigneron and Johnson 2004), WOM's signal on uniqueness is expected to be more salient instead. WOM is expected to signal reduced uniqueness of the target product, because it could signal that the product is used by other consumers (Cheema and Kai-kati 2010) and that consumer's autonomy in choice is being somewhat restricted by the recommendation (Imajo 2002; Maslach, Stapp, and Santee 1985; Worchel 2004). Thus, WOM for luxury (vs. non-luxury) products is expected to produce more negative attitudes toward the items. Seven studies were conducted to test this hypothesis.

Studies 1a-c established that people perceive luxury products encountered through a recommendation (vs. in the absence of it) less favorably. Participants imagined encountering either a luxury or non-luxury target product in the presence (vs. absence) of a recommendation and then evaluated their product attitude. Results showed that participants were more favorable toward the recommendation-present (vs. -absent) non-luxury items but less favorable toward the recommendation-present (vs. -absent) luxury items.

Studies 2 and 3 tested for the mediating process of reduced feelings of uniqueness. In study 2, participants recalled and evaluated either two luxury or two non-luxury clothing items they purchased in the past, one of which was recommended to them and one that they found on their own. Results showed more negative attitudes toward the recommended luxury (vs. non-luxury) item and an overall negative effect of WOM on feelings of uniqueness for both luxury and non-luxury items. However, within-subject mediation analyses showed that feel-

ings of uniqueness only mediated the effect of the product encounter (recommendation-present vs. recommendation-absent) on attitudes for luxury products, but not for non-luxury products.

Study 3 provided further evidence for the mechanism through moderation. Based on our theorization, WOM should not backfire for luxury products when uniqueness is no longer prioritized. To test this effect, half of the participants were primed to care less about product uniqueness, whereas the other half were not. Participants then imagined choosing between either two luxury or two non-luxury dress shirts, one of which was recommended, and the other was not. Results showed that within the non-luxury shirts, no difference between the uniqueness conditions was found. However, within the luxury shirts conditions, the uniqueness unimportant condition (vs. control) displayed greater preference for the recommended shirt relative to the found shirt.

Study 4 tested whether a different type of WOM would also result in the same negative consequences for luxury products. While studies 1-4 focused on recommendation WOM, there is another form of WOM, mere mention, where consumers talk about the product without specific recommendations (Berger 2014), which should show an attenuated negative effect of luxury WOM. To test this moderator, participants were asked to read tweets that either recommended or mentioned a target luxury or non-luxury wine and indicated their willingness to pay (WTP) for it. Results showed that for non-luxury wine, WTP did not differ between the two types of WOM. However, for luxury wine, WTP was lower for the recommended (vs. mentioned) item.

Study 5 identified another boundary condition: political orientation. We expected liberals (vs. conservatives), who are more sensitive to product uniqueness signals (Ordabayeva and Fernandes 2018), to display an even more negative response to luxury WOM when WOM communicates even lower uniqueness (i.e., WOM from a social media influencer vs. a friend). In the study, Democratic and Republican participants were asked to indicate their WTP for either luxury or non-luxury headphones recommended by either an influencer or a friend. The Republican participants did not differ in their WTP for an influencer-recommended vs. friend-recommended headphones for both luxury and non-luxury conditions. In contrast, although the Democratic participants' WTP did not differ between a friend-recommended and influencer-recommended non-luxury headphones, their WTP was lower for an influencer-recommended (vs. a friend-recommended) luxury headphones.

Across seven studies, our research examines the costs of WOM marketing for luxury products, making theoretical advancement in the WOM literature and offering managerial implications on whether WOM marketing is the most effective for luxury goods. An additional contribution is made by showing how WOM can take on a different meaning for people depending on what considerations are more salient (i.e., uniqueness vs. quality). We further contribute to the luxury literature by showing how the product encounter plays an important role in determining consumers' luxury product attitudes. Finally, based on insight provided by the moderating role of political orientation and types of WOM, marketers may also reconsider consumer targeting as well as the forms of WOM they generate in their marketing campaigns for luxury goods.

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Predicting Against Judgment: When People Fail to Predict What They Believe to Be Most Likely to Arise

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EXTENDED ABSTRACT

We document a robust discrepancy between predictions and likelihood perceptions. When the most likely outcome seems unlikely (e.g., it is objectively most likely but has only a 20% chance), people are less likely to predict that it will arise than when it seems likely (e.g., has an 80% chance).

Consumers often predict the outcome of an event from a set of alternatives. For example, a gambler predicts which roulette number will come up; a basketball fan predicts which team will win the title, and so on. It is widely accepted that such predictions can be biased. However, research usually assumes that predictions correspond to people's likelihood assessments, such that people select as their prediction the outcome that seems most likely to them. Thus, if Ray thinks Kansas is most likely to win March Madness, one might assume that he would predict Kansas as the winner. Less research has examined whether likelihood assessments and predictions diverge. We demonstrate a novel disconnect between the two.

Consider Ray again. If he thinks Kansas has a 90% chance of winning, he can easily predict that Kansas will be the champion. However, if he thinks Kansas only has a 10% chance, he might hesitate to predict Kansas, even if he thinks all other teams have a lower chance, because there remains substantial uncertainty.

Normatively, Ray should focus on the relative likelihoods of the teams. No matter how likely Kansas is to win, Ray should predict Kansas if he believes Kansas is more likely than any other team. However, we find that people often incorporate absolute likelihoods into their predictions: they consider not only what is *most* likely but also *what is likely*. When the most likely outcome is likely to arise, they regularly predict that it will arise. However, when the most likely outcome is unlikely, meaning that no outcome is truly likely, they less regularly predict that outcome. This may happen because events seem unpredictable when the most likely outcome is unlikely, so people may make arbitrary predictions using gut feelings or random guesses. We explore this effect in 7 studies (all preregistered except Study 1).

In Study 1, 222 undergraduates each randomly (virtually) drew a ball from one of two sets of nine balls. In one set, two balls were labeled "1", and the others were labeled "2" to "8". In the other set, six were labeled "1" and the others were labeled "2" to "4". Participants knew the composition of their sets. They either predicted which number they would draw or indicated which they were most likely to draw. With six "1"s, nearly everyone identified "1" as most likely and nearly everyone predicted they would draw a "1" (98.1% vs 94.7%, $p=.663$). With two "1"s, although nearly everyone identified "1" as most likely, significantly fewer predicted "1" (94.7% vs 74.5%, $p=.007$). Thus, people were less likely to predict "1" when it was unlikely to arise—even though they knew that it was most likely to arise. Study 2 ($n=600$) replicated these findings with monetary incentives for correct predictions.

Study 3 ($n=300$) replicated Study 1 in a within-subject design where participants both indicated the most likely number from the set with two "1"s and predicted what number they would draw. Nearly everyone (88.0%) identified "1" as most likely, but only 59.7% predicted "1" ($p<.001$).

Next, we sought evidence from real-world predictions. In Study 4, 602 participants predicted which team would win 2022 March

Madness. They also estimated the probability of each team winning. Participants were less likely to predict the team that they estimated to have the highest probability when that probability was lower ($p<.001$).

In Study 5, 601 participants predicted the 2022 NBA championship. They indicated which team was most likely to win the title and whether that team had a high or low absolute chance of winning. Among people who thought their team had a high (low) absolute chance of winning, 76.8% (54.2%) predicted that their most-likely team would win the title, $p<.001$. That is, people were less likely to predict their most-likely-winner when they believed that this team was unlikely to win in an absolute sense.

If our effect arises because people consider absolute likelihood, reducing the sense that the most likely outcome is unlikely may attenuate the effect. In Study 6 ($n=290$), participants played the version of Study 1's game where there were only two "1"s. They were also asked to imagine 1000 people playing the same game. They estimated which number would be drawn most often across the 1000 players. We theorized that this intervention would make drawing a 1 seem less unlikely because people could imagine hundreds of players drawing a 1. As predicted, considering 1000 plays reduced the effect. After (before) imagining 1000 plays, 74.7% (55.6%) predicted that a "1" would be drawn when they played the game themselves. ($p<.001$).

One might also attenuate our effect by increasing the relative-likelihood advantage. In Study 7 ($n=586$), participants considered a set of balls that contained either 10 balls (2 labeled "1" and 8 labeled "2" to "9") or 100 balls (20 labeled "1" and 80 labeled "2" to "81"). In both sets, "1" had a 20% chance of being drawn and was most likely. Notably, "1" was twice as likely as any other number in the 10 set, but 20 times as likely in the 100 set. Regardless of whether the relative-likelihood gap was large or small, most participants identified "1" as most likely (88.6% vs. 86.3%, $p=.676$). However, participants more often predicted "1" with the 100 (vs. 10) set (75.0% vs. 53.2%, $p<.001$).

We document a robust discrepancy between what people predict and what they believe to be most likely. This disconnect may suggest a new angle on predictions and probability judgment.

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How Polarizing Discourse Varies Around the World and Throughout the US: The Influence of Strong Societal Norms

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EXTENDED ABSTRACT

This research shows societies with strong norms express more polarizing discourse. The effect is robust across countries and US-states, manifests in reviews and microblogs, and is salient (reversed) for topics with permissive (restrictive) subjectivity. The authors argue this polarization phenomenon is a compensatory manifestation of highly structured and restraining environments.

In recent years, the prevalence of polarizing discourse in the online social space has become particularly discernable. Although the prevalence of polarizing word-of-mouth (WOM) is well documented (Hu, Zhang, and Pavlou 2009; Schoenmueller, Netzer, and Stahl 2018), little is known about why and how polarizing WOM varies across different geographic regions around the world. Accordingly, the main objective of this research is to investigate the relationship between societal cultures and polarizing WOM.

In our research, we define *polarizing WOM* as the degree of extremity and variance expressed in content generated by users and that is intended to be shared with others. Our societal factor of interest is cultural tightness-looseness (Gelfand, Nishii, and Raver 2006; Harrington and Gelfand 2014; Uz 2015). *Cultural tightness-looseness* refers to variation in the strength of norms and tolerance for norm deviance among different consumer groups. Tight [loose] cultures have strong [weak] norms and low [high] tolerance for deviant behavior; e.g., Bangladesh, Egypt, and Indonesia [Belgium, Mexico, and Sweden]. We argue that tightness-looseness influences expressions of polarizing WOM.

Myriad research shows that people have, to one degree or another, a need to be unique (Tian, Bearden, and Hunter 2001; Cheema and Kaikati 2010). However, highly structured and restraining environments of tight cultures, by nature, largely limits one's ability to express their uniqueness. As such, individuals of tight societies behave modestly and similarly in the public limelight (Gelfand et al. 2011; Harrington and Gelfand 2014). We argue that this incongruity between restraining environments of tight cultures and individuals' need for uniqueness drives people from tight cultures to seek external outlets, such as social media and online discussion boards, for self-expression. More importantly, we argue that the expression itself is manifested in a compensatory manner (Khan and Dhar 2006; Rucker and Galinsky 2008), i.e., with greater polarity, which is in sharp contrast to the conspicuous societal alignment of tight cultures.

We test our main hypothesis across four studies: one behavioral and three field studies. Study 1 (Booking.com) leverages online review data and tests whether the hypothesized relationship between tightness-looseness and polarizing WOM is a global phenomenon. The main dependent variable is polarizing WOM, i.e., the degree of extremity expressed in the review post. Polarizing WOM is operationalized based on the sentiment of reviews (Hansen et al. 2011); specifically, the magnitude of standard deviations of sentiment of a review, relative to all reviews for a given hotel. As robustness of measurement, we also computed polarizing WOM by the assigned rating – i.e., variance in a rating relative to all ratings for a given hotel.

The main independent variable is cultural tightness-looseness (CTL)—i.e., the degree to which societies tolerate deviant behavior. CTL scores, at the country level, are provided by Uz (2015), which contain the combined-index CTL scores across 63 countries. A number of other predictor variables were included as controls: (a) other major cultural factors (Hofstede, Hofstede, and Minkov 2005) and (b) economic-

related factors, such as gross domestic product per capita and education level.

Mixed-effects regression shows that greater degree of country tightness is associated with more polarizing discourse ($b=.027$, $se=.010$, $p<.01$). Most notable, across all culture and economic predictor variables, cultural tightness has the *most pronounced effect* on review polarity (Cohen's $f^2=.40$), well above any other variable. All results of polarizing WOM operationalized based on written reviews are replicated and robust with assigned ratings.

Study 2 was conducted in the lab to test and provide support for the causal relationship from cultural tightness to polarizing WOM. Students ($N=152$) from a large public University in the Midwest participated in the experiment (77 males, $M_{age}=19$). Tightness [looseness] was manipulated by asking participants to write three reasons to support [argue against] the statement “there should be clear expectations of what behaviors are appropriate or inappropriate in most situations in our society”. After the manipulation, participants were asked to recall a recent restaurant experience and consider the extremity of their review writing behavior, using a four-item, seven-point scale ($\alpha=.69$). A general liner model with extreme review behavior as the dependent variable, and looseness/tightness as the independent variable, revealed a significant main effect of looseness/tightness manipulation ($F(1, 143)=3.90$, $p=.05$). Pairwise comparison show that participants in the tightness (vs. looseness) condition tend to be more extreme when reviewing their restaurant experience ($M_{tightness}=3.96$, $M_{looseness}=3.57$, $p=0.05$, Cohen's $d=.33$).

Studies 3 (Twitter) and 4 (New York Times) show that the effect of cultural tightness on polarizing WOM extends to a more granular geographic level, US states (Cohen's $f^2=.27$). More importantly, in Study 4, we examine an important boundary condition—permissive subjectivity of topic—for the effect of tightness on polarization. We define *permissive subjectivity* as the degree to which a topic is conducive to self-expression, diverse ideas. Its counterpoint is *restrictive subjectivity*, the degree to which a topic is deemed fact-based, objective. A pre-test demonstrates that *op-ed*, *sports*, and *travel* [*politics*, *science*, and *Washington*] categories of news are deemed to have permissive [restrictive] subjectivity. Accordingly, comment sections across these six news categories are collected from the New York Times, a major US news outlet. Polarizing WOM is operationalized by variance in the sentiment of comments generated by users from each state by news article.

Regression results show a significant interaction between tightness-looseness and topic subjectivity ($b=.121$, $se=.038$, $p=.001$). We find that the effect of cultural tightness on polarizing discourse is salient [reversed] for comments in the *op-ed*, *sports*, and *travel* [*politics*, *science*, and *Washington*] news categories (permissive subjectivity: $b=.068$, $se=.030$, $p=.024$) [(restrictive subjectivity: $b=-.053$, $se=.024$, $p=.025$)]. Further, pairwise comparison demonstrates that changes in polarizing WOM is driven by tightness ($|\Delta_{tightness}|=.075$), not looseness ($|\Delta_{looseness}|=.022$, $p=.007$).

To conclude, this research contributes to the research stream on polarizing WOM, demonstrating how language polarity systematically varies by geographic regions around the world. Across multiple contexts (online reviews, microblogs, news forums), WOM formats (written text, assigned ratings), and geographic granularity (country, US state), we show that individuals from tight (vs. loose) cultures—i.e., societies with strong norms and low tolerance for deviant behavior—express more polarizing WOM.

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Ownership Unwanted: Identity Signals and Preferences to Consume Without Owning

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EXTENDED ABSTRACT

Ownership is usually desirable. Consumption trends are evolving, however, replacing private ownership with access based consumption of goods. Declining ownership has its costs, but we identify an upside. Consumers prefer access-based consumption to private ownership when goods confer a negative identity signal; it buffers the self from their use.

Consumers often prefer to purchase products that allow them to affirm desired identities and communicate those identities to others (Berger & Heath, 2007; Bodner & Prelec, 2003). With the rise of the sharing economy, however, legal ownership of private goods is being replaced with legal access to shared goods, the many benefits conferred by psychological ownership appear to be on the decline (Morewedge et al., 2020). We examine a potential benefit to the rise of access-based consumption.

We argue when goods produce negative identity signals, consumers prefer forms of consumption that minimize psychological ownership because such “access-based” consumption feels less diagnostic of their true preferences. When a good is associated with undesired identities (e.g., a rival team or political party), consumers will then prefer to rent than purchase the product, even at the same price, as the negative identity signal outweighs the benefits of ownership. Access-based consumption allows consumers reap the consumption utility of “off-limits” products without incurring the negative identity signal that ownership would produce.

METHODS & RESULTS

In **Study 1** ($N=404$) we requested an online panel of Democrats ($N = 201$; 53% female) and Republicans ($N = 203$; 48% female). Participants imagined needing a book to complete an assignment for an online course. In the identity relevant (neutral) condition, participants were told that they needed was «The Art of the Deal» by Donald J. Trump («Getting to Yes» by Roger Fisher”).

Consistent with our preregistered hypothesis, Democrats were significantly more likely to rent when the book conflicted with their identity than when it did not (94% vs. 69%; Wald $\chi^2 [1] = 17.62, p < .001$), whereas Republicans did not differ in their likelihood of renting (Wald $\chi^2 [1] = 0.06, p = .81$), yielding a significant interaction (Wald $\chi^2 [1] = 12.12, p < .001$).

Study 2a ($N=249$) was a field study to examine this effect in an incentive compatible setting. University students were either given a neutral pencil (i.e., plain) or identity conflicting pencil (i.e., logo of rival university) to complete a short survey. After completing the survey, students were offered to keep the pencil as a gift for participation. The key dependent variable was whether the student chose to keep (i.e., own) the pencil, which was secretly recorded.

All students used the pencil to complete the survey (i.e., engaged in access-based consumption). However, as predicted, significantly more students chose to own the pencil, when it was identity neutral (i.e., plain red; 73%) than when it was identity conflicting (i.e., logo of rival university's; 32%; $\chi^2 [1] = 42.77, p < .001$).

In **Study 2b** ($N=306$), student participants imagined needing an umbrella during an unexpected rainstorm. The umbrella available was either: identity-confirming (i.e., logo of the alma mater university), identity-neutral (i.e., plain umbrella) or identity-conflicting (i.e., logo of a rival university).

Consistent with our preregistered hypothesis, students were more likely to rent a product when it conflicted with their identity (63.1%)

than when the product was identity-neutral (31.4%; Wald $\chi^2 (1) = 19.96, p < .001$) or when the product was identity-confirming (36.6%; Wald $\chi^2 (1) = 13.95, p < .001$).

Study 3 ($N=202$) tested our proposed mediator: product-self connection (Escalas & Bettman, 2003). Participants from New England imagined a going to see a football game where it unexpectedly started to rain. In the identity conflict (confirming) condition, participants were told that the concession stand only had “New York Jets” (“New England Patriots”) ponchos available.

As predicted, significantly more participants chose to rent the identity conflicting product (79%) than the identity consistent product (47%; $\chi^2 (1) = 21.97, p < .001$). Critically, this effect was mediated by product-self connection (Indirect Effect = 1.37, 95% CI [0.89, 2.05]; Model 4; Hayes, 2017).

In **Study 4** ($N=300$), participants imagined being cast in a local play and that they needed to acquire a costume. Participants were told that they had either been cast in the role of Darth Vader (confirmation), a Roman statesman (neutral), a Roman statesman, or Adolf Hitler (conflict). Finally, participants indicated their preference to rent or buy the costume at the same price.

Consistent with our preregistered hypothesis, significantly more people preferred to rent the conflicting costume compared to the neutral costume (87% vs. 64%; Wald $\chi^2 (1) = 13.04, p < .001$) or the confirming costume (87% vs. 59%; Wald $\chi^2 (1) = 18.57, p < .001$). Critically, we found that this effect was mediated through product-self link (Model 4; Hayes, 2017).

We have suggested that consumers prefer to access identity conflicting products because the more ambiguous form of ownership confers less diagnostic identity signals. Therefore, we would expect those renting an identity conflicting item to be less likely to engage in compensatory consumption, consumption which aims to cope with identity threat (Rucker and Galinsky 2013). In **Study 5** ($N=400$), participants imagined buying (renting) luxury apparel to attend an opera and responded to the self-authenticity scale (Goor et. al. 2020). Finally, participants read that the next night they wanted to go out to dinner and choose from two restaurant options: 1) a fancy burger restaurant with high-class offerings [authenticity threatening; non-compensatory]; or 2) a no-frills burger joint with simple down-to-earth offerings [authenticity restoring; compensatory].

Consistent with our preregistered hypothesis, the interaction between ownership and self- authenticity was significant (Wald $\chi^2 (1) = 5.24, p = .02$). Buying the luxury apparel caused a positive relationship between feelings of inauthenticity and compensatory consumption ($B = .50, \text{Wald } \chi^2 (1) = 19.51, p < .001$). However, preferences for the compensatory choice were not affected by feelings of inauthenticity for those who rented ($B = .14; \text{Wald } \chi^2 (1) = 1.73, p = .19$).

CONCLUSION

Consumers avoid purchasing products that conflict with their identities. However, we find that consumers may be more willing to consume identity conflicting products when they do not feel like they own them. Access-based consumption appears to create a weaker identity-signal than private ownership. As a result, it allows consumers to enjoy the consumption utility off “off-limits goods” while avoiding the negative self-signal they evoke.

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Bleed from Extraordinary Experiences

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EXTENDED ABSTRACT

The present ethnography of live action role-playing explains how consumers return from extraordinary experiences and how this process differs depending on consumers' subjectivity. The emic term "bleed" captures the trace that extraordinary frames and roles leave in everyday life. The subjective tension between the extraordinary and the ordinary intensifies bleed.

"I took the hat off, clinging to it all the way home, thinking about being back in this strange, therapeutic, enlightening experience, where the hosts seemed to understand me better than I did. I wanted to go back; despite the small panic attack and emotional exhaustion that washed over me, I wanted to do it all again" (Alexander 2017).

Accessing an alternative realm beyond the everyday where they can be someone else has captured consumers' imagination for centuries. Fascination with utopian worlds and possible selves continues to the present day (Kozinets 2002; Schouten 1991), and consumer experiences with fictional or virtual places offer a new frontier for innovative companies (Bertele et al. 2020). Contemporary consumer society is brimming with opportunities to join extraordinary experiences that allow for the exploration of different settings and roles—from reenacting the fur trade in modern mountain men's rendezvous (Belk and Costa, 1998), to immersion into vampire narratives during the Whitby Goth Weekend (Goulding and Saren 2016), to the decelerated experience that a Camino de Santiago pilgrimage promises (Husemann and Eckhardt 2019).

Returning from such experiences can be challenging. Modern mountain men's "romantic nostalgia" (Belk and Costa 1998, 233), Whitby Goths' "trace" (Goulding and Saren 2016, 221), and pilgrims' "post-Camino syndrome" (Husemann and Eckhardt 2019, 1158) all suggest that coming back to reality is difficult. What this challenge exactly looks like, however, is still a question. How the kinds of lives consumers are leading influences the process of returning from extraordinary experiences also remains underexplored. Previous scholarship examines subjective understandings of consumers' everyday life mainly as a motivation to engage in the experience (Kozinets 2002; Tumbat and Belk 2011), leaving uncharted how individual differences influence the process of returning. Yet the consequences of experiential consumption are likely as idiosyncratic as its antecedents (Tumbat and Belk 2011). Scholarship thus needs a better understanding of what happens when consumers leave extraordinary experiences and reintegrate into everyday life, and how subjective understandings of the tension between "extraordinary" and "everyday" influence this process.

This paper examines the challenge of returning from extraordinary experiences in the context of live action role-play (LARP), an extraordinary experience during which consumers explore fantastic frames within which they assume the roles of invented characters (Orazi and Cruz 2019). Since frames and roles characterize what consumers detach from when returning to everyday life, these Goffmanian (1974) concepts enable us to unpack the emic term "bleed" as the process through which consumers' experience in the extraordinary seeps into the ordinary, like dye colors bleed into one another. Unpacking bleed is theoretically relevant to advance understanding of the process by which consumers return from extraordinary experiences. As a result, we make three contributions to the literature: We (1) identify the critical dimensions of bleed to provide greater insight

into what happens when consumers return from extraordinary experiences, (2) explain how consumers' subjective understandings of the tension between the extraordinary experience and their everyday lives can influence bleed's intensity, and (3) formalize a transformative recursive process that captures the diverse trajectories consumers can take when returning from extraordinary experiences. Our model of bleed offers a more nuanced understanding of the traces and tensions generated by extraordinary experiences, and how individual consumers take different routes along the extraordinary-ordinary continuum to return, cope, and transform their everyday lives.

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Failure Counts (but Success Doesn't): Evidence for an Attributional Asymmetry in the Evaluation of Others' Financial Outcomes

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EXTENDED ABSTRACT

When evaluating others' successes or failures, are we more influenced by how big the success or failure was or how many times it occurred? This research reveals a novel asymmetry; the number of occurrences matters more than magnitude for failure, and for success, neither magnitude nor occurrences carry more weight.

When evaluating others' successes or failures, are we more influenced by how big the success or failure was or how many times it occurred? The current research ($N=1,740$) illuminates that the number of occurrences of an outcome can be a stronger psychological input to observers' evaluations of an actor than the magnitude of occurrences depending on the valence of the outcome.

A tenet of a classical attribution theory, the Covariation Model of attribution, proposes that dispositional attributions of observed outcomes should increase with higher consistency among the observed outcomes. This model would predict that greater numbers of outcomes of the same valence (whether the outcomes are successes or failures) would be attributed increasingly to an actor's disposition. However, we propose that people readily infer that either one or two financial successes arise from internal ability; the number of successes provides no further cue to diagnosticity. Conversely, people attribute a single financial mistake to external forces but only make dispositional inferences after observing multiple financial failures.

We build our prediction on three lines of research. The first is work on attribution theory, demonstrating that observers tend to attribute a single success of another to internal ability, whereas observers tend to attribute a single failure of another to external factors. The second is from the realm of mistake correction, hinting that multiple failures move the attribution needle. Such work has demonstrated that when an actor committed and corrected the same mistake twice, people were relatively less likely to attribute the multiple mistakes to external circumstances compared to a single mistake, albeit attributions did not crossover from external to dispositional. The third concerns the Evaluative Information Ecology model, which proposes that positive information (in the present studies, observance of one or more financial successes) is perceived as more similar to other positive information than negative information (in the present studies, observance of one or more financial failures) is to other negative information. We predict multiple mistakes gone uncorrected shift attributions from external to dispositional with negative downstream consequences.

Study 1

Participants considered a debtor who successfully paid back[failed to pay back] one loan of \$20,000 alongside a debtor who successfully paid back[failed to pay back] two separate loans of \$10,000.

The omnibus was significant for attributions ($\chi^2(df=1, N=199)=24.47, p<.001$). Participants perceived the debtor failing once as more financially proficient (86.9%) vs. the debtor failing twice (13.1%; $\chi^2(1, N=99)=53.83, p<.001$). Participants perceived no difference in proficiency between the debtor succeeding twice (45.0%) vs. once (55.0%; $\chi^2(1, N=100)=1.00, p=.317$).

The omnibus was significant for lending likelihood ($\chi^2(1, N=199)=36.17, p<.001$). Participants preferred to grant a future

loan to the debtor failing once (84.8%) vs. twice (15.2%; $\chi^2(1, N=99)=48.09, p<.001$). Participants did not prefer to grant a future loan to the debtor succeeding twice (56.0%) vs. once (44.0% $\chi^2(1, N=100)=1.44, p=.230$).

Study 2

In a 2(failure vs. success) x 2(one vs. two) between-subjects design, participants considered an individual debtor who successfully paid back[failed to pay back] one loan of \$20,000[two separate loans of \$10,000].

The interaction was significant for attributions; $F(1, 823)=7.21, p=.007$. Participants made more dispositional attributions when the debtor failed twice ($M=4.25$) vs. once ($M=3.65$; $F(1, 823)=16.96, p<.001$). Attributions did not differ between the debtor succeeding once ($M=4.69$) vs. twice ($M=4.74$; $F(1, 823)=.12, p=.733$).

Attributions to the debtor who failed once were lower than the 7-point-scale's midpoint ($M=3.65, t(203)=-3.66, p<.001$), but attributions to the debtor who failed twice were higher than the midpoint ($M=4.25, t(206)=2.53, p=.012$). In contrast, both attributions to the debtor who succeeded twice ($M=4.74, t(208)=6.69, p<.001$) and attributions to the debtor who succeeded once ($M=4.69, t(207)=6.62, p<.001$) were higher than the midpoint.

The interaction was significant for lending likelihood; $F(1, 823)=9.60, p=.002$. Participants were more likely to give a loan to the debtor failing once ($M=18.26$) vs. twice ($M=13.03$; $F(1, 823)=9.49, p=.002$). There was no difference in lending likelihood between the debtor succeeding once ($M=88.15$) vs. twice ($M=90.33$; $F(1, 823)=1.67, p=.196$).

Bootstrapping revealed that in the failure conditions[but not the success] number of occurrences increased dispositional attributions, leading to differences in lending likelihood [95% CI: 2.12, 6.19].

Study 3

In a 2(failure vs. success) x 2(skill vs. chance) between-subjects design, participants considered a gambler who lost[won] \$100 in a single session of blackjack[roulette] alongside a gambler who lost[won] two \$50 gambles in two separate sessions of blackjack[roulette].

The interaction was significant for attributions; $b=.65, SE=.32, p=.040$. In the game of skill(blackjack), the higher evaluations of gambling proficiency of the person with one occurrence was stronger in the failure condition (73.1% vs. 2 failures: 26.9%) than in the success condition (52.9% vs. 2 successes: 47.1%), $p<.001$. In the game of chance(roulette), there were no differences in proficiency between the two outcome conditions (success=63.4%; failure=68.5%), $p=.299$.

The interaction was significant for who to give \$25 to gamble; $b=.64, SE=.32, p=.046$. In blackjack, choice of the person with one occurrence was stronger in the failure condition (73.7% vs. 2 failures: 26.3%) than in the success condition (56.4% vs. 2 successes: 43.6%), $p<.001$. In roulette, there were no differences in choice between the two outcome conditions (success=64.5%; failure=67.5%), $p=.547$. This result offers evidence inconsistent with the alternative explanation that the asymmetry demonstrated in Studies 1-2 was due

to low base rates of defaulting on loans given that base rates of losing a hand of blackjack at a casino are higher than base rates of winning.

This research extends attribution theory's predictions beyond patterns of single events to attributions of multiple successes and failures. In doing so, it qualifies a tenet of the Covariation Model of attribution, demonstrating that the influence of outcome consistency on dispositional attributions differs based on outcome valence (success versus failure). Further, it builds upon work demonstrating that the presence of negative information may not be as damaging as one might expect but that making and correcting multiple mistakes is relatively less attributed to external causes. The present investigation shows that multiple failures without subsequent correction are attributed to internal disposition in absolute terms with negative downstream implications.

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On Scarcity, Self-threat, and the Avoidance of Financial Advice

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EXTENDED ABSTRACT

This paper investigates the psychological reasoning the avoidance of financial advice (e.g., financial services, money management books) that money-scarce consumers have. In four experiments, this paper shows that money scarcity, relative to time scarcity, leads to avoidance of financial advice.

Consumers are often confronted with situations that make them feel that their money is scarce. However, interventions to assist people in making financial decisions seem to have little appeal, especially to those who experience greater financial constraints (Fernandes, Lynch, and Netemeyer 2014; NFCS 2018).

This research suggests why money-scarce consumers are more reluctant to seek help to improve their financial decisions and strategies for overcoming this aversion. Specifically, we propose that money-scarce people avoid financial advice, such as financial services, money management apps, or self-help books, because the domain of financial advice leads to defensiveness. In contrast to other forms of resource scarcity (e.g., time scarcity), money scarcity will lead people to perceive financial advice as a psychological threat to their negative self-perception. Feeling money scarcity is an unpleasant experience that people would like to avoid (Griskevicius et al. 2013; Paley et al. 2019; Sharma and Alter 2012). When experiencing money scarcity, they may feel less ‘worthy’ since money can be an important tool in proving their competence and maintaining positive self-views (Zhang 2009). However, we expect that people who experience time scarcity may not respond defensively to financial advice because time scarcity may not be such a negative state that people want to avoid compared to money scarcity (Bellezza et al. 2017; Gershuny 2005).

Furthermore, we propose two ways of minimizing the defensiveness of money-scarce consumers: reducing the threat from money scarcity and reducing the supposed threat from financial advice. First, we suggest that the threat from money scarcity can be reduced if money-scarce consumers are presented with the opportunity to buffer their threat (Hall et al. 2014). Research shows that self-affirmation can buffer the threat allowing people to respond less defensively to situations that are threatening (Aronson, Cohen, and Nail 1999; Hall et al. 2014; Steele 1988). Another approach to reducing the defensiveness of money-scarce people is to discount the threat stemming from financial advice through message framing. That is, when financial advice aids money-scarce consumers to cope with the threat, by helping the money-scarce consumers devalue the threat from the message (Gibbons, Benbow, and Gerrard 1994; Tesser 1988), people would no longer consider the financial advice as a threat and show lower defensive processing.

In study 1, we test defensive processing by measuring people’s distrust toward financial advice. Participants in the money-scarcity and time-scarcity conditions first performed an episodic recall task (adapted from Roux et al. 2015). Following that, participants were instructed to view a financial service advertisement and answer the questions. We found a significant effect on the financial advice acceptance such that the money scarcity condition showed lower financial advice acceptance than the time scarcity condition ($M_{\text{money}} = 4.93$, $SD = 1.96$ vs. $M_{\text{time}} = 5.45$, $SD = 1.79$; $F(1, 443) = 8.59$, $p = .004$, $\eta_p^2 = .019$). We also found that the money scarcity condition showed greater distrust toward the advertisement than the time scarcity condition ($M_{\text{money}} = 4.01$, $SD = 1.86$ vs. $M_{\text{time}} = 3.67$, $SD = 1.73$; $F(1, 443)$

$= 4.04$, $p = .045$; $\eta_p^2 = .009$). We found that distrust significantly mediated the scarcity effect on the financial advice acceptance ($B = -.26$, $SE = .12$, 95% CI = $[-.510, -.011]$).

In study 2, we examine the moderating effect of self-affirmation. A 2 (scarcity: money scarcity vs. time scarcity) \times 2 (self-affirmation: present vs. absent) between-subjects design was used. Participants were asked to evaluate advertisements for self-help books (money management book, time management book, stress management book). They were asked to choose one book that they would like to read and rate how likely they would purchase the books. The chi-square test result showed that when participants were self-affirmed in the money scarcity condition, they chose money-management books significantly more than those not self-affirmed ($\chi^2(2, 161) = 11.84$, $p = .003$). A 2 (scarcity: money scarcity vs. time scarcity) \times 2 (self-affirmation: present vs. absent) \times 3 (book: money-management vs. time-management vs. stress management) mixed repeated-measures ANOVA demonstrated a significant three-way interaction $F(1, 316) = 9.16$, $p = .003$, $\eta_p^2 = .03$.

Study 3 evaluates whether money (vs. time) scarce consumers’ defensiveness toward financial advice can be mitigated through message framing. This study used a 2 (scarcity: money scarcity vs. time scarcity) \times 2 (message framing: stressed vs. strapped) between-subjects design. The analysis revealed a significant interaction between the scarcity and message framing ($F(1, 833) = 4.11$, $p = .04$, $\eta_p^2 = .005$), and a significant interaction between the scarcity and message framing ($F(1, 833) = 6.43$, $p = .011$, $\eta_p^2 = .008$). Moderated mediation analysis showed a significant result ($B = .33$, $SE = .16$, 95% CI = $[.004, .654]$).

In study 4, we used a 2 (scarcity: money scarcity vs. time scarcity) \times 2 (message framing: stressed vs. strapped) \times personal relevance between-subjects design. Phase 1 consisted of a survey measuring the financial advice relevance. Phase two study was carried out one week later. The procedure of phase 2 was identical to that of study 3. The three-way interaction (Model 3, Hayes 2017) was significant ($B = .51$, $SE = .24$, $t = 2.11$, $p = .036$). Consistent with our prediction, when the relevance is low (-1 SD), interaction between scarcity and message framing was not significant ($F(1, 326) = .22$, $p = .64$). However, when the relevance was high (+1 SD), the interaction between scarcity and message framing was significant ($F(1, 326) = 13.24$, $p < .001$).

Our findings suggest that feeling money scarcity is a negative state that makes people act defensively toward financial advice, which is perceived as a further threat. We test this notion by comparing money scarcity with time scarcity, which is a relatively less aversive state than money scarcity. Furthermore, this research reveals that money scarcity can be moderated.

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Can Patently “False” Labels Cancel the Harmful Effects of Corporate Fake News?

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EXTENDED ABSTRACT

This research investigates fact-checking measures inoculating consumers against fake news threatening brands. First, it identifies that the ambiguity of current labeling countermeasures is harmful to the targeted brands. More importantly, it shows that less-ambiguous fact-checking labels can be beneficial in overturning the adverse consequences of fake news into attitudinal resistance.

Fake news threatens brands of all sizes, causing them to lose profit and reputation, but despite numerous real-life incidents (e.g., United Airlines, McDonald’s, Starbucks, Pepsi), the research overlooks downstream marketing consequences of fake news. There is a reasonable analogy between the spread of fake news and viruses (Kucharski 2016) as fake news, defined as verifiably false news articles (Allcott and Gentzkow 2017), circulates six times faster than real news on social media (Vosoughi, Roy, and Aral 2018), creating the urgency of inoculating people against fake news. However, this is not easy, as people are more likely to start believing fake news the more often they see it, the so-called illusory truth effect (ITE) (Pennycook, Cannon, and Rand 2018).

Although fact-checking is increasingly prevalent in the fight against fake news, the recent evidence hints that widely-used fact-checking measure (“disputed by third-party fact-checkers”) has severe shortcomings in preventing the ITE (Pennycook et al., 2018), and its impact on the downstream marketing consequences is unknown. Seemingly, its inefficiency lies in the ambiguity of the label. Building on the inoculation theory (McGuire 1964), this research investigates (un)ambiguity of the fact-checking labels in generating resistance to fake news persuasion. In a series of experiments, we contrast ambiguous (“disputed”) vs. unambiguous (“false”) labels attached to corporate fake news and assess their potency in preventing biased judgments for the next time consumers see fake news without any help from those labels.

Study 1 (N=1400, Prolific) utilizes a 2x3 mixed design experiment with the fake news exposure (repeated vs. novel) manipulated as a within-subject factor and label (no-label, “disputed”, “false”) manipulated as a between-subjects factor. Repeated news had the label manipulation to assess the effect of labels on the next unlabeled exposure to the same fake news. Participants rated accuracy judgments (1=“not at all accurate”, 4=“very accurate”) and brand evaluations (1=“negative”, 7=“positive”) about several corporate fake news denigrating well-known brands. We find that the “false” label does not only eliminate the ITE but also overturns the harmful impact of repeated fake news exposure to an immunizer as it reduces the accuracy perceptions for the next time participants come across the same fake news ($M_{\text{repeated}}=1.77$ vs. $M_{\text{novel}}=2.02$, $p < .001$). Also, it prevents the drop in brand evaluations better than the widely-adopted “disputed” label ($M_{\text{false}}=3.83$ vs. $M_{\text{disputed}}=3.65$, $p = .010$), while the “disputed” label is not different from not labeling fake news at all ($p = .522$). Furthermore, accuracy judgments restrict brand evaluations ($B = -.36$, $SE = .05$, $p < .001$). Study 2 (N=994, Prolific) demonstrates that inoculation with a “false” label can endure over time, as the same results hold even three days after the first exposure to the fake news.

Study 3 (N=134, undergraduate students) shifts the focus to actual behavior. In a behavioral lab, after repeatedly being exposed to fake news, participants chose among four connected watch brands, one of which was denigrated by fake news at the earlier stage of the experiment. On top of confirming our previous findings, we find that the “false” label leads to a higher choice rate of the victim brand (40.9%) than the “disputed” label (33.3%). Also, the choice of the victim brand is guided by brand evaluations ($B = .47$, $SE = .15$, $p = .002$), which is shaped by perceived accuracy ($B = -.52$, $SE = .14$, $p < .001$). We observe this indirect effect only for the “false” label (vs. unlabeled, $B = .12$, $SE = .09$, $CI_{95\%}$ does not include 0) but not for the “disputed” label (vs. unlabeled, $B = .08$, $SE = .07$, $CI_{95\%}$ includes 0).

Study 4 (N=888, Prolific) includes brand reactions by contrasting different strategic approaches about how they can counter fake news. Specifically, we explore whether removing fake news is better for victim brands than labeling. We manipulated the victim brand’s social media response: the brand denied the fake news either (i) when fake news is removed, (ii) “false” labeled, or (iii) unlabeled. We confirm the previously observed inoculation effect of the “false” label as it reduces accuracy perceptions when news is not removed ($M_{\text{unlabeled}}=33.36$ vs. $M_{\text{false}}=17.23$, $p < .001$), but removing the news later cancels this initial inoculation effect of the “false” label ($M_{\text{unlabeled}}=32.20$ vs. $M_{\text{false}}=31.04$, $p = .751$). We do not observe a significant effect on brand evaluations; effects are predominant in accuracy perceptions.

Our research provides important implications. First, we identify the ambiguity of current measures as a problem for eliminating ITE and brand-related responses. We show that unambiguous labels inhibit the ITE more effectively and can even be beneficial to overturn adverse consequences into attitudinal resistance the next time consumers see the same fake news. Second, and relevant for managers, we demonstrate that this imprint on brands has a lasting effect and is even detectable some days after being aware of fake news. Third, for the first time, this research sheds light on the downstream consequences of fake news on brands. Even when consumers notice that news denigrating a brand is fake, seeing such a message next time inflates not only their accuracy judgments but also lowers their brand evaluations and choices. Remarkably, the label widely used by social media platforms (“disputed”) seems to prevent distorted accuracy judgments but provides no additional benefit of inoculation. Our findings are generalizable to various brands from various industries (consumer goods, digital platforms, fashion, retailing) as each study tests several factually false news, all having unique denigrating content (e.g., about moral issues, product safety). We also suggest that the strategy of removing fake news has to be employed cautiously because removing also implies eliminating a cue that could otherwise generate resistance to fake news persuasion.

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Motivated Fake News: Understanding how ideology and competitive context influence misinformative posts on social media

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EXTENDED ABSTRACT

We investigate how context motivates people to post misinformation on social media. In four field and lab studies, we find that in a competitive context, conservatives (vs. liberals) tend to post more political misinformation because of higher motivated ingroup favoritism. A cooperative context nullifies this effect.

As the most profound type of misinformation, political misinformation is spread by both political conservatives and liberals (Vosoughi, Roy, and Aral, 2018; Hochschild and Einstein, 2015). However, who is more likely to post political misinformation online; political conservatives or liberals? Past research on political misinformation has mainly focused on why people believe political misinformation (Tucker et al., 2018), neglecting consumers' active role in political misinformation spread. Furthermore, while there has been some research on how consumers' political ideology impacts general misinformation sharing (Jost et al., 2018; Grinberg et al., 2019), virtually none of that research has addressed the sharing of political misinformation. In addition, the limited research on how political ideology may affect the spread of political misinformation (Pennycook and Rand, 2019; Osmundsen et al., 2021) has overlooked possible contextual factors that may motivate liberals and conservatives to engage in this behavior. Despite the prevalence of competitive contexts that both conservatives and liberals experience (Green-Pedersen, 2007), its impact on posting political misinformation has been neglected in the literature. Thus, in this research, we investigate how and why a competitive context may impact people's posting of political misinformation on social media. Our predictions are as follows:

Hypothesis 1: In a competitive context, conservatives (vs. liberals) will be more likely to post negative political misinformation; while in a cooperative context, conservatives and liberals will be equally likely to post negative political misinformation.

Hypothesis 2: Motivated ingroup favoritism will mediate the effects of political ideology and competitive context on the posting of political misinformation. In a competitive context, conservatives (vs. liberals) will be more likely to post negative political misinformation because of conservatives' higher ingroup favoritism, but this mediating effect will be weakened in a cooperative context.

In a pre-study, we explored the prevalence of competitive contexts in political discussions between conservatives and liberals. Using secondary datasets from the Pew Research Center (2019, 2020), we found that U.S. conservatives and liberals were highly divided and therefore competitive in 11 of the 13 political contexts studied, such as whether to increase government spending on health care ($p < 0.001$) and education ($p < 0.001$). The two groups agreed in only two contexts: spending on veteran benefits (between-group difference, $p = 0.947$) and on combatting the federal budget deficit ($p = 0.599$).

Study 1 examined how political ideology and discussion context competitiveness affected post misinformativeness. We used a public dataset called LIAR (Wang, 2017), which contained political posts from 2007 to 2016 that were compiled by a fact-checking website (PolitiFact.com). All statements were rated on a 6-level scale that ranged from "true" for accurate posts to "pants-on-fire" for highly misinformative

posts. Based on our pre-study, we identified posts from this website that represented known competitive contexts (e.g., that supported spending on healthcare) or cooperative contexts (e.g., that supported spending on veterans), which amounted to 3532 posts. As predicted, conservatives' posts were more misinformative than those of liberals in the competitive contexts ($p < 0.001$), while the misinformativeness of posts was comparable for liberals and conservatives in the cooperative contexts ($p = 0.133$).

Study 2 also used actual posts but shed light on the underlying mechanism. We scraped public posts from both a conservative Facebook group and a liberal Facebook group that were posted between January 2020 and June 2021. This period encompassed both a highly competitive political context, the U.S. presidential election, and a more cooperative political context in which congressional conservatives and liberals reached numerous agreements related to the COVID pandemic (Galston, 2020). Two researchers working independently coded whether each post contained political misinformation (1) or not (0), agreement = 90.61%. Ingroup favoritism conveyed in the posts, the posited mediator, was analyzed using the automated textual analysis software LIWC (Sterling et al., 2020). In the competitive context, conservatives had stronger ingroup favoritism ($p < 0.001$) and, moreover, posted significantly more political misinformative information than did liberals ($p < 0.001$). However, in the cooperative context, liberals and conservatives expressed similar levels of ingroup favoritism ($p = 0.219$) and, moreover, posted similar amounts of political misinformation ($p = 0.935$). The index of moderated mediation was significant (95%CI 0.0005, 0.0539), indicating that the mediating effect of ingroup favoritism was stronger in the competitive context than in the cooperative context.

In study 3, we conducted a lab experiment using a 2 (political ideology, between-subjects) x 2 (context, within-subjects) mixed design. Participants indicated their political ideology and then read two misinformative attack posts based on their ideology, one representing a competitive context (the U.S. election) and the other representing a cooperative context (the COVID pandemic), in random order. After reading each post, participants indicated their intention to make similar posts, their ingroup favoritism (Scheepers et al., 2003; Chen and Kirmani, 2015), and the perceived competitiveness of context as a manipulation check. The manipulation was successful. In addition, in the competitive context, conservatives reported greater ingroup favoritism ($p = 0.048$) and a higher intention to post misinformation than did liberals ($p = 0.014$). In contrast, in the cooperative context, liberals and conservatives did not differ in their ingroup favoritism ($p = 0.817$) nor in their intention to post political misinformation ($p = 0.256$). The mediation results showed that ingroup favoritism only mediated the effect of political ideology on the intention to post political misinformation in the competitive context (95% CI .0024, 1.0248), not in the cooperative context (95% CI -.2006, .8059).

To summarize, this research finds that conservatives (vs. liberals) experienced higher ingroup favoritism in competitive contexts and, therefore, posted more political misinformation to attack opponents. In contrast, in cooperative contexts, conservatives and liberals experienced similar ingroup favoritism, and their intentions to post political misinformation did not differ. This research provides several theoretical insights for the literature as well as managerial implications for the public, as we strive to understand the pervasiveness of political misinformation spread in today's highly polarized political environment.

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Barriers to social change: Unconscious complicity and a distributed form of power woven throughout the social space

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EXTENDED ABSTRACT

Social movements face significant barriers to change. One barrier lies in the clash of tacit understandings that stem from everyday interactions between people with differently configured habitus(es). We illustrate the emotional frictions that stem from such clashes by analyzing reader comments in response to newspaper articles on the #MeToo movement.

We draw on reader comments in response to 55 New York Times articles where the #MeToo social movement was the central subject of the story. Many comments exhibit sympathy, support and understanding. Others exhibit skepticism and hostility. Overall, we saw an ideological battleground. In the #MeToo case there have been numerous references to adversarial reactions, typically framed as “backlash” (Hillstrom 2019). The term was first coined by Faludi (1991) in her book “Backlash” which examined hostile reactions by conservatives to feminist advances across the 1960-70’s. In a recent interview Faludi was asked if she felt that a similar backlash was happening post #MeToo. Her response was in the affirmative; “The assault on women’s rights and feminist gains is loud and clear, and embodied in one obvious figure of fury: Hard to imagine a backlash expressed more literally than in Donald Trump’s reflexive need to humiliate and attack any strong women who challenges him” (Faludi et al. 2020, p. 337). Here Faludi identifies associations between ideological stance, emotionally charged dispositions and the resulting (political) actions that impede goals of women’s social movements.

In this paper, we focus on the cultural mechanisms that retard the advancement of social movements through an analysis of reader comments, which reveal a range of morally charged opinions. We employ Bourdieu’s (1984) theory of social practice to explore the distribution of power across the social space. We demonstrate how emotionally charged social interactions (dis)empower in an unconsciously shared complicity that impedes social change. We argue that this complicity is not simply reducible to two opposing parties that divide into advocates and adversaries. Rather, this unconscious complicity is woven into the social fabric.

METHODS

We drew down the entire body of reader comment text that were posted in response to the 55 articles published in the NYT between October 2017 and October 2019. The final data set comprises 26,000 comments posted by 12,646 commenters. The total corpus word count was 1,857,883 words. We then employed a mix of qualitative and quantitative approaches. First, we employed the text mining suite of tools—Voyant—to explore the text (see voyant-tools.org). We next employed Word-Network Topic Modelling WNTM (Zuo, Zhao and Xu 2016). We followed the technical specification for WNTM detailed in Zuo et al. (2016). Following multiple runs, we settled on a six-topic version. We then iteratively moved between text and Bourdieusian theory to examine the question as to barriers of unconscious complicity faced by the #MeToo social movement.

FINDINGS

The six topics include: Topic 1 - The casting couch metaphor: Focusses on discussion of cultural norms in the film industry. Topic 2 – Justice and due process: Focusses on justice for those accused of as-

sault, rape and harassment. However, others are more concerned about the possibility of false accusations and trial by media. Topic 3 – Speaking out (or not): Focuses on people either speaking out or remaining silent on rape and harassment. A variety of opinions range from credit for speaking out or being blamed for remaining silent. Topic 4 – Polarized political positions: Focuses on disparaging opposing political parties which involve accusations of hypocrisy on the part of opposing party’s political leaders. Topic 5 – Experiences of female readers: Commenters describing their past experiences of sexual harassment in workplaces. Topic 6 – Abuse of power: Features references to exercise of power. Opinions as to power abuse spans Hollywood, the wider workplace and broader society.

DISCUSSION

The foundational idea of Bourdieu’s habitus stems from repetitive performance. Dispositions and preferences generate patterns of behavior in which we feel a natural and comfortable fit. These patterns of behavior encompass our daily social interactions, which vary in terms of the level of distinction endowed on those with whom we interact (Probyn 2004). We behave in ways that convey deference to some and fear of others. We feel a sense of comfort around our equals and disdain for others. Similarly, those with whom we interact, also respond in a like way based on relative distinction. These repetitively performed behaviors across social interactions reinforce such behavior; and take on an unconsciously performed character. For example, Harvey Weinstein expressed bemusement as to his wrongdoing, even after he was convicted (Ransom 2020). He had become used to being lauded and fawned upon by those around him. Others reacted with fear and deference at his power position. His pattern of behavior saw him regularly being rewarded and reinforced by the reactions of others. This applied to most all the people working in the Hollywood sphere and, also applied in the wider social and political environment that Weinstein inhabited. Similarly, deferential behaviors of those seeking to accrue distinction are also reinforced with repeated performance of deference. The following reader comment goes some way in expressing unconscious complicity born: “Most of us don’t tell. Not because we’re protecting a career. Just because telling and being doubted, is worse than keeping quiet. You’re not even aware that you’re a part of the problem.”

We illustrate how cycles of emotionally-based actions and reactions are embedded across everyday life; and operate across the social space. We argue that a form of power resides within and across the cycle of interactions and that this power can be likened to the sum of the threads that bind a tapestry. The sum of the interactions that trigger the myriad of everyday emotional reactions can be thought of as the threads that hold a society together in a stable manner. Such stability works against those that seek social change. Our analysis of power reveals that a characterization which polarizes imagined opponents into a simple struggle between advocates and adversaries is illusionary. This characterization of power spotlights the self-sustaining nature of social systems. This is not to say that social change does not happen, but it demonstrates how desired progress of social movements can be retarded. This is evident in the case of movements seeking to promote gender equality where well-publicized backlash is translating into concerted actions to wind back hard-fought gains (Faludi et. al 2020).

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Closing the Attitude-Behavior Gap: A Novel Measure to Predict Ethical Consumption

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EXTENDED ABSTRACT

An attitude-behavior gap in ethical consumption presents a pervasive challenge to socially responsible marketing. In response, this research seeks to develop a novel tool measuring consumers' *implicit* ethical consumerism. Through rigorous development, findings show that our implicit measure (based in the Affect Misattribution Procedure) predicts ethical consumption beyond explicit attitudes.

Consuming ethically is socially desirable and reporting favorable attitudes does not incur any personal cost. Thus, consumers have incentives to explicitly state their favorable attitudes and intentions toward ethical products despite a host of barriers to actual purchase. This attitude-behavior gap in ethical consumption presents a pervasive challenge to the theory and practice of socially responsible marketing. A litany of theoretical explanations for this gap in ethical consumption has been offered. This research seeks to draw from these existing explanations and—based on extant research in psychometrics and the psychology of attitudes—develop a novel measurement tool based on the Affect Misattribution Procedure (AMP). We aim to capture consumers' *implicit* ethical product attitudes which have otherwise evaded marketing practitioners and scholars. Further, the current research examines the predictive power of this measurement tool in predicting consequential ethical consumption choices.

Study 1

A pretest recruited 98 US residents from Prolific to rate 20 ethical product labels in terms of ethicality and familiarity (1=Not at all ethical/familiar, 9=Highly ethical/familiar). We summed these ratings for each label into an index and retained the five top-rated labels: *Rainforest Alliance Certified*, *Free Range*, *Fair Trade*, *Cruelty Free*, and *Forest Stewardship Council (FSC) Certified*. The main study (N=366) presented a modified AMP including these ethical labels and five common non-ethical product labels for control. Each label was displayed for 1 second, followed by a randomly selected Chinese pictograph, followed by a gray square with a single item below asking participants to rate the visual pleasantness of the Chinese pictograph (1=Very unpleasant, 6=Very pleasant). Participants' average ratings following the five ethical labels should represent an implicit measure of ethical consumerism. Participants also responded to measures of explicit ethical consumerism and socially desirable responding. Lastly, participants engaged in a shopping task where they used a Prolific bonus to choose between ethical and non-ethical versions of four product. Each ethical (non-ethical) choice was scored as 1 (0), creating an index of ethical purchase (range: 0–4). Participants were informed that they would be entered into a drawing to receive the products they chose.

The main analysis employed hierarchical linear regression, treating the ethical purchase index as the dependent variable. At step 1, only implicit ethical consumerism was entered as a predictor, and results showed a positive significant effect ($\beta=.23, p<.001$). At step 2, we entered the average implicit scores associated with the non-ethical labels as a predictor ($\beta=.11, p=.08$), and implicit ethical consumerism remained significant ($\beta=.18, p=.003$). At step 3, we added the two method factors pertaining to the randomization of Chinese pictographs (both $ps>.15$) and social desirability ($p=.79$), and implicit ethical consumerism's effect remained ($\beta=.17, p=.004$). Lastly, at step 4, we added the explicit ethical consumerism item ($\beta=.41, p<.001$), and the effect of our implicit measure remained significant ($\beta=.14, p=.01$). Overall, these results suggest that our implicit measure predicts consequential

choices in an ethical (vs. non-ethical) product purchase task over and above the effect of an explicit measure. Moreover, our study suggests that the implicit measure's effect is robust to method factors and socially desirable responding.

Study 2

Study 2 included a more behavioral measure of ethical consumption and tested our measure's effects among consumers in Italy. We repeated the pretest procedure among 70 Italian consumers recruited from Prolific. Participants rated a series of eight actual ethical labels in terms of familiarity and ethicality. These two ratings were summed for each label and sorted in descending order, and the five labels rated most highly were retained for the main study: *Consumo Energetico A+++*, *Cartone Riciclabile*, *Confezione Riciclabile*, *Legambiente*, and *Plastica in meno*.

Participants in the main study (N=414), as before, completed our modified AMP, the four-item explicit ethical consumerism scale ($\alpha=.87$), and the Social Desirability Scale, in randomized order. Next, a product search task was presented in which participants imagined themselves considering options of a popular Italian delivery service, Just Eat. They were told that six service options would be displayed, one at a time, in order from least to most environmentally friendly. For each option, participants chose whether to continue learning about the subsequent options or to stop searching and skip to the end. Because participants knew that the latter options were more ethical, their search effort (operationalized as the number of times they chose to continue searching, ranging from 0–5) represented a behavioral measure of ethical consumption. In addition, search effort was consequential because Prolific participants are motivated to complete each study as quickly as possible.

A hierarchical linear regression was conducted, treating search effort as the dependent variable. At step 1, only implicit ethical consumerism was entered as a predictor, and results further support its predictive validity via a positive significant effect ($\beta=.13, p=.008$). At step 2, we added the two method factors ("set" and "type") pertaining to the randomization of Chinese pictographs (both $ps>.18$) as well as social desirability ($p=.15$), and implicit ethical consumerism's effect remained significant ($\beta=.12, p=.02$). Lastly, at step 3, we added the explicit ethical consumerism scale which served as only a marginally significant predictor ($\beta=.09, p=.09$), whereas the effect of the implicit measure remained significant ($\beta=.10, p=.049$).

DISCUSSION

The attitude-behavior gap in ethical consumption presents a pervasive challenge to socially responsible marketing. The current research, informed by literatures in ethical consumption and the psychology of attitudes, offers a novel measurement tool aimed at capturing consumers' *implicit* ethical product attitudes which have otherwise evaded marketing practitioners and scholars. Through a rigorous development process, findings across two national contexts converge to show that our implicit measure predicts ethical consumption beyond the effects of other variables, including explicit attitudes. Further, our AMP-based implicit measure is relatively easy for researchers to implement using standard survey software and basic regression analyses.

One limitation of this research is that, while results showed the unique (study 1) and superior (study 2) predictive power of the implicit measure, our studies were not conducted in a field setting. Although the tasks were designed to be consequential, participants were still aware that they were participating in a research study.

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Sentimental Value: Use it & Grow it

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EXTENDED ABSTRACT

Three studies demonstrate that the usage of sentimentally valuable possessions causes the sentimental value imbued in those possessions to increase over time. Process evidence suggests that this happens because repeated-use causes the object's source of sentimental value to be more highly integrated with the owner's self-concept.

Sentimental value stems from an object's association with a special event, time, or person in a consumer's life, and as a result, objects with sentimental value are cherished greatly by their owners (Yang and Galak 2014; Givi and Galak 2017). Sentimental value generally does not wane over time (Yang and Galak 2015); however, it is unclear as to what factors might systematically stimulate its growth.

Past literature suggests that as a consequence of the great emotional value attached to sentimentally valuable objects, consumers often avoid using them in an effort to protect the object and/or the memories it is associated with (Belk 1995; Zauberan et al., 2009). For example, a consumer who bought an engraved ceramic bowl while on vacation may choose to simply display it above his/her/their fireplace as a decorative piece rather than regularly using it to warm up his/her/their afternoon soup. We empirically confirmed this with a pilot study, which found that consumers are far less likely to actively use their sentimentally valuable items as compared to their other possessions (all p 's < .001).

We propose that this tendency to avoid using sentimentally valuable objects causes consumers to miss out on an opportunity to naturally grow their objects' sentimental value over time. This notion stems from the idea that that repeated-usage of a possession can self-signal one's identity based on the characteristics of the possession (O'Brien 2021). For example, a person who always has his/her/their morning cup of coffee from a mug that portrays the logo of his/her/their alma mater may more greatly identify with his/her/their alma mater over time. As people repeatedly interact with sentimentally valuable objects, the object's associations (i.e., the object's source of sentimental value) become a more salient characteristic as compared to its benefit-based features (Yang and Galak 2015). These two points suggest that repetitive use of a sentimentally valuable object can self-signal to the user that the associations the possession holds are more tightly knit to his/her/their identity, which subsequently enhances the object's sentimental value over time. We tested this hypothesis in two studies.

In study 1 we operationalized participant's most recently purchased souvenir as their sentimentally valuable possession due to souvenirs having the inherent purpose of being a memento of a special place/time and being a commonly used example of a sentimentally valuable possession in past work (e.g., Belk 1991; Yang and Galak 2015). We first measured the sentimental value imbued in the souvenir (1) at the time it was acquired, and (2) in the present moment. This was followed by a measure of usage frequency, which served as our independent variable. A repeated measures ANOVA with sentimental value over time (sentimental value at the time of acquiring vs. sentimental value in the present) as a within-subjects factor and usage frequency as a measured continuous predictor revealed that the only significant effect was the two-way interaction between usage frequency and sentimental value over time ($F(1, 113) = 4.42, p = .04$). Contrasts revealed that high usage frequency led the object

to have higher sentimental value in the present ($M = 5.09$) than the sentimental value the object had at the time of acquiring ($M = 4.53; t(113) = 2.56, p = .01$). However, when there is low usage frequency, we found no such difference between the object's sentimental value in the present ($M = 4.39$) and sentimental value at the time of acquiring ($M = 4.30; t(113) = .41, p = .68$). In sum, this pattern of results provides evidence of a link between the usage of sentimentally valuable objects and the growth of sentimental value over time.

Study 2 was preregistered on aspredicted.org (https://aspredicted.org/DXN_NIR). We repeated the first part of study 1 by asking participants to share with us their most recently purchased souvenir. The dependent measure tapped into the change in sentimental value of the souvenir by asking whether sentimental value had increased, decreased, or remained the same since the initial purchase (1 = much less now, 7 = much more now). We measured the proposed mediator with three items that asked whether the time/place the souvenir is associated with had become more closely integrated with the owner's self-concept over time. Finally, consumers were presented with the same independent variable from study 1, which asked about how frequently participants actively used the souvenir.

Basic Effect. We conducted a regression analysis in which we inserted usage frequency as the predictor and inserted change in sentimental value as the dependent variable. Our analysis found that usage frequency has a strong positive relationship with change in sentimental value ($b = .21, t = 3.27, p < .01$).

Process Evidence. We averaged the mediator items to create a self-concept integration index ($\alpha = .87$). Next, we conducted a mediation analysis using model 4 of Hayes's PROCESS macro estimate the indirect effects. Usage frequency was entered as the independent variable, change in sentimental value was entered as the dependent variable, and the self-concept integration index was entered as the mediating variable. The analysis revealed that the self-concept integration index yielded an indirect effect with a confidence interval that did not contain zero (LLCI = .0336, ULCI = .1473), indicating a significant mediating pathway for this model. In addition, the direct effect was non-significant (LLCI = -.0107, ULCI = .1550), suggesting strong mediation.

Taken in tandem, these studies provide evidence for core effect by demonstrating that greater usage frequency leads sentimental value to grow over time. Our process evidence suggests this occurs because repeated-use leads owners to integrate the association the object holds into their self-concept. Thus, it seems consumers' lay inclination to avoid regular-use of sentimentally valuable objects is causing them to miss out on an opportunity to organically grow the object's sentimental value, and by doing so failing to maximize the value (Liu et al. 2020; Yang and Galak 2014) and other benefits that could be derived from such objects (Belk 1991; Coleman and Wiles 2020; Curasi et al. 2004; Grossman and Rahinel 2022; Price et al. 2000; Yang and Galak 2015).

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Using Benchmarks to Mitigate Overhead Aversion and Increase Donations

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EXTENDED ABSTRACT

Donors avoid charities with high operational expenses (“overhead aversion”). Four preregistered studies demonstrate that benchmarking (i.e., providing the average overhead of similar charities) mitigates overhead aversion and increases donations, by increasing perceived charity efficiency. We add to prior work on the drivers of overhead aversion and provide guidelines for charities.

A major hindrance for charitable donations is *overhead aversion* - the tendency to donate less to charities that have high overhead costs (e.g., Gneezy, Keenan, & Gneezy, 2014). Although such overhead costs are often unavoidable, donors think of them as “a diversion of funds from program expenses” (Tinkelman & Mankaney, 2007, p. 42). This is problematic as overhead aversion can ultimately lead charities to underinvest in their organizational infrastructure (Gregory & Howard, 2009) and render them less effective in the long run (Lecy & Searing, 2015).

In this research, we argue that overhead may not be inherently aversive and that overhead related information can be strategically disclosed to create a competitive edge for certain charities, because what matters to donors may not be the charity’s overhead ratio, per se, but rather how low its overhead is, relative to peer charities. In four preregistered studies (<https://researchbox.org/553&PEER-REVIEW-passcode=RHQFUM>), we reveal a novel, simple, and effective strategy - benchmarking (i.e., providing the average overhead of similar charities) - to increase donations, while also considering donor perceptions of charity efficiency as a driver of overhead aversion.

Study 1 ($N = 398$) tested whether providing an overhead benchmark that is higher than a given charity’s overhead increases donations to that charity. As predicted, providing a high (50%) overhead benchmark ($M = 5.16$; $SD = 1.21$) had a positive and significant effect on willingness to donate, compared to both an equal (30%) benchmark ($M = 4.80$; $SD = 1.25$), $t(265) = 2.36$, $p = .019$, $d = .29$, and a low (10%) benchmark ($M = 4.65$; $SD = 1.36$), $t(263) = 3.22$, $p = .001$, $d = .40$. The equal and low benchmark conditions did not differ significantly, $t(262) = .95$, $p = .341$, $d = .12$.

Study 2 ($N = 200$) tested whether perceived charity efficiency mediates the effect of an overhead benchmark on donations, while also measuring perceived personal impact for comparison. As predicted, willingness to donate was higher when the benchmark overhead was 50% (i.e., high benchmark; $M = 4.82$; $SD = 1.29$) than when it was 20% (i.e., low benchmark; $M = 3.25$; $SD = 1.48$), $t(199) = 8.00$, $p < .001$, $d = 1.13$. Importantly, the effect of benchmarking on willingness to donate was significantly mediated by not only perceived personal impact, $B = .53$, $SE = .13$, $CI95 = (.30, .80)$, but also perceived charity efficiency, $B = .48$, $SE = .17$, $CI95 = (.17, .85)$.

Study 3 ($N = 200$) tested incentive compatible whether benchmarking can reverse overhead aversion, while pitting perceived charity efficiency against personal impact. Participants viewed two charities (i.e., Kids Korps and charity:water), which were randomly assigned across “low overhead (=15%), lower benchmark (=5%)” and “high overhead (=25%), higher benchmark (=35%)” conditions, and were asked to choose which should receive a \$100 donation. As predicted, significantly more participants (64%) chose to donate the \$100 to the high overhead, higher benchmark charity than to the low overhead, lower benchmark charity, $\chi^2(1, 200) = 15.68$, $p < .001$, d

$= .59$. Remarkably, people chose to donate to the charity with higher overhead costs, indicating that they made their choices based on (relative) charity efficiency rather than (absolute) personal impact.

Study 4 ($N = 600$) tested in a more comprehensive manner the effect of benchmarking via perceived charity efficiency. As predicted, a 2 (overhead) \times 2 (benchmarking) ANOVA on willingness to donate revealed that overhead and benchmarking had a significant interaction effect on willingness to donate, $F(1, 596) = 20.89$, $p < .001$. In the control condition, when there was no benchmark, willingness to donate was higher with low overhead ($M = 5.25$; $SD = 1.22$) than with high overhead ($M = 4.89$; $SD = 1.37$), $t(298) = 2.42$, $p = .016$, $d = .28$, demonstrating overhead aversion. In contrast, when the benchmarks were provided, willingness to donate was higher in the high overhead-higher benchmark condition ($M = 5.07$; $SD = 1.28$) than in the low overhead-lower benchmark condition ($M = 4.42$; $SD = 1.55$), $t(298) = 3.97$, $p < .001$, $d = .46$. The index of moderated mediation was significant for both personal impact, $B = .20$, $SE = .08$, $CI95 = (.06, .36)$, and charity efficiency, $B = .53$, $SE = .12$, $CI95 = (.31, .77)$. In the control conditions, both personal impact, $B = -.11$, $SE = .05$, $CI95 = (-.22, -.02)$, and charity efficiency, $B = -.16$, $SE = .07$, $CI95 = (-.31, -.03)$, significantly mediated the effect of overhead ratio on willingness to donate. Importantly, for the present purposes, in the benchmark conditions, charity efficiency significantly mediated the effect of overhead ratio on willingness to donate, $B = .37$, $SE = .08$, $CI95 = (.21, .54)$, but personal impact did not, $B = .09$, $SE = .05$, $CI95 = (-.01, .19)$, demonstrating the role of perceived charity efficiency in underlying overhead aversion.

Our findings point to the role of charity efficiency perceptions and suggest that using benchmarks is an effective strategy to mitigate overhead aversion.

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Production Enjoyment Asymmetrically Impacts Buyers' Willingness to Pay and Sellers' Willingness to Charge

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EXTENDED ABSTRACT

Production enjoyment (the perception that a seller enjoys producing a product/service) increases buyers' willingness to pay (and choice likelihood) and lowers sellers' willingness to charge for the product/service. This asymmetry in pricing judgments occurs because production enjoyment signals high quality to buyers and a lower need for compensation to sellers.

The marketplace has experienced a proliferation of opportunities for buyers and sellers to directly connect and conduct business (e.g., peer-to-peer marketplaces). These buyers can access personal information about sellers, and these sellers can share information about the production processes behind their products or services. We examine the impact of an understudied yet fundamental attribute that sellers can communicate and that both buyers and sellers use to help determine the value of a product or service: the seller's enjoyment of the production process, or *production enjoyment*. We find that buyers are willing to pay *higher* prices for products and services that are high in production enjoyment because of inferences about quality. In contrast, sellers are willing to accept *lower* prices and charge less for products and services high in production enjoyment, because they require compensation for the unpleasant emotional labor invested in the production process.

In study 1, we examined the impact of production enjoyment on buyers' willingness to pay and sellers' willingness to charge for the 100 most common consumer-facing jobs (bls.gov). MTurk participants were randomly assigned to imagine that they needed to hire someone with a particular job (buyer condition) or that they had a particular job (seller condition). For each job, buyers (and sellers) indicated whether they were willing to pay (charge) more if the seller really didn't enjoy doing the work or if the seller really did enjoy doing the work. A paired samples t-test revealed that buyers were willing to pay more for high production enjoyment (relative to low production enjoyment), while sellers were willing to charge less for high production enjoyment (relative to low production enjoyment (job-level analysis $t(99)=41.39, p<.001, d=4.14$).

Study 2 investigates sellers' own jobs and addresses the possibility that the buyer-side results are driven by an increased liking of happy people (Bell 1978). First, sellers with jobs outside of MTurk named their job and one task core to their job that they enjoyed more than other people and one that they enjoyed less. They then indicated the minimum amount of money they would need to be paid per hour to do each task. Sellers' jobs and the two tasks were then yoked to MTurkers who imagined wanting to hire someone to do the tasks, and these buyer-side participants indicated their maximum willingness to pay for each task. Results revealed that buyers were willing to pay more for tasks high (vs. low) in production enjoyment, while sellers were willing to accept less for tasks high (vs. low) in production enjoyment (interaction $F(1,180)=67.38, p<.001, \eta_p^2=.27$).

Study 3 examines the process driving this pricing asymmetry. MTurk participants were randomly assigned in a 2(marketplace role: buyer vs. seller) x 3(enjoyment: high vs. neutral vs. low) between-subjects design. Sellers imagined that they were a local baker who sold brownies while buyers imagined they were buying a brownie from a local baker, and they each read about how much the seller

enjoyed baking brownies. Participants indicated their willingness to pay/accept on a sliding scale from 0 and 5 dollars, and indicated the quality of the brownies and how much compensation is necessary for the baker's experience during the process of making brownies. Again, buyers were willing to pay significantly more for higher enjoyment and sellers were willing to accept significantly less for higher enjoyment (interaction $F(2,1091)=41.18, p<.001, \eta_p^2=.07$). Mediation analyses using the two parallel mechanisms revealed that the positive effect of production enjoyment on buyers' WTP was driven by perceptions of higher quality, and the negative effect of production enjoyment on sellers WTA were driven by perceptions of an increased need for compensation.

Study 4 compares the relative strength of a production enjoyment signal to other information that buyers often have about sellers in the marketplace. We conducted a choice-based conjoint experiment where participants (acting as buyers) viewed information about three photographers and chose their most preferred option, repeated this choice task 12 times. In each trial, the three photographers randomly varied across five different attributes: production enjoyment, effort towards job, number of reviews, amount of advertising, and price (low, high, or no information). A Hierarchical Bayes analysis revealed that production enjoyment was significantly more important than each other attribute for driving choice. Buyers were willing to pay approximately \$40 more for a photographer who enjoys taking photos (vs. the no information control).

In study 5, we conducted a field study through Facebook to examine whether consumer responses to advertising were affected by a seller's mention of high production enjoyment. We created two ads for an SEO specialist and randomly presented one of the two ads to Facebook users associated with small business ownership. In the control condition, the ad read: "Need SEO Help? I have a lot of experience." In the production enjoyment condition, the ad additionally stated, "I really enjoy SEO." Results revealed that the enjoyment ad led to a significantly higher click-through rate (control=.72%, enjoyment=1.01%; $\chi^2(1)=9.47, p=.002$).

The current research demonstrates a novel factor (i.e., production enjoyment) that produces a consequential asymmetry in pricing judgments between buyers and sellers. This work contributes to and connects disparate streams of literature that examine the role of enjoyment in consumer behavior (e.g., Alba and Williams 2013), buyer/seller asymmetries in pricing (e.g., Carmon and Ariely 2000), and how marketplace cues and subsequent inferences guide decision making, especially cues relating to the creation process (e.g., Kirmani and Rao 2000). On a practical level, this work offers guidance for sellers seeking to maximize their profits and reveals how high production enjoyment might lead sellers to miss out on available profit, since it increases buyers' willingness to pay, but instead lowers the prices that sellers charge.

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Describing Rosé: Measuring Consumer Preferences for Hedonic Experiences

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EXTENDED ABSTRACT

We develop an approach to measure preferences whereby anticipated hedonic experiences are presented to participants in written (unstructured) prose, akin to the real-life marketplace. Our method decomposes consumer preferences for experiences into product-attributes shaping these experiences. To illustrate, we present a large-scale study across Australia, New Zealand, and the US.

Many products and services (henceforth, ‘products’) are typically described and presented to consumers in prose. Prominent examples include products that consumers choose, buy, and use primarily for the hedonic consumption experience provided (Holbrook and Hirschman 1982), such as entertainment, travel, and hospitality. As consumer experiences are rich and nuanced, descriptions of these products are best delivered in prose—restaurants describe their ambience, travel operators describe the sight-seeing experience at an exotic locale, and theme parks describe the exhilaration of a roller-coaster ride. Similarly, tasting notes of wines are presented in natural language to capture the sensory experience of wine consumption. In extant methods to measure consumer preferences (e.g., conjoint analysis), hedonic experiences are described to participants and portrayed in the utility model as a list of product attributes (Green et al. 2001; Toubia et al. 2007). This format is also common in many extant consumer decision-making studies, wherein hedonic options are listed by their product attributes in tabular formats (e.g., Chang and Hung 2018).

In this research, we propose a novel approach wherein products are described to participants in natural language, akin to how they are presented to consumers in real-life marketplace. To do so, we construct a novel embeddings-based utility model that incorporate product embeddings and leverage the utility model to analyze participants’ choices of hedonic experiences (described in natural language) to infer their preferences. The model is based on the mathematical theory of an embedding—an injective map (i.e., a one-to-one function) from a set of objects to points on a normed vector space, the axes of which encode important and relevant information about the objects—as applied to products. Our proposed approach is based on prior research in three distinct literatures, including (1) hedonic consumption in consumer behavior, (2) embeddings in computer science and machine learning, and (3) choice modeling in quantitative marketing. Specifically, we propose a two-component approach where we first derive the product embeddings which numerically represent (verbally described) experiences by extracting latent features. Next, we incorporate the product embedding in the utility model to form an embedding-based utility model. We estimate the utility model on participants’ choices to infer preferences.

We use our method to investigate consumer preferences for wines made in 427 wine-growing regions in 44 wine-growing countries, from 708 wine-grape varieties, in Australia, New Zealand, and the United States (henceforth, “US”). In our empirical application, we first obtained a large-scale dataset of wine descriptions with the name, region, country, varietal (or blend), and tasting notes of 119,955 wines from 44 countries. We constructed product embeddings using this product dataset. We compared the performance of three methods in constructing product embeddings: (1) a model with the probabilistic (non-neural) embedding; (2) a model with the feed-forward embedding; and (3) a model with the recurrent embedding. We then conducted three choice experiments among regular wine consumers in three countries—the US, Australia, and New Zea-

land—to demonstrate our proposed method and the generalizability of the approach among English-speaking markets. Participants sequentially evaluated 32 pairs of randomly selected wines and chose their preferred wine in each pair. Each presented wine included its name and a prose description of the tasting experience. To provide a conservative test of our proposed approach, for each participant, the wines were randomly selected from the complete set of tasting experiences of 119,955 wine (which we collected for the product dataset). We estimated utility models based on the three embeddings methods and additionally estimated three benchmark models based on extant research: (a) a benchmark model that includes region, country, and grape varietal fixed effects; (b) a benchmark model with Latent Semantic Analysis (LSA) feature loadings (Eliashberg et al. 2007); and (c) a benchmark model with Latent Dirichlet Allocation (LDA) topic intensities (Toubia et al. 2019). Our findings show that, the model with the recurrent embeddings consistently fits the choice data across the three markets the best (in LOOIC and WAIC); this model also performs best at predicting participants’ choices (highest AUC and the lowest MSE) among all models.

Relative to extant methods, our proposed method can provide three key benefits. First, describing products in prose enhances study realism. Extant consumer behavior studies have shown that presenting the same product information in different formats (e.g., numerically vs. verbally, matrix display vs. written sentences) alters consumers’ decision processes. Therefore, for participant responses in a preference measurement study to reflect real-world behavior, products should be presented in the same manner in a study as they are presented in the real-world marketplace (e.g., Morales, Amir, and Lee 2017).

Second, it enables products to be described in prose, and hence more completely than if they were described using categorical variables (Toubia et al. 2019). For example, it is challenging to construct a categorical system to capture the flavors and sensory properties of all the hedonic experiences (such as wine) available in the market; this is particularly likely for hedonic experiences, as they are characterized by rich, nuanced, and complex sensory descriptions (Chang and Mukherjee 2022). Even if such a categorical system could be derived, it likely would have far too many attributes and attribute-levels to be useful in a self-contained market research study (i.e., curse of dimensionality; pp. 233–237, Toubia et al. 2007b).

Third, it enables a more detailed measurement of consumer preferences. If products are described to participants using categorical variables, there is a natural limit to how many attributes and attribute-levels can be included in a study. While much progress has been made in the development of more efficient study designs including adaptive self-explicated conjoint designs (Netzer and Srinivasan 2011), the use of many categorical attributes increases the amount of required participant data. These issues are particularly salient for products with many nuanced, sensory characteristics (such as wines). Our method facilitates the specification of a much more parsimonious embedding-based utility model, thereby reducing data requirements and enhancing cost-effectiveness.

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Secondbrand Exchange: When Traditional Retail Brands Resell Used Products

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EXTENDED ABSTRACT

This paper explores consumer behavior in the novel context of secondbrand exchange, which is defined as traditional “firsthand” retail brands directly engaging in the reselling of used items. The authors introduce framework of item transformation and connect theory from brand extension and contagion literatures to this circular consumption marketing practice.

INTRODUCTION AND MOTIVATION

Can previously used products ever be “better than new” as Patagonia, an outdoor gear and clothing manufacturer, suggests to consumers on its website? We call this practice secondbrand exchange—when traditional brands directly reselling their own used goods. Rethinking linear consumption patterns, addressing overconsumption, and attempting to mitigate negative environmental impacts, brands as varied as Walmart, Nordstrom, Levi’s, REI, and others make strategic choices about acquisition, transformation, communication and distribution of used products. In this paper, we uncover the theoretical foundations connected to this novel brand strategy, present exploratory descriptive marketplace data, and offer research propositions to investigate the impact on consumer perceptions of the new and used products as well as the brand itself.

The secondhand market is experiencing an exponential rise (thredUP 2020), motivated by the climate change imperative and supported by technological advances and consumers’ shifting preferences (Ertz, Durif, and Arcand 2017). Because the vast majority of research exists within the linear economy paradigm wherein brands make new goods to be sold directly to consumers, these practices are both novel and understudied. This research contributes to the stream focused on circular and more fluid or liquid consumption practices (Bardhi and Eckhardt, 2017), but is distinctly separate from access-based consumption (Bardhi and Eckhardt, 2012) as ownership in secondbrand exchange is transferred.

CONCEPTUAL FOUNDATIONS

Defining Secondbrand Exchange: The Space Between New and Used

Secondhand reselling has existed for centuries in many forms, from flea markets to donation-based providers like Goodwill to for-profit thrift and consignment shops to informal consumer-to-consumer exchange such as classifieds and garage sales. More recently, web and app-based interfaces like Poshmark, thredUP, The RealReal, Depop, StockX, as well as social media-hosted C2C communities have appeared as technological advances break down geographic and logistical barriers. Secondbrand exchanges are defined as those mediated and hosted within one traditional, firsthand retailing brand (Nordstrom vs. thredUP) where the category remains the same (clothing remains clothing vs. clothing altered into recycled packaging). Because secondbrand exchanges are facilitated within one brand landscape, we must consider its differences from both traditional firsthand and secondhand retailers.

We introduce an organizational framework around secondbrand positioning matched with four main consumer motivations for buying secondhand: sustainability, durability, frugality, and fashionability. Another key aspect of secondbrand exchange is product transformation, defined as the magnitude of item change performed by

the secondbrand before resale, ranging from refresh (cleaning and/or merchandising) to renew (refresh+repair or other substantive change) to remake (refresh/renew+full recreation of new item from old item(s)).

Mapping Secondbrand in the Marketplace

To provide a snapshot of current secondbrand exchange activities in the marketplace, exploratory research identified twenty-nine large traditional brands in the online retail space. Some main findings from qualitative coding indicated difficulty in locating the used items (3.59 on a 5-point scale), a common (78%) display of actual (vs stock) item, and most (84%) displayed the new MSRP as a reference price for the used item. Secondbrands most often used sustainability positioning (approximately 2/3 of the brands), followed by durability (21%), and fashionability and frugality being infrequent (both at approximately 7%). Renewal activities were the most common level of product transformation (55%) and remaking was the least (17%). Only 17% engaged in more than one level of transformation. It was very unusual for the brand to share information about previous owners (single instance). Extending from these exploratory findings, we draw theoretical connections in two primary domains: brand extension and contagion.

THEORY DEVELOPMENT

Brand Extension

Brand extension refers to the introduction of new products/services by established brands (Keller and Aaker 1990). The question of whether brand extensions will help or harm parent brands and which factors affect these outcomes has been researched in depth (Aaker and Keller 1990; Keller 2002). The two main factors resulting in brand extension success are quality of the parent brand (Aaker and Keller 1990) and “fit” between the brand category and the extension category (Boush and Loken 1991; Dawar 1996; Herr, Farquhar, and Fazio 1996). In secondbrand exchange, perceptions of similarity may be bolstered based on category match (i.e., both firsthand and secondhand items are apparel) as well as item transformation level (i.e., reducing the perceived difference between new and used items). Further, consumers’ perceptions of fit may be influenced through the match within the four appeal types discussed above, brand position, and target consumers’ motives for shopping secondhand.

Contagion

The Law of Contagion refers to a phenomenon wherein objects transfer certain properties to another object upon coming into contact (Nemeroff and Rozin 1994) and is therefore pertinent to secondhand contexts. Physical contagion refers to perceived contamination through germs, dirt, and other disgusting material (Nemeroff and Rozin 1994), is perceived negatively by consumers, and is an important deterrent to secondhand consumption (e.g., O’Reilly et al. 1984) and driven by disgust and risk (Bezaçon, Guiot and Le Nagard 2019). Magical contagion, in contrast, refers to a transfer of essence from one entity to another and can be perceived as positive or negative depending on whose essence is transferred (Nemeroff and Rozin 1994). Positive magical contagion has been shown to increase the perceived value of items, make them feel more special, and to even imbue the new owner with certain abilities from the previous user (Kramer and Block 2014; Lee et al. 2011; Newman and

Bloom 2014; Newman, Diesendruck, and Bloom 2011). We suggest that it may be possible for secondbrands to strategically enhance positive magical contagion through transference of brand identity or prior owner identity and reduce negative physical contagion through product transformation level, merchandising and presentation/communication choices.

CONTRIBUTIONS AND CONCLUSION

This paper introduces the unique consumer context of second-brand exchange, a second-order market that blurs the line between new and used, entering a perceptual space that must be explored with continued research. After considering the phenomenon itself, presenting a spectrum of item transformation and drawing connections between brand extensions and contagion, we present seven research propositions organized around consumer perceptions of used products, new products and the brand itself.

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Personal Growth is More Enjoyable than Consumers Expect

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EXTENDED ABSTRACT

In ten studies, we demonstrated that growth experiences (i.e., leisure experiences meant to change, develop, or improve oneself) provided more meaning than, and just as much enjoyment as, purely fun experiences. Despite these dual benefits, people expect growth-experiences to be relatively unenjoyable and, consequently, often avoid them.

Imagine its Friday night and you are deciding between attending an improv comedy class and a stand-up comedy show. How should you decide? When making decisions like these, many choose the option they expect will maximize well-being, such as enjoyment (pleasure; Kahneman et al. 1997) or meaningfulness (a sense of purpose, value, and significance; Steger 2018). Thus, your decision might rest on how enjoyable and meaningful you expect each option will be.

Yet, such predictions are often inaccurate, and can produce faulty decisions (Wilson and Gilbert 2003). In this work, we examine how accurately people forecast the enjoyment and meaning they will derive from growth experiences (those meant for self-development, like an improv class; Ryff 1989) and compare these to those of fun experiences (like a stand-up show).

We propose that people underestimate their enjoyment of growth (but not meaningfulness). Growth experiences are designed to highlight gaps in knowledge. Once people notice such gaps, it creates drive-like curiosity that persists until the gap is bridged (Loewenstein 1994), leading them to feel highly absorbed by the experience (Kashdan et al. 2004). However, people often don't realize how drive states like this one will influence their behavior and feelings (Loewenstein 1996). Consequently, they tend to overlook how easily curiosity immerses them in growth experiences. Since engagement is a key driver of enjoyment, this disconnect leads people to underestimate their enjoyment of growth (but not fun). Further, we expect this will lead people to choose fun rather than growth experiences, despite the dual benefits of growth.

In Study 1, we examined the relationships between our constructs of interest. We found a positive relationship between growth and both predicted ($r=.200$, $p=.028$) and actual meaning ($r=.547$, $p<.001$). People expected a negative relationship between growth and enjoyment ($r=-.153$, $p=.095$) but instead, we found no relationship ($r=.039$, $p=.676$), indicating both high and low growth were similarly enjoyable. There was also a negative relationship between growth and purchase likelihood ($r=-.262$, $p=.004$).

In Study 2, we measured expected and actual enjoyment and meaning for the same experience (learning to draw an illusion). Study 2a was within-subjects, 2b measured only post-experience ratings, and 2c was between-subjects. Participants generally correctly predicted meaningfulness (2a: predicted $M=35.04$ v. actual $M=41.31$, $t(185)=5.39$, $p<.001$; 2b: average rating ($M=1.15$) v. midpoint, $t(115)=.64$, $p=.522$; 2c, predictor $M=36.03$ v. experiencer $M=37.96$, $t(195)=.64$, $p=.52$). In contrast, they underestimated enjoyment (2a, predicted $M=51.92$ v. actual $M=64.25$, $t(185)=6.41$, $p<.001$; 2b average rating ($M=16.04$) v. midpoint, $t(115)=8.28$, $p<.001$; 2c, predictor $M=52.74$ v. experiencer $M=60.53$, $t(195)=2.30$, $p=.022$).

In study 3a, we compared growth (documentary films) to fun (comedy films) experiences. While documentaries were considered more meaningful (predicted $M=69.23$; actual $M=76.82$) than comedies (predicted $M=48.92$; actual $M=51.68$), $F(1, 307)=100.15$, $p<.001$, prediction accuracy did not differ by film type ($F<2$). In

contrast, enjoyment accuracy did, $F(2, 614)=2.72$, $p=.067$. Predicted enjoyment of documentaries ($M=58.23$) was lower than actual enjoyment ($M=69.75$, $t(306)=5.22$, $p<.001$) whereas predicted enjoyment of comedies ($M=64.68$) was more similar to actual enjoyment ($M=70.28$), $t(306)=2.37$, $p=.015$).

In study 3b, participants chose which film from study 3a they wanted to watch. More selected a comedy (70.1%) than a documentary (29.9%), $\chi^2=18.88$, $p<.001$, even though the documentaries contributed more to well-being in study 3a.

Study 4 showed that the underestimation of enjoyment of growth (v. fun) was mediated by differences in how easily participants expected to become engaged in the experiences (indirect effect=.53, 95% CI[.15, .94]). Study 5 showed that adding a distraction to a growth experience moderated prediction accuracy, $F(1, 428)=4.70$, $p=.01$. We replicated previous findings in the control condition (predicted $M=5.96$ v. actual $M=6.83$, $F(1, 428)=31.31$, $p<.001$) but found the underestimation of enjoyment was reduced in the distracted condition (predicted $M=5.79$ v. actual $M=6.18$, $F(1, 428)=6.02$, $p=.015$).

In Study 6a we debiased predictions. Participants read an article stating that becoming engaged is easier than expected (v. an unrelated article) before they did the same experience from study 2, $F(1, 407)=5.22$, $p=.023$. We replicated our findings in the unrelated condition (predicted $M=4.98$ v. actual $M=5.69$, $F(1, 407)=25.08$, $p<.001$) but found that predicted enjoyment ($M=5.62$) was more similar to actual enjoyment ($M=5.89$) in the engagement condition, $F(1, 407)=3.69$, $p=.055$.

In Study 6b, we used the same article manipulation and measured participants likelihood of choosing growth (learn to draw activity) versus fun (play a video game). After reading the engagement article, participants rated their likelihood of choosing the growth experience as higher ($M=6.09$) than after reading the control article ($M=4.92$), $t(254)=2.34$, $p=.02$.

We demonstrate that people underestimate enjoyment of growth experiences, which can be both highly meaningful and highly enjoyable. We argue that this error occurs because people overlook how easily they become immersed in growth experiences. Further, this misprediction leads people to avoid growth experiences, preferring more fun experiences despite the dual benefits of growth.

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“It happened to my friend”: How story source and victim characteristics shape consumer responses to stories about marketplace injustice

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EXTENDED ABSTRACT

People often hear stories about marketplace injustice from someone who was not the actual victim. The current work examines how exposure to a story told by one person, that is subsequently revealed to have happened to another person, influences the audience's willingness to take retaliatory action against an offending retailer.

Researchers and practitioners alike agree that telling an engaging story is an effective way to inspire action (Monarath, 2014). However, people routinely tune out messages based on initial judgments of the person communicating the message, particularly in emotionally charged contexts, rendering the message less persuasive (Parks-Stamm et al., 2008). Separately, consumer ethics research has also overlooked the role of storytelling in galvanizing consumer action. Specifically, while prior consumer ethics research has focused on how consumer (Cowan & Yazdanparast, 2021) and business characteristics (Hornsey et al., 2021) influence retaliation behaviors such as boycotts (Hahn & Albert, 2017), whether and how the characteristics of the source of a story of marketplace injustice influence retaliation behavior remains little understood. Addressing this gap in the consumer ethics literature is especially relevant in light of (1) rising concerns about customer ethnic and racial biases (Linzmajer et al., 2020) and (2) the growing prevalence of social media messages about marketplace injustice told by people who are not necessarily the victims of the incident (Chen et al., 2019).

Against this background, the aim of this work is to examine how the race of both the source of and the victim in a story of marketplace injustice influence a consumer audience's desire to retaliate against a focal retailer featured in the story. Three experiments using professionally acted and produced media examine the dynamic interplay of revealing information about the race of a victim (which is separate from that of the story source) *after* exposure to a story. Our findings confirm that both the race of the story source and victim (white vs. black) interact to influence the audience's desire to retaliate (studies 1-3). When the source is black, revealing the victim of the incident (black vs. white) does not lead to significant differences in the audience's willingness to retaliate against discrimination. When the source is white, however, respondents are significantly less likely to support a white victim compared to a black victim. This effect occurs despite exposure to identical story content, is serially mediated by differential levels of victim trustworthiness and ensuing perceptions of moral violation (study 2), and disappears when the victim race is revealed at the beginning (rather than the end) of the story (study 3).

Our research offers two key contributions to existing literature on consumer ethics and injustice in the marketplace. First, we extend current consumer ethics research focusing on consumers' retaliation in response to transgressions. While previous scholarship investigates the role of audience (Cowan & Yazdanparast, 2021) and business characteristics (Hornsey et al. 2021; Russell, Russell & Honea, 2016) in influencing retaliation behaviors, we are the first to focus on consumer-to-consumer transmission of stories about marketplace injustice. In doing so, we demonstrate how specific features of the story source and victim influence the audience's perceptions of moral violation and ensuing vicarious retaliation intentions against the offending service provider. Second, we extend research on service transgressions by unveiling a distinct form of racial bias from that

which is found in customer-employee interactions. Recent research on racial and ethnic bias demonstrates that a white majority of customers is negatively biased toward a non-white minority of employees and reports “less positive behaviors in interethnic service” (Linzmajer et al., 2020, p. 194). Our findings instead demonstrate that the retaliatory intentions individuals develop after being exposed to a story of marketplace injustice depend on the race of both the story source and the victim of the story, such that white audience members are positively biased towards the stories of non-white story sources and victims. Together, these contributions enrich our understanding of how the race of both the source and the victim of a story of marketplace injustice influence intentions to retaliate against the offending service provider, and provide avenues for future research on how to mitigate the responses and regulate communications.

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Extended Warranties Protect the Consumer, Not Only the Product

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EXTENDED ABSTRACT

We propose that consumers experiencing greater choice process induced negative affect wish to avoid repeating the choice experience. They purchase extended warranty plans because it eliminates future product choice for the plan's duration. We discuss practical implications and theoretical implications for research on choice-induced affect and avoidant behavior.

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Product Face Ratios, Stereotypes, and Political Orientation: Field Data on Consumer Evaluations

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EXTENDED ABSTRACT

Prior findings show a positive relationship between a product's facial width-to-height ratio (*fWHR*) and consumers' perceptions of its dominance and evaluations. The current research employs actual car review data and an experiment to replicate this effect, and show that this effect reverses for Asian brands and moderated by political orientation.

Product appearance influences a product's initial impressions and overall evaluations (Hollins and Pugh 1990). Recent research suggests that much like human face width-to-height ratio (*fWHR*): bizygomatic width divided by upper-face height), product *fWHR* too signals dominance. Further, products with high *fWHR* are evaluated positively since dominance traits signal higher status (Maeng and Aggarwal 2018). Given the different racial stereotypes especially the submissive stereotype associated with Asians, prior research shows that dominance ratings of a minority race are suppressed compared to that of the white race (Maeng and Aggarwal 2022). This current research examines if racial stereotypes are also applied to products made by Asian companies and how it affects product evaluations. Finally, prior research notes that people's political orientation affects the extent to which they endorse racial stereotypes (Nosek et al. 2007). Employing field and experimental data, we examine whether the effect of *fWHR* on product evaluations for Asian versus American brands depend upon consumers' political orientation.

STUDY 1

To investigate these effects, data was obtained from a car review website, Cars.com. Data contain the review text, exterior style rating, and the consumer's location. We obtain review data of 34 car models from 16 distinct manufacturers over 15 years via a web-scraper. We also obtain front-facing car images for each model for each year (689 total photos).

Variable Operationalization

Dependent variable for our analysis is reviewers' exterior style ratings assessed on a discrete scale of 1-5 -- e.g., $y_{icyt} \in \{1,2,3,4,5\}$.

Primary independent variables of interest are: car *fWHR*, Asian car branding, and reviewer political orientation. The front-facing car images were annotated with landmarks *a*, *b*, *c*, and *d*. The $fWHR_{cy} = (a-b)/(c-d)$, where the landmarks indicate the left edge (*a*), right edge (*b*), top of the hood (*c*), and undercarriage (*d*).

To investigate the moderating effect of Asian branding on *fWHR* we define a binary variable for a car as $AsianBrand_c = 1$ if $make_c \in \{Toyota, Honda, Hyundai, Lexus, Genesis, Acura\}$ and 0 otherwise, where $make_c$ is the manufacturer of car *c*. To investigate the moderating effect of political orientation on *fWHR*, we define a variable using reviewers' self-reported location information as a proxy for political orientation. $Conservative_i = 1$ if reviewer *i* is located in a conservative-voting state (2016 presidential election).

Control variables. We include a rich set of control variables that may affect consumers' ratings of a car's exterior including review characteristics, car use, and other car specifications.

Empirical Analysis

Effects are investigated via a linear ordered logit model consisting of specific combinations of our defined covariates: $y_{icyt}^* = \beta_1 fWHR_{cy} + \beta_2 fWHR_{cy} \times Conservative_i + \beta_3 fWHR_{cy} \times AsianBrand_c + \beta_4 AsianBrand_c \times conservative_i + \beta_5 fWHR_{cy} \times AsianBrand_c \times Conservative_i + \Gamma X_{icyt} + \eta_i + \omega_{brand} + \nu_{generation} + \Phi_y + \Psi_t + \epsilon_{icyt}$. β_1 captures the main effect of car *fWHR* on the exterior rating y_{icyt} , β_2 captures the moderating effect of political identity, and β_3 captures the moderating effects of Asian branding on *fWHR*. The three-way interaction, β_5 captures the interacting effects of political affiliation, Asian branding, and *fWHR*. X_{icyt} is a vector of control variables; state/brand/generation/time fixed effects are also included.

RESULTS

(a) *The effects of fWHR*. Consistent with prior findings (Maeng and Aggarwal, 2018), our results show that *fWHR* positively affects consumers' evaluations of the car exterior ($\beta_1 = .104; p < .01$). (b) *The effects of political orientation*. Results reveal a significant positive interaction effect ($\beta_2 = .033; p < .01$) between product *fWHR* and preferences among conservatives. (c) *The effects of Asian brands*. Our model reveals a negative interaction effect between *fWHR* x Asian Brand ($\beta_3 = -.685; p < .01$), reversing the overall positive effect of *fWHR* ($\beta_1 = .104; p < .01$). These results provide evidence supporting our hypothesis that stereotypes associated with Asians bias consumer perceptions of Asian car brands. (d) *The effects of Asian branding and political orientation*. We see a significant negative interaction effect ($\beta_5 = -.313; p < .01$) showing that conservatives suppress the dominance cues of Asian-branded product faces more than liberals.

STUDY 2

The purpose of study 2 is three-fold. First, we replicate the effects of study 1 in a controlled experiment to ensure internal validity. Second, we test our hypothesis using individual-level political orientation measures. Finally, we examine the causality of the proposed effects using moderated mediation analysis. The *fWHR* of five automobile front faces were manipulated to high-low levels, yielding a total of 10 automobile faces. 581 M-Turk participants evaluated the automobile faces presented as either Asian or American brands on three liking and three dominance measures as well as participants' political orientation on a 5-item scale (Evans, Heath, & Lalljee, 1996).

Consistent with the results of Study 1, there was a three-way interaction between *fWHR*, Asian brand, and respondents' political orientation ($B = -.09, S.E. = .04, p < .05$). Political conservatives show a larger effect of *fWHR* on the dominance ratings of American brands ($B = .50, 95\% CI [.31, .68]$) than for Asian brands ($B = .23, 95\% CI [.03, .42]$). For liberals, *fWHR* has a larger impact on the dominance ratings of Asian brands ($B = .50, 95\% CI [.32, .68]$) than for American brands ($B = .35, 95\% CI [.16, .54]$). A similar interaction was observed for overall preference ($B = -.12, S.E. = .04, p < .05$), indicating that for conservatives *fWHR* has a significant effect only for American brands ($B = .37, 95\% CI [.15, .58]$) but not for Asian brands ($B = .08, 95\% CI [-.14, .31]$). For liberals, *fWHR* has a larger impact on Asian brand preference ($B = .48, 95\% CI [.27, .69]$).

but not for American brands ($B = .21$, 95% CI [-.01, .43]). Finally, a moderated mediation analysis revealed that dominance mediated the influence of $fWHR$ on the preference for automobile faces and that this effect was moderated by brand country of origin and respondents' political orientation ($B = -.056$, $p < .05$).

In sum, using actual field data and a controlled experiment, we show, for the first time, the effect of car $fWHR$ on consumer preference and the moderating effects of Asian stereotypes and consumer political orientation.

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How do Emojis Shape Conversations in Digital Environments?

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EXTENDED ABSTRACT

Conversations that take place online suffer from the lack of audio-visual cues. Using real conversation samples from Twitter and online experiments, the current study demonstrates that emojis shape online conversations such that people better understand each other and eventually engage in greater turn-taking behaviors (e.g., more conversation topics and turns).

Emojis can be considered the most important linguistic development of the past decades. In 2015, the Oxford Dictionaries chose, for the first time, an emoji as the word of the year (Dictionaries 2015). Emojis are a textual paralinguistic (Luangrath, Peck & Barger 2017), which is described as “visual textual paralinguistic elements”. Conversations in digital environments (e.g., on social media, chatbots, or forums) lack the non-verbal cues that are common in face-to-face conversations, which led to the development of surrogates for those missing cues (Byron & Baldrige 2007; Ganster, Eimler, & Krämer 2012; Walther 1996). Emojis, as paralinguistics in general, thus aid people in expressing themselves in digital environments.

Research on the effect of emojis on conversations and especially on the efficiency of conversations is sparse. Previous studies in the area of emojis focus on people’s interpretation of emojis (Na’aman, Provenza & Montoya 2017; Miller et al. 2016; Pohl, Domin & Rohs 2017; Barbieri, Ronzano, & Saggion 2016), the sentiment of emojis, their similarity (Novak et al. 2015; Ljubešić & Fišer 2016; Eisner et al. 2016), as well as their impact on customer outcomes, such as service relationships and purchase intentions (Hill 2016; Smith & Rose 2020). Finally, Li et al. (2019) showed that emojis could significantly affect the consumers’ perception of the warmth and competence of the service provider.

However, it is still unclear how emojis affect conversations and the work hitherto primarily uses non-experimental methods. At the same time, researchers across disciplines call for more work on language (Kronrod & Danziger 2013; Schellekens, Verlegh & Smidts 2010; Sela, Wheeler & Sarial-Abi 2012). An important gap is the impact of emojis on conversations in digital environments, which are hitherto predominantly using text. Specifically, such conversations lack nonverbal (e.g., facial expressions) and vocal cues (Kiesler, Siegel & McGuire 1984; Culnan & Markus 1987; Walther 1992). While this does not seem to be a major drawback, at first sight, the lack of verbal cues can lead to inefficient conversations coined by misunderstandings and longer information processing time (Herring 1999).

Considering the prior work, this work asks the broader research question: *How do emojis affect conversations?* We propose that emojis can increase the clarity of digital, text-based conversations and eventually lead to a better mutual understanding of the conversation partners. We propose that this results in greater turn-taking behaviors (i.e., more conversation turns) and higher dynamics of topic change (i.e., more conversation topics).

Study 1 investigates whether turn-taking conversations with emojis (vs. without emojis) lead to more topic changes in a real-life environment. We collected real random conversations via Twitter API and the *Tweepy* package (period: October-December 2020). To rule out the potential dynamics in conversations (i.e., different turns for each conversation and emoji frequency for each turn), we extracted three turns in each conversation. Further, we trained two topic clustering models (*Latent Dirichlet Allocation* [LDA] and K-

Means) to compare the topic modeling predictive performance in the conversations ($N = 6'719$, $N(\text{conversations with emojis}) = 1'905$ and $N(\text{conversations without emojis}) = 4'814$). To control selection bias and endogeneity problems, we choose the matching approach in Study 1 to compare the estimation difference between the emojis groups and non-emojis groups. We applied logistic regression on unmatched and matched samples to assess the effect of emojis on the probability of topic change dynamics. The estimated results showed that the main effect of emojis on the probability of topic change is robust after controlling for all covariates in three-turn conversations. Both unmatched and matched estimated results show that the group with emojis has a positive significant effect on topic change probability in online conversation ($b = 0.27, p < .001$ [unmatched conversation]; $b = 0.26, p < .001$ [genetic matching]; $b = 0.26, p < .001$ [nearest neighbor matching]; $b = 0.27, p < .001$ [subclass matching], $b = 0.25, p < .001$ [optimal matching]). The results of Study 1 showed that emojis can enhance turn-taking in conversations using real-world data.

In Study 2, we focused on the difference in responses in conversation, examining whether the likelihood of topic change is lower when only the recipient uses emojis (versus neither of the two communicators using emojis). We randomly collected conversations with two turns from Twitter ($N=6'954$). Results in Study 2 illustrated that recipient who used emojis is more likely to change topics than neither of the two communicators without emojis ($b_{\text{emojis}} = 0.55, p < .001$).

Studies 3 and 4 examine whether the use of emojis increases conversation turns and topics by enhancing better mutual understanding in conversations. In Study 3, participants [$N = 597$] were recruited from Amazon Mechanical Turk to imagine a conversation that would take place online. Participants were randomly assigned to assess five text messages in one of two conditions (emojis: [present vs. absent]). We selected five text messages with varying meanings, which are merely ambiguous lexicons in each. After that, we measured the perceived ambiguity and understanding level of the text messages. The indirect serial path through disambiguation and common understanding on willingness to take conversation turns has found to be positive significant in the Study 3 ($b = 0.027, p < .001$), $CI95\% = [0.012; 0.041]$, $SE = 0.007$). The results from study 3 support that, conversation with emojis increased the clarity of message content and mutual understanding, which led to more conversation turns in these effects. Study 4 replicated previous findings that people contributed more topics in conversations that included emojis compared to conversations with merely verbal texts.

The findings of four studies show that emojis can increase the efficiency of conversations online such that they cover more topics, and, at the same time, lead to a greater mutual understanding. Our current work highlights the importance of emojis as non-verbal cues on efficient conversations regarding turn-taking behaviors (e.g., conversation topics and turns) and message clarity.

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Luxury Content Becoming Viral Online: The Positive Role of Lexical Sophistication

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EXTENDED ABSTRACT

An analysis of 300,000+ brand-created tweets reveals that luxury brands' content using more sophisticated (vs. simple) words is more likely to be shared. This is because lexically sophisticated content is in line with high-status communication styles, thus enabling luxury brands' audiences to signal superior status by sharing such content online.

Nowadays, most well-known luxury brands are active on social media. How to increase content virality while maintaining a high-end brand image has become the focal point of contemporary luxury branders. Pancer et al. (2019) found that content using simple (vs. complex) words is more likely to be shared online. However, we propose such a strategy may not be suitable for luxury brands.

Keeping a psychological distance from the mass is a critical strategy for luxury branding (Kapferer and Bastien 2012). Sophisticated (vs. simple) words that are used less in daily contexts could reduce content's processing fluency, and hence, enlarge the psychological distance between a brand and its audiences (see Construal Level Theory; Alter and Oppenheimer 2008). Thus, sophisticated wording should align with luxury brands' communication styles. Besides, content-sharing behavior can be seen as a form of social interaction. Driven by impression management motives (Goffman 1959), users should prefer sharing content with more status signaling qualities. For example, people like to discuss high-status matters to signal that they belong to the elite (Berger 2014). Taken together, we predict that users prefer sharing lexically sophisticated content that is created by luxury brands (H1a) vs. non-luxury brands (H1b), because sophisticated luxury-branded content is more aligned with high-status brands' communication style (H2a), and thus, has more status signaling qualities (H2b).

Studies 1–2 were conducted by analyzing a dataset from the global watch industry containing 318,775 tweets and 119,593 images by 221 brands. The purpose of Study 1 was to explore how different levels of lexical sophistication would impact the virality of luxury versus non-luxury brands' content. We used the word's usage frequency cross-checked with existing frequency-checking corpora (e.g., Corpus of Contemporary American English) as a proxy for the sophistication level (Kyle, Crossley and Berger 2018). Then, we took the inverse of average word frequency to quantify each tweet's sophistication level and used the Linguistic Inquiry and Word Count 2022 (Boyd et al., 2022) and Google Cloud Vision API to capture each tweet's text- and image-specific features. Regression results revealed that increased lexical sophistication was positively correlated with the sharing volume of luxury brands' content (e.g., $\beta = .016$, $p < .05$; We determined a brand's status based on Deloitte's watch industry report; Deloitte 2021), but negatively correlated with the sharing volume of affordable (e.g., $\beta = -.033$, $p < .005$) and premium brands' content (e.g., $\beta = -.041$, $p < .001$). By extension, Study 2 was designed to show that sophisticated wording style is more status-relevant. Thus, we used a brand's (median) product price as the proxy for a brand's status (Lee 2021), regressed the natural log of the median price of each brand on the tweet's lexical sophistication level, and found that lexical sophistication was positively correlated with brand status (e.g., $\beta = .12$, $p < .001$).

To verify the main effect and the mediation path, we conducted Study 3, a one-factor experiment (lexical sophistication: unsophisticated vs. sophisticated) with a between-subject design. 153 MTurkers (45% female, $M_{age} = 33.5$) were randomly assigned to read either a sophisticated or unsophisticated post. After reading, participants rated their intention of sharing the post on social media (scale adapted from Pancer et al., 2019), the content's conformity to high-status communication norms (scale adapted from Bellezza, Gino and Keinan 2014), and the content's status signaling qualities (scale adapted from Locke, 2003). ANOVA results showed significant differences between conditions on sharing intention ($F(1, 151) = 10.22$, $p < .005$), conformity to high-status communication norms ($F(1, 151) = 184.66$, $p < .001$), and status signaling qualities ($F(1, 151) = 18.13$, $p < .001$). Next, we used Hayes's (2017) Model 6 to test the serial mediation model and found evidence of full mediation.

To conclude, our research explores the positive effects of lexical sophistication on the virality of luxury brands' content and sheds light on the mechanism behind the effect. Theoretically, this paper makes several contributions. First, some previously established virality-driving factors should be carefully revisited for high-status brands' digital marketing practices. Second, we provide empirical evidence that manifests people share high-status content to signal superior statuses. Third, we add to those studies (e.g., Pocheptsova, Labroo and Dhar 2010) that show the positive effects of processing disfluency. Managerially, luxury brands could create sophisticated social media content to ensure content virality while maintaining the brand's prestige.

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Creative Gift Systems: An Autonetnography Among Writers

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EXTENDED ABSTRACT

This article details a creative gift system, investigating the relationships between a single giver and its recipients. Using an autonetnographic approach, it explores the author's experience on the social media of Wattpad, unpacking how different types of relationships affect the creative process of writing an original novel online.

INTRODUCTION

Nowadays, consumers share content on platforms like SoundCloud and WebToon (focusing on music and comic book production, respectively), creating alongside other creators and followers. This article explores a similar setting: I discuss the case of Wattpad, an online book community where writers share original creations, entrusting their creative development (e.g., books) to anonymous users. I focus on my own experience as a writer, using three years of autonetnography where I concurrently wrote and published a Fantasy novel on Wattpad. In those three years, I developed a relationship with my readers, which impacted the object of my giving – the novel being written. The article unpacks said relationships, that shaped the creative gift system in which I was embedded and that impacted the object of the giving. Furthermore, it explores the development of the creator's experience of a creative gift system through a specific social media platform.

LITERATURE REVIEW

Gift giving is a fundamental representation of social behavior (Mauss 1925), which encapsulates key cultural dimensions (Levi-Strauss 1949; McCracken 1986). Gift giving grasps the complexity of human behavior by showing a variety of non-utilitarian but paradoxical characteristics – generosity and reciprocity, as well as the attempt to impose oneself in a quest for power (the “dark side” of the gift, Sherry et al. 1993). Caillé (2000) summarizes Mauss' gift constructs in four main concepts: 1) gift giving as being about *alliance*, in particular about forming relationships with other individuals, 2) gift giving as *ritual obligation*, which implies reciprocity on the recipient's part, 3) gift giving as *generativity*, where it represents the giver's need for acknowledgment, and 4) the gift as a *quest for glory*, in which the parties involved in the exchange establish a particular hierarchy by imposing themselves.

Contemporary marketing research ties gift giving to the idea of marketplace exchange (Bagozzi 1975) and consumer behavior (Sherry 1983). Furthermore, marketing research uses it to study a multitude of relationships and exchanges: dyadic forms of relationships (Belk 1979; Belk and Coon 1993; Otnes et al. 1993; Lowrey et al. 2004), as well as sociological, communitarian but nonetheless reciprocal expressions of giving (Giesler 2006; Joy 2001; Kozinets 2002; Weinberger and Wallendorf 2012). In the last two decades, gift giving literature extended to exchanges in digital settings, uncovering the digital gift (Kwon et al 2017; Romele and Severo 2016) and representing the complexities of anonymous, digital gift systems (Giesler 2006). Nonetheless, still very few papers attempt to understand how gift systems are shaped around digital environments, in particular creative ones.

METHODOLOGY

I employ a mix of netnography (Kozinets 2002) and autoethnography (Ellis 1999): an autonetnography (Kozinets, Scaraboto and Parmentier, 2018; Villegas 2018) on Wattpad, a platform where users

can publish anything from fan fictions to original novels, through mobile app or desktop. Starting July 2016 until August 2019, I concurrently wrote and published a Fantasy novel on this social media. During these years, I interacted daily with the Wattpad community, where I built a tight knit group of writers and readers.

The introspective approach allowed me to study tenets of my experience. For the analysis, I scraped comments left by readers and myself on the story, from the day it was first published until the moment I decided to elaborate on my experience from an academic point of view (July 2019). On Wattpad, users can leave comments on single chapters, paragraphs, sentences, or even words. These comments appear as a small bubble to be clicked on, which incorporates readers' jokes, critiques, and opinions on the story, displayed alongside the main text. I collected over 40,000 comments in 58 book chapters published separately. In analyzing these comments, I followed an iterative, hermeneutic approach (Thompson 1997). I narrowed down the data to the months between July 2016 and December 2017, when I was the most active and the interaction with the community was at its peak. Overall, the dataset consists of 680 single-spaced pages, including 14,858 comments on the story, personal notes left as footnotes in the chapters, private messages with fellow wattpadders, and opinions and posts published in my profile's feed in the considered time frame. To corroborate my analysis, I then held five in-depth semi-structured interviews (lasting from 60 to 118 minutes) with writers, to explore their long-term experience before and after landing on Wattpad.

FINDINGS

A creative gift system is made of a multiplicity of relationships. On Wattpad, these relationships define specific types of interactions, which act as forces of change in the system. These forces shape the creative gift system and push it forward. I categorize two types of forces of change: *generative forces*, that arise out of the interaction between the creator and the platform, and *relational forces*, which spur from the various interactions between the creator and other consumers. Generative and relational forces of change impact the creative gift system at different stages. I develop a framework to identify four main steps: *Nesting*, when the creator approaches the new platform, learning its rules and userbase's habits; *Giving*, when the creator, out of a generative desire to be acknowledged, begins gifting its original, creative artifact; *Co-creating*, when the creator, through followers' feedbacks and comments (i.e., relational forces), shapes the artifact around the system; *Branching Out*, which marks the end of the cycle, when the creator feels the need to branch out of the platform, to generatively engage with a new one.

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The status signaling function of wasting food

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EXTENDED ABSTRACT

While food waste instances are omnipresent, it remains unclear what the social consequences are for the individual who wastes food. Results show that wasting food increases one's financial status, yet also decreases one's social status in the eyes of others. The decrease in social status is driven by inconsiderateness perceptions.

While food waste has tremendous consequences on a large scale (WRI, 2019), it remains unclear what the possible social consequences are for the individual who wastes food. We fill this gap in the literature by examining how wasting food impacts one's ascribed status.

Extant literature identified several ways an individual can signal status to others, including consuming luxurious brands (Cannon & Rucker, 2019; Nelissen & Meijers, 2011), and performing non-conforming behavior (Bellezza et al., 2014). We add to this literature by exploring wasting food as an alternative status signal.

In contrast to the vast majority of status research, we specify status as a multidimensional concept by distinguishing between financial and social status. We define social status as the respect and esteem one enjoys from others (Magee & Galinsky, 2008), and financial status as the possession of financial resources (Nelissen & Meijers, 2011). We expected that wasting food increases one's financial status, yet decreases one's social status in the eyes of others (H1).

We focus on explaining the change in social status perceptions as little research considered it, despite it being crucial for one's social interactions and well-being (Anderson et al., 2015; Nelissen & Meijers, 2011). Wasting food is associated with harming others and is considered immoral behavior (Misiak et al., 2018). When individuals act against the common good their ascribed social status decreases (Keltner, 2016). Therefore, we propose that one's social status decreases because the observer believes the waster cares less about other humans (H2).

Study 1 ($N = 198$) tests H1 in a between-subjects design. Participants imagined helping a friend clean up leftover food (lobster) after a dinner party, and seeing their friend Alex throwing away the leftover (waste condition) or saving it for later (control condition). Afterwards, we measured participants' financial status perception (6 items; e.g. "Alex is financially wealthy"; $\alpha = .96$) and social status perception of Alex (6 items; e.g. "Alex is admired by others."; $\alpha = .92$) on a 7-point Likert scales ranging from 1 = "strongly disagree" to 7 = "strongly agree". Results showed that Alex was ascribed higher financial status ($M_{waste} = 5.50$) when he wasted the leftovers compared to when he stored it ($M_{control} = 5.09$; $t(185.84) = -2.91$, $p = .004$, $d = .42$). Yet, at the same time, ascribed Alex significantly lower social status ($M_{waste} = 4.86$ vs. $M_{control} = 5.26$; $t(196) = 3.25$, $p = .001$, $d = .47$).

Study 2 ($N = 221$), not reported here, shows that the effect is truly driven by wasting food rather than simply having leftovers one has to decide over.

Study 3 ($N = 250$), using a similar procedure and measures as study 1, tests whether the price of the wasted food (red wine) plays a moderating role. We employed a 2 (leftover use: wasteful vs. control) \times 2 (price: low [8\$] vs. high [65\$]) between-subjects design. As predicted, financial status perceptions ($\alpha = .96$). significantly in-

creased when wasting the red wine ($M_{waste} = 4.59$ vs. $M_{control} = 4.17$, $F(1,246) = 12.19$, $p = .001$, $\eta_p^2 = .047$) and serving the expensive bottle ($M_{expensive} = 5.04$ vs. $M_{cheap} = 3.72$, $F(1,246) = 119.69$, $p < .001$, $\eta_p^2 = .327$). Surprisingly, there was no interaction ($p = .215$). Social status perceptions ($\alpha = .90$) decreased when wasting the leftover wine ($M_{waste} = 4.49$ vs. $M_{control} = 4.83$, $F(1,246) = 13.14$, $p < .001$, $\eta_p^2 = .051$). We found no effect of price ($p = .271$) nor an interaction between price and leftover use on ascribed social status ($p = .520$).

Results from *study 4* ($N = 201$), not reported here, provides initial support for the underlying process ($ab = -.11$, Boot $SE = .06$, 95% CI [-.23, -.01], 10,000 bootstrap samples), yet in a different setting (observing a stranger in a restaurant).

The goal of *study 5* ($N = 312$) was to replicate the finding of study 4 and examine whether the amount of leftover food moderates the negative effect of wasting food on social status perception. Participants imagined seeing their friend David wasting (waste condition) or saving (saving condition) either one hotdog (low amount condition) or five hotdogs (high amount condition). Participants indicated their social status ($\alpha = .92$), and inconsiderateness perceptions of David (4 items; e.g. "David does not care about others."; $\alpha = .92$). Results show that participants ascribed significantly less social status to David when he wasted the hot dogs ($M = 4.73$) compared to when he saved them ($M = 5.06$, $F(1,308) = 8.97$, $p = .003$, $\eta_p^2 = .028$). Contrary to our contradictions, there was neither a significant effect of amount manipulation ($F(1,308) = 1.50$, $p = .221$, $\eta_p^2 = .005$) nor a significant interaction of amount and use manipulation ($F(1,308) = 2.04$, $p = .154$, $\eta_p^2 = .007$) on social status perceptions. Lastly, a mediation analysis confirmed that when observers saw David waste food they thought he had significantly less social status because they thought David was more socially inconsiderate ($ab = -.39$, Boot $SE = .08$, 99% CI [-.61, -.20], 10,000 bootstrap samples).

Study 6 ($N = 381$) further explores this mechanism by manipulating rather than measuring the mediator. To manipulate perceived inconsiderateness, we described a friend (Jack) who agrees or refuses to volunteer. We used a 2 (use: waste vs. control) \times 3 (perceived inconsiderateness: inconsiderate vs. considerate vs. control) between-subjects design. Most importantly, contrast analyses confirmed that social status perceptions decreased significantly more when Jack wasted the spaghetti (cf. saved it) if no information about Jack's (in)considerateness was available, versus when participants had additional information (contrast estimate = -3.72 , $F(1,375) = 4.53$, $p = .034$, $\eta_p^2 = .020$). Moreover, using only the control perceived inconsiderateness conditions, we confirmed our mediation hypothesis ($ab = -.70$, Boot $SE = .20$, 99% CI [-1.28, -.27], 10,000 bootstrap samples).

In sum, we demonstrate that observers ascribe higher financial status, yet, at the same time, lower social status to an individual who wastes food. Neither the price nor the amount of the wasted food attenuates the main effects. Observers confer less social status to a food waster because they believe that the individual is being inconsiderate of others.

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Disposing of Dior: The Impact of Luxury Goods on Disposal Decisions

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EXTENDED ABSTRACT

Building on the product disposal and sustainability literatures, we examine the disposal of luxury goods. We find that consumers make more (not less) sustainable disposal decisions for luxury goods because they consider the financial value. Furthermore, this effect extends to non-luxury goods that are disposed of at the same time.

Today, decluttering is considered an important self-care practice (Wang, 2021). This trend has led to the decluttering of homes, which leads consumers to dispose of a variety of goods, including both luxury and non-luxury items. Past research that examines product disposal identifies several disposal decisions, such as keeping, gifting, donating, trashing, and selling (Jacoby et al., 1977). Importantly, disposal decisions are closely linked to sustainability (Athwal et al., 2019). Recent research from thredUP (2021), an online consignment store, states that approximately 34 billion pieces of clothing get trashed each year when they could have been recycled or reused. Second, while keeping may initially seem to be a more sustainable option, hoarding items prevents unwanted goods from being redistributed to other consumers who may have bought a used item (rather than new) if it were available in the marketplace (Sarigöllü et al., 2021).

Existing literature on the secondhand market focuses primarily on the demand side of secondhand goods (e.g., motives for consuming secondhand goods) (see Turunen and Pöyry, 2019 as an example). Despite the sustainability benefits of the secondhand market, there is very little research on how unwanted goods end up in the secondhand market. Understanding the supply side is integral to the growth and success of secondhand markets (thredUP, 2021). Therefore, we question how consumers make disposal decisions for unwanted luxury goods as well as how these decisions affect disposal decisions for non-luxury goods.

Luxury goods are typically offered at a premium price and associated with exclusivity (Wang et al., 2021). Just like past research on the secondhand market, prior work on luxury goods largely studies the demand side (i.e., purchase and consumption of luxury goods) (see Wiedmann et al., 2009 as an example). Some of this research finds that luxury goods may lead consumers to engage in more selfish behaviors (Wang et al., 2021). We, therefore, might expect disposal decisions related to unwanted luxury goods to be more selfish in nature (e.g., trashing or keeping). However, we argue that disposal decisions for unwanted luxury goods make consumers focus on the financial value of the items and thus make more sustainable disposal decisions.

Study 1 had two between subject conditions (luxury/non-luxury). Participants imagined that they were decluttering when they found a fictitious brand scarf. In the luxury (non-luxury) condition the fictitious brand was described as a luxury (mass market) brand. Participants reported their disposal decision as well as their disposal motivation. We coded sell, give to someone, and donate as sustainable and keep and throw away as unsustainable disposal decisions. Participants in the luxury condition made more sustainable disposal decisions (88.9% vs. 75.0%, $\chi^2(1, N=101)=3.15, p<.08$). Participants in the luxury (vs. non-luxury) condition reported financial value as a more important motivation ($M=4.98$ vs. 3.43, $F(1,99)=12.38, p=.001$) and their own feelings ($M=3.31$ vs. 4.48, $F(1,99)=8.56,$

$p<.01$) and future use ($M=3.09$ vs. 3.95, $F(1,99)=5.15, p<.05$) as less important. All other motivations were not significantly different.

Study 2 attempts to replicate our results using real brand names as well as test mediation. Participants read a scenario similar to that in study 1. In the luxury (non-luxury) the accessory was a Coach (Target) brand wallet. Participants responded to the same items from study 1 and rated likelihood to make each type of disposal decision. Participants in the luxury condition made more sustainable disposal decisions (88.0% vs. 60.9%, $\chi^2(1, N=96)=9.41, p<.01$), and reported a higher likelihood to make sustainable disposal decisions ($M=6.12$ vs. 4.97, $F(1,94)=9.22, p<.01$). Participants in the luxury condition reported financial value, ($M=5.38$ vs. 3.26, $F(1,94)=23.16, p<.001$), their own feelings ($M=4.78$ vs. 3.39, $F(1,94)=12.22, p=.001$), and others' feelings ($M=5.32$ vs. 3.87, $F(1, 94)=15.48, p<.001$) as more important. Unexpectedly, participants in the luxury condition reported timelessness as less important ($M=2.67$ vs. 3.62, $F(1,94)=5.93, p<.05$). All other motivations were not significantly different. Financial value (95% CI of the indirect effect = .29, 1.29), their own feelings (.24, 1.14), and others' feelings (.38, 1.42) mediated the relationship between luxury good and sustainable disposal decisions (PROCESS model 4; Hayes, 2017).

In study 3, participants imagined getting rid of items as part of a decluttering exercise. They received a box containing seven items. Participants in the luxury (non-luxury) condition received a Coach (unbranded) scarf. Participants made disposal decisions and rated disposal motivations. Perceptions of luxury increased sustainable disposal decisions for the scarf ($\beta=.26, t(77)=2.36, p<.05$) as well as the disposal motivation of financial value ($\beta=.47, t(77)=4.66, p<.001$). All other motivations were not significant. Additionally, perceptions of luxury increased the number of sustainable decisions for the other goods ($\beta=.22, t(77)=2.02, p<.05$) demonstrating a spillover effect.

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Donate Your Work: Framing a Monetary Donation Request as Donating Work Increases Donor Responsiveness

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EXTENDED ABSTRACT

Can a monetary donation feel more like a donation of time? Two field and four lab studies demonstrate that asking people to donate their pay from a day's work (vs. equivalent money) increases donor responsiveness, because it makes the requested donation feel both smaller and more representative of the donor.

Charities welcome donations of both money and time, and extensive research has examined the differences in how people think about these resources and potentially donating them to a charity. Expenditures of time and donations of time are considered more personally meaningful, more reflective of moral identity, and more virtuous to people than expenditures and donations of money (Johnson and Park 2021; Liu and Aaker 2008; Mogilner and Aaker 2009; Reed, Aquino, & Levy 2007). People therefore often prefer giving time to giving money (Brown, Meer, and Williams 2018; Costello and Malkoc 2022). Regrettably, donations of time involve more challenges for charities than donations of money (e.g., volunteer training, fungibility). We propose that charities can encourage donations of money by making it feel more like a donation of time. For example, they can ask people to donate a day of their work, where their take-home pay from a day's work at their job is donated to the charity. Six lab studies (three reported here) and two field studies conducted in partnership with actual charities demonstrate the benefits of this novel "money as time-worked" framing strategy. Asking people to "donate your work" increases donation rates and amounts because it makes the requested donation feel both smaller as well as more representative of the donor.

For study 1, we partnered with Tilburg University's fundraising office for their annual fundraising campaign. We randomly assigned alumni to receive either a Donate Money email which was created by the professional fundraisers at the university, or a Donate Work email which was identical, except that it included our money as time-worked framing manipulation, which read "For example, you can 'donate' one working day. With your salary for one day of work you can contribute to the realization of great projects and grants." The Donate Work email produced more positive engagement (e.g., clicks on links to learn about the University fund and how to support it; $p=.035$) and less negative engagement (i.e., clicks on the link to not be called during the fundraiser; $p=.002$).

For Study 2, we partnered with Doctors of the World UK to test whether money as time-worked framing would influence responsiveness to a charity appeal presented in a Facebook advertisement. We made two versions of a fundraising ad to help people affected by a large explosion in Beirut, Lebanon: a Donate Work ad where the appeal is framed as a request to "donate a day of your work," and a Donate Money ad which was otherwise identical but framed the request as "donate your money." The Donate Work ad produced a significantly higher click-through rate ($X^2=12.08$, $p=.002$) and a marginally higher donation rate (13 donations totaling £315) compared to the Donate Money ad (6 donations $X^2=3.35$, $p=.067$, totaling £170).

Participants in Study 3 imagined that they have a full-time job where they earn \$100 take-home pay per day. Participants then considered a donation request from the American Red Cross. Participants in the Donate Work condition read that, "The Red Cross

is asking you to donate a day's work, where your take-home pay from one day's work would go directly to helping victims of disasters." Participants in the donate money condition read that, "The Red Cross is asking you to donate \$100, where your money would go directly to helping victims of disasters." Participants in the donate work condition donated significantly more ($t(278)=4.303$, $p<.001$, $d=.52$), felt that the donation was more representative of themselves ($t(278)=-2.171$, $p=.031$, $d=.26$), and felt that the donation request seemed smaller ($t(278)=5.292$, $p<.001$, $d=.63$) than participants in the donate money condition. Both representativeness of the self and the perceived size of the request mediated the effect.

In study 4, we applied money as time-worked framing to other units of time beyond one day. Participants considered a donation request from UNICEF which was presented in a 2 (Donation Framing: Work vs. Money) X 2 (Requested Amount: Full Day vs. 6 Hours) between-subjects design. The full day conditions were functionally the same as in study 3; the 6 hours conditions were similar, except the requests were for them to "donate 6 hours of work, where your pay from 6 hours of work would go directly to helping children" versus "donate \$120...". The Donate Work condition again yielded significantly higher donations ($F(1,121)=4.402$, $p=.038$, $\eta_p^2=.035$) which was not moderated by the requested amount. Again, both representativeness of the self and perceived size mediated the main effect.

In study 5, we test whether money as time-worked framing is most effective for high wage donors. Participants indicated their daily wage amidst some filler questions, and we piped in the participant's exact daily wage in both conditions, which were otherwise similar to Study 3. Analyses revealed that framing the donation request as a donation of work again significantly increased total donations. This was significantly moderated by wage rate, such that it grew as participants' wage increased, with a floodlight analysis showing that the influence of condition is significant for people making more than \$48.30 per day (64% of the sample). Again, the main effect was mediated by both representativeness of the self and perceived size, with perceived size alone mediating the moderation effect.

These studies demonstrate that charities can increase donations of money when they frame that donation in terms of the time required to earn it. This research has theoretical implications for how consumers generally think about time versus money (Gino and Mogilner 2014; Mogilner and Aaker 2009), and introduces a relatively novel construct of thinking about money in terms of hours worked. Our investigation therefore contributes to several literatures, including research on the framing of charitable appeals, the psychology of time and money. Our work also offers fundraisers a simple yet effective strategy for increasing monetary donations—framing a request for money in terms of a day's work significantly boosts donor responsiveness in real-world donation appeals.

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The Unintended Consequences of Raising Awareness: Knowing About the Existence of Algorithmic Racial Bias Widens Racial Inequality

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EXTENDED ABSTRACT

Public awareness of algorithmic bias is important for motivating change, but a longitudinal Airbnb dataset and an experiment reveal an unintended consequence: raising awareness of algorithmic racial bias can deter Black consumers (but not white consumers) from using “good” (i.e., fair and beneficial) algorithms and exacerbate existing racial inequality.

Algorithms have revolutionized almost every industry, but they are not perfect. Algorithmic bias occurs when an algorithm generates unfair outcomes on the basis of sensitive attributes such as race and gender, a situation that threatens social welfare and equity. Algorithmic bias went largely unnoticed by the public—until May 2016, when ProPublica published a study exposing algorithmic racial bias: a widely used recidivism prediction algorithm was twice as likely to mistakenly predict a high risk of recidivism for low-risk Black defendants than for their low-risk white counterparts. The study went viral and triggered a nationwide outrage on social media. It also sparked a series of articles on racial bias in other algorithms, awakening a public horror that algorithms, just like humans, can exhibit racial bias.

Public awareness of algorithmic bias is certainly useful for putting pressure on firms and policymakers to correct injustice in algorithms. We argue, however, that raising public awareness of algorithmic bias may have unintended consequences. Specifically, awareness of algorithmic bias can affect consumers’ reactions to “good” algorithms, namely, algorithms that are fair (i.e., satisfying conditional statistical parity) and beneficial.

Across industries, many algorithms are fair and beneficial. For instance, Zhang et al. (2021) examined Smart Pricing, Airbnb’s free algorithm for hosts, by analyzing the algorithm’s price predictions and impacts on host revenue. The study found that Smart Pricing is both fair and beneficial. The algorithm is “fair” because it recommends similar price adjustments for similar properties, regardless of the host’s race; the algorithm is “beneficial” because hosts earn more when using Smart Pricing than when setting prices themselves.

While research has found that algorithms can be drastically different, we propose that the average consumer, unfortunately, has no insight into the differences among algorithms. Instead, they tend to view different algorithms as homogeneous, due to their lack of understanding of artificial intelligence. Building on the literature on overgeneralization and illusory correlation (Tversky and Kahneman 1974; Baron 1994; Hsee et al. 2019; Risen et al. 2007; Yang et al. 2021), we propose that, when consumers learn that some algorithms are biased against (toward) them, they may overgeneralize that information, and assume that other algorithms are also biased against (toward) them. If so, then awareness of algorithmic racial bias may deter Black consumers (but not white consumers) from adopting “good” algorithms, algorithms that are fair and beneficial, like Smart Pricing.

To understand how awareness of algorithmic racial bias may differentially influence the usage of “good” algorithms among white and Black consumers, we report an analysis of a longitudinal dataset of 8,175 unique Airbnb properties in the US. We investigated how the extensive media coverage of the ProPublica study in May 2016 influenced the usage of Smart Pricing (i.e., a “good” algorithm) among Black and white Airbnb hosts. We found that, before the media event, Black hosts were less likely than white hosts to use Smart Pricing;

after the media event, the racial gap in Smart Pricing usage widened by 61.2%.

We then report a controlled experiment that tested the causal effect of raising awareness of algorithmic racial bias. We found that awareness, whether experimentally-induced or naturally-occurring, discouraged Black consumers (but not white consumers) from using Smart Pricing. Moreover, awareness differentially affected the expected benefits of using the “good” algorithm along racial lines: it increased the expected benefit for white consumers and reduced the expected benefit for Black consumers.

The present studies contribute to several streams of research. First, while the nascent literature on algorithmic bias has greatly advanced our understanding of algorithmic bias per se (Caliskan et al. 2017; Simious et al. 2017; Kallus et al. 2021), no research, to the best of our knowledge, has studied public awareness of algorithmic bias and its consequences. The present research extends the scope of the algorithmic bias literature by investigating how public awareness of algorithmic racial bias may differentially affect the behaviors of consumers of different races. While the conventional wisdom suggests that raising public awareness of a problem should always be beneficial, we find that raising public awareness of algorithmic racial bias can backfire, discouraging disadvantaged consumers from using the technology that would benefit them.

Second, recent work in the consumer behavior literature finds that people may be reluctant to rely on algorithms decisions even when the algorithms clearly outperform humans. Prior research has identified several explanations: People have a lower tolerance for mistakes made by algorithms than for the same mistakes made by humans (Dietvorst et al. 2015). Also, people incorrectly believe that algorithms are less capable of accounting for consumers’ unique situations and characteristics (Longoni et al. 2019) and performing subjective tasks (Castelo et al. 2049). The current research contributes to the literature by discovering a novel cause of algorithm aversion: awareness of algorithmic racial bias. While the previously documented causes suppress the use of algorithms across all racial groups equally, the present research reveals that awareness of algorithmic racial bias deters only the disadvantaged group from adopting algorithms, thereby exacerbating the already-pronounced racial gap in technology adoption.

It is important to note that while overgeneralizing algorithmic bias can lead to serious negative consequences, we should not blame consumers for overgeneralizing, because overgeneralization in this case is entirely due to a lack of information: no firms, to the best of our knowledge, disclose fairness-related information about their algorithms directly to consumers when consumers make adoption decisions; media outlets rarely acknowledge the existence of fair algorithms when exposing unfair algorithms. Under this circumstance, overgeneralizing may be completely rational. Our research has implications for policymakers, firms, and media outlets. Policymakers should encourage firms to disclose fairness-related information to consumers. When consumers have adequate information to discern whether an algorithm is biased, they may be less likely to overgeneralize concerns about publicized instances of algorithmic bias to algorithms that are fair and beneficial. Policymakers should encourage the media to report on algorithmic bias more accurately and responsibly by providing examples of both biased and fair algorithms, raising awareness that not all algorithms are created equal.

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Frugality versus Thriftiness: The Gender Difference in Consumer Saving Behaviors

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EXTENDED ABSTRACT

This paper focuses on the gender difference in consumer saving behaviors. Using a multi-method approach, two studies reveal that females are generally thriftier and lean towards pro-consumption while males are generally more frugal and lean towards anti-consumption. We use experiments to show the generalization and the underlying mechanism.

We live in an era that witnessed rampant consumption, and most consumer research focuses on how to incentivize consumers to make more purchases. The life cycle hypothesis predicts that people choose a level of consumption they can maintain over the course of their lifetimes, independent of their current income. However, during the pandemic, we observed that consumer spending fell sharply, and saving increased more than ever before (Smith 2020). Increasing saving for retirement is one of the most important challenges as the aging population could render public retirement and pension funds insolvent in the future. Saving behaviors are encouraged not only for consumer financial well-being reasons but also for social welfare reasons. Thus, more research switches the focus from encouraging consumer spending to understanding consumer saving.

Related literature suggests two important dimensions of consumer saving behavior: frugality and thriftiness. Although both are used to achieve saving goals and lead to lower monthly spending, researchers argue that these two behaviors need to be distinguished from each other, as frugality is associated with reduced consumption, while thriftiness is associated with finding deals and, therefore, could potentially induce more consumption (Gatersleben et al., 2019; Evans 2011). However, the existing literature fails to examine the role of gender in saving behavior, although gender is an important indicator for many financial decisions (e.g., Gao et al., 2020). We extend the body of literature by examining whether the different saving styles differ systematically between men and women, if so, how and why.

In study 1, We collected data from a popular interest-based forum-like social media platform in China. The platform allows registered users to join groups with similar interests and share their opinions and ideas. Among all the groups, two most popular groups on this platform are “Federation of Female Savers” and “Federation of Male Savers.” While these two groups are for female and male users, respectively, members from both groups share their tips and experiences regarding saving and consumption. We have scraped more than 10,000 posts from both groups and used machine learning algorithms to identify whether female and male members approach the saving problem differently based on their posts. Following the literature (Evans, 2011; Gatersleben et al., 2019), we focused on two types of saving behaviors: frugality and thriftiness. Three steps were taken to classify whether each member is frugal or thrifty based on the posts s/he publishes. *Step 1: training set construction.* Because there is no available training set, we constructed our own training set by hiring three research assistants to label about 2000 subsample posts as “frugality” or “thriftiness.” *Step 2: data training.* We utilized the cutting-edge TF-IDF method for natural language processing to identify relevant keywords/phrases in each post. *Step 3: Topic classification.* We applied several powerful machine learning algorithms to classify the posts into frugality or thriftiness, in-

cluding two types of logistic regression and three types of support vector machine (SVM) analyses. The logistic regression model performs best, with a prediction accuracy of 97.02%. Given the classification results from the machine learning algorithm, we compared the percentage of “thriftiness” and “frugality” posts between female and male groups. Our results suggest that compared to males, female members are more likely to be thrifty (84.24% vs. 59.07%, $p < 0.01$). Compared to females, males are more likely to be frugal (40.93% vs. 15.76%, $p < 0.01$).

One potential limitation of Study 1 is that we used the field data in China to explore the gender difference in saving behaviors, and we do not know whether the results would hold in a different cultural background. To address this issue, we conducted a survey in the United States in Study 2a. Two hundred workers from Prolific were recruited, with 50% females and 50% males. We measured frugality versus thriftiness using a scale adapted from Rick et al. (2008) and used as DV. A regression analysis reveals that after controlling for age, household income, marital status, gender has a substantial and significant effect on frugality. In particular, males tend to focus more on frugality while females tend to focus more on thriftiness ($b = -0.61$, $p < 0.01$). To further explore the process of our main finding, we conducted another survey in the United States in Study 2b and used the ST-TW scale developed by Rick et al. (2008) to measure the pain of payment and find evidence that it mediates our main effect. Specifically, females generally experience a lower pain of payment ($b = 1.24$, $p < 0.1$), which is associated with thriftiness (lower level of frugality) ($b = -0.12$, $p < 0.01$).

This paper makes several contributions. First, it extends the consumer saving literature by providing empirical support for the gender difference. Our findings suggest a systematic difference between males and females in money-saving behavior, closely related to financial wellbeing. Moreover, we detect an important mediator of the gender effect in saving behaviors. These are important discoveries because although gender has been associated with a wide range of consumption-related attitudes and behaviors, its role in saving behavior is unexamined. Managerially, our findings provide important implications to practitioners and policymakers to improve consumer financial well-being and increase sustainability.

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The Inclusive Minimalism Effect: Increased Preference for Minimalist Aesthetics in Choices for Shared Consumption

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EXTENDED ABSTRACT

We identify an “inclusive minimalism effect” wherein consumers believe minimalist (vs. maximalist) aesthetics are more broadly appealing and thus choose minimalist (vs. maximalist) products for shared (vs. solo) consumption. This research thus bridges the literatures on product aesthetics and shared consumption, demonstrating how choosing for shared consumption alters aesthetic preferences.

Though consumption is often social (Belk 2010; Liu, Dallas, and Fitzsimons 2019; Simpson, Griskevicius, and Rothman 2012; Wu, Moore, and Fitzsimons 2019), especially in the modern sharing economy (Eckhardt et al. 2019; Goldsmith and Lambertson 2020), literature on consumer aesthetics predominately focuses on how product aesthetics influence choices for only one person—generally the self (e.g., Batra and Ghoshal 2017; Sevilla and Townsend 2016; Wu et al. 2017). This research examines how consumers make aesthetic decisions for shared (vs. solo) consumption, focusing on choices between products with minimalist (e.g., clean lines, ample whitespace, simple color palettes (Wilson and Bellezza 2022)) versus maximalist aesthetics (e.g., complex textures, bold colors, excess ornamentation (Budds 2020)).

On the one hand, maximalism is historically associated with inclusivity (and minimalism with exclusivity) (Adamson 2019; Keats 2019). However, we predict and find the opposite: that consumers prefer relatively more minimalist (vs. maximalist) product aesthetics for shared (vs. solo) consumption. The “inclusive minimalism effect” occurs because consumers view minimalist products as more broadly appealing across diverse tastes, making them better suited for balancing multiple consumers’ preferences, and thus preferable for shared (vs. solo) consumption. Five pre-registered experiments ($N=2245$) test our hypotheses.

Experiment 1 ($N=371$) tests our key hypothesis that there is an increased preference for minimalist (vs. maximalist) aesthetics for shared (vs. solo) consumption. Participants considered shopping for furnishings for either a solo or shared office and indicated their aesthetic preference (1=maximalist, 6=minimalist). Demonstrating the inclusive minimalism effect, participants preferred minimalist (vs. maximalist) aesthetics more in the shared condition than the solo condition ($M_{\text{shared}}=4.41$, $SD_{\text{shared}}=1.18$ vs. $M_{\text{solo}}=4.04$, $SD_{\text{solo}}=1.40$; $t(369)=2.75$, $p=.006$, $d=.29$).

Experiment 2 ($N=368$) generalizes the inclusive minimalism effect to the increasingly relevant consumption context of the sharing economy. Participants considered decorating a shared (intended to be rented out via Airbnb) or solo vacation home, and viewed images of interior homes pre-defined as minimalist (three images) and maximalist (three images) by interior design tastemakers (Jones 2019; Nemoy 2016). They then selected the image that best represented the aesthetic they would choose when decorating a shared (solo) vacation home. Preference for a minimalist (vs. maximalist) aesthetic was significantly greater when participants considered decorating a home for shared (90.27%) than for solo consumption (63.93%) ($B=1.66$, $\chi^2(1)=38.00$, $p<.001$, $OR=5.23$).

Experiment 3 ($N=387$) examines the process underlying the inclusive minimalism effect. Participants were randomly assigned to consider shopping for a rug for a solo or shared office, before choosing a rug aesthetic (1=maximalist, 6=minimalist). Next, par-

ticipants responded to a 2-item ($r=.80$) mediator measuring focus on broad appeal involving addressing universal tastes. Participants in the shared (vs. solo) condition indicated greater preference for a minimalist (maximalist) rug, $M_{\text{shared}}=4.54$, $SD_{\text{shared}}=1.65$ vs. $M_{\text{solo}}=3.80$, $SD_{\text{solo}}=1.87$; $t(385)=4.15$, $p<.001$, $d=.42$). This effect was significantly mediated by focus on broad appeal ($B=.53$, $SE=.19$, 95% $CI=[.17, .91]$). Participants in the shared ($M=5.92$, $SD=1.04$) versus solo ($M=3.26$, $SD=1.73$) condition were more focused on choosing a product with broad appeal ($B=2.66$, $SE=.15$, 95% $CI=[2.38, 2.95]$), and a greater focus on broad appeal predicted a higher preference for the minimalist (vs. maximalist) option ($B=.20$, $SE=.06$, 95% $CI=[.08, .32]$).

Experiment 4 ($N=555$) tests a process-consistent moderator of the inclusive minimalism effect: the homogeneity (vs. heterogeneity) of aesthetic tastes in shared consumption groups. Participants were randomly assigned to one of three conditions (solo, shared with others with homogenous tastes known to be similar to one’s own, shared with others with heterogeneous tastes) and considered shopping for a wall art print for an office space. Replicating the inclusive minimalism effect, participants in the heterogeneous shared condition showed a greater preference for a minimalist ($M=4.52$, $SD=1.42$) art print, compared to participants in the solo condition ($M=3.80$, $SD=1.77$), $t(552)=4.20$, $p<.001$, $d=.44$. Additionally, participants in the heterogenous shared condition showed a greater preference for a minimalist aesthetic than participants in the homogenous shared condition, $t(552)=3.91$, $p<.001$, $d=.41$. There was no significant difference in aesthetic preference between the solo and homogenous shared conditions—thus, the inclusive minimalism effect is eliminated when the aesthetic tastes of anticipated co-consumers are known and homogeneous.

Experiment 5 ($N=564$) demonstrates that the inclusive minimalism effect is observed when choosing for multiple consumers (vs. one consumer) who will share in consumption, regardless of whether or not the decision-maker will also consume the product. Thus, we varied both whether participants were choosing for one consumer or multiple consumers and also whether they would take part in the consumption of the chosen product. Participants considered shopping for a wall clock that would either be used by one consumer (solo condition) or shared between multiple co-consumers (shared condition). Further, the participant would either be using the product (self-as-consumer) or not (self-not-consumer). Participants indicated their preferred aesthetic (1=maximalist, 6=minimalist) for a wall clock in their assigned consumption scenario. A 2(choice type: solo, shared) 2(self-as-consumer: yes, no) ANOVA on aesthetic preference revealed no significant interaction nor a significant main effect of self-as-consumer. Instead, the analysis revealed only a significant main effect of choice type, such that participants in the shared condition expressed a greater preference for minimalism ($M=4.65$, $SD=1.43$) than participants in the solo condition ($M=4.06$, $SD=1.73$), $F(1, 560)=19.79$, $p<.001$, $\eta^2_p=.034$.

Overall, this research shows that—counter to the historical notion of maximalism as more welcoming and inclusive—choosing for shared (vs. solo) consumption leads to a consistently greater preference for minimalism (vs. maximalism), a novel effect that we call the inclusive minimalism effect. Specifically, consumers believe that

minimalist products are more broadly appealing to diverse aesthetic tastes, and thus they are more likely to select them for shared (vs. solo) consumption. This research offers theoretical contributions to the literature on consumer aesthetics—by showing that consumers’ aesthetic decisions can vary based on whether consumption is shared—and to the burgeoning literature on choices for shared consumption (e.g., Liu et al. 2019; Simpson et al. 2012), by adding visual aesthetics to the identified set of dimensions affected by sharing.

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How does Local-global Identity Impact Consumer Preference for Leisure over Work? The Perspective of Production Orientation

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EXTENDED ABSTRACT

This research finds that global-identity consumers prefer work over leisure, whereas the opposite is the case for local-identity consumers. This occurs because global-identity consumers tend to hold stronger productivity orientation, which promotes work-related over leisure-related activities. Framing leisure as productivity-related reverse the proposed effect.

In modern human society, people tend to spend significant more time on work than leisure, leading to emotional exhaustion and cynicism, lower psychological wellbeing, and poorer life quality (Etkin and Memmi 2020; Reichl, Leiter and Spinath 2014). Thus, it is important to examine what factors may explain consumers' choice between work and leisure. Such an understanding not only advances the related literature, but also provides useful guidelines for organizations and public policy makers to enhance consumer wellbeing.

In a work-leisure trade off, work refers to activities that feel productive and provide primarily instrumental benefits (Laran and Janiszewski 2011), whereas leisure refers to activities that feel unproductive and provide primarily hedonic or experiential benefits (Etkin and Memmi 2020). Then, how does consumers' local-global identity impact their work-leisure tradeoffs?

Following Zhang and Khare (2009), we define a local identity as consumers' mental associations with local traditions, local culture, and people in the local community, whereas a global identity as consumers' mental associations with a global culture, exotic traditions, and people around the world. Accordingly, global-identity consumers tend to be more open to diversified experiences, ideas, and values from different parts of the world (Nie et al. 2022). They also tend to meet more unfamiliar people from different cultures, buy or use more unfamiliar products and services, and engage in more novel activities in their lives, compared with their local-identity counterparts (Gao et al. 2017). As a result, global-identity consumers are more likely to experience self-competence doubt due to broader social comparison, cultural or language barrier, or novel way of doing things. In contrast, local-identity consumers are less likely to have such experiences given their focus on their local community and neighborhood, which tend to be more familiar and less challenging (Zhang and Khare 2009).

Consequently, global-identity consumers are more motivated to address their competence challenges by focusing on productivity orientation, which is defined as the aspire for progress and achievements in multiple domains (Keinan and Kivetz 2011). Given productivity orientation encourages work and discourages leisure (Laran and Janiszewski 2011), we predict that global-identity consumers tend to be more productivity oriented, leading them to prefer work over leisure.

We test the theory with five studies. Study 1 utilized secondary data from a national tourist and leisure survey, which measured the average hours per day spent on leisure activities. We operationalized local-global identity with residential area with larger cities indicating stronger global identity (Gao et al. 2017). The results indicated that, consumers from larger cities (vs. rural area) or stronger global (vs. local) identity tend to spend less time on leisure activities.

Study 2 provided causal test for the effect with experimental design. We first manipulated local-global identity following Zhang and Khare (2009). Then, we asked consumers to choose between leisure versus work activities. The results indicated that global-identity consumers are more likely to choose work-related activities, whereas local-identity consumers are more likely to choose leisure activities. Study 3 further replicated the findings from Study 2. More importantly, Study 3 showed direct evidence for the mediating role of productivity orientation.

In Study 4, we tested the mediating role of productivity orientation by directly manipulating it. This study was a 2 (identity: local vs. global) \times 2 (leisure option: control vs. productive) between-subjects-designed experiment. Besides completing the local-global identity manipulation (Gao et al. 2017), we also framed the leisure option as either leisure (i.e., control) or a productive activity. The results replicated the effect of local-global identity on work-leisure preference in the control condition. In contrast, in the productivity condition, the effect was attenuated, supporting our prediction.

In Study 5, we tested the moderating role of open mindset. According to our theory, if we create a salient open mindset, all consumers regardless of their local-global identity levels should exhibit stronger productivity orientation and thus preference for work over leisure activities. In this study, we manipulated both local-global identity and open versus control mindset. Then, we measured consumers' preferences between work versus leisure activities. The results indicated that among local-identity consumers, manipulating open mindset significantly boosted their preference for work over leisure. In contrast, global-identity consumers showed similar work-leisure preference regardless of mindset, supporting our theory.

This research makes several contributions to the related literature. First, it contributes to the understudied phenomenon of work-leisure tradeoff by identifying consumer identity as a new antecedent. Second, it advances the local-global identity literature by introducing it into a new area of study. Third, we discover productivity orientation as a key mechanism behind the effect of local-global identity on work-leisure tradeoff, which extends the study on productivity orientation in marketing.

Furthermore, this research offers practically useful strategies for companies and public policy makers. For instance, in marketing leisure-focused products such as theme park, vocation package, or other entertainments, companies could benefit from activating consumers' local identity. For consumers with strong global identity, these companies may want to frame the leisure activities as a way to enhance productivity.

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Don't trust what you see: The consequences of deepfake videos for consumer evaluation of firms and their representatives.

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EXTENDED ABSTRACT

This paper studies the psychological and behavioral impact of deepfakes (i.e., synthetically generated content) on consumer evaluations. Through four studies, deepfakes negatively impact consumer evaluations of a CEO. Moreover, suspicion acts as an attenuation mechanism reducing the impact. However, consumers do not return evaluations to baseline even when warned beforehand.

INTRODUCTION

Imagine seeing Mark Zuckerberg tell you he wants to steal your data (Posters 2020), or Richard Nixon give a stirring speech on a failed moon landing (DelViscio 2020). While these events never happened, advancements in artificial intelligence technology have introduced the phenomenon of 'deepfakes', which produce realistic depictions of situations (Chesney and Citron 2018; Korshunov and Marcel 2018). Deepfakes are "hyper-realistic videos [audio files, and images], [synthetically] manipulated to depict people saying and doing things that never actually happened" (Westerlund 2019; pp.40). Much of the work involving deepfakes is technical (Albahar and Almalki 2005; Yang, Li, and Lyu 2019; Li and Lyu 2018) or aimed at the societal, political, and legal impact (Vaccari and Chadwick 2020; Dobber et al. 2021; Mara and Alexandrou 2018). This paper is one of the first to explore the impact on consumer responses at the individual level. Moreover, this paper applies non-technical intervention techniques utilizing psychological processes (i.e., suspicion) to attenuate the negative effects of exposure. Detection software has shown to be ineffective thus far (e.g., 65% accuracy for the Facebook competition; Collins and Ebrahimi 2021), therefore, a variety of approaches must be explored to appropriately respond to this novel phenomenon.

We conceptualize deepfakes as videos, audio files, or images that (1) realistically mimic a person's bodily movements, facial features, and voice patterns, (2) convey false and novel (i.e., surprising) information, (3) are incongruent with people's view of what the person would typically express, (4) and are nonconsensual, with harmful intent (i.e., negative as boundary condition). We show support for this conceptualization in Pilot Study 2, which for purposes of length is not included in this abstract. We utilize suspicion, which describes "a person's simultaneous state of cognitive activity, uncertainty, and perceived malintent about underlying information" (Bobko et al. 2014), as an important psychological process and attenuation mechanism. The following are results from three separate empirical studies.

Pilot Study 1

The aim of the pilot study is to provide preliminary evidence on the characteristics of deepfake videos. Three hundred and three US participants (Median_{age} = 35-44, 56.33% female) were recruited from MTurk for this within-subjects experiment. Participants were exposed to one fake news article found on politifact.com, then randomly exposed to 5 videos – a mix between real and deepfake. After the article and each video, participants responded to various measures including suspicion and surprise of the articulation of the message. Linear mixed models reveal that deepfake videos result in higher levels of suspicion compared to both fake news and real videos ($M_{\text{Deepfake}} = 5.22$, $M_{\text{FakeNews}} = 4.35$, $M_{\text{RealVideo}} = 3.27$; $B_{\Delta\text{Deepfake-FakeNews}} = 0.87$, $t = 8.12$, $p < 0.001$; $B_{\Delta\text{Deepfake-Real}} = 1.95$, $t = 17.87$, $p < 0.001$). In addition, deepfakes were significantly more surprising in terms of articulation of the message ($M_{\text{Deepfake}} = 4.30$,

$M_{\text{FakeNews}} = 4.07$; $B_{\Delta\text{Deepfake-FakeNews}} = 0.23$, $t = 2.55$, $p = 0.029$). Thus, this study gives us indications of two potential psychological processes of exposure (i.e., suspicion and surprise of articulation).

Study 1

This study aimed to observe deepfakes effect on consumer evaluations towards company representatives. Using 600 US participants (Median_{age} = 35-44, 53.41% female) on Mturk, participants were randomly assigned to one of the three conditions (video vs. text vs. audio), using a viral deepfake found online of Mark Zuckerberg (Posters 2020). A one-way ANOVA shows a significant difference in evaluations following exposure of a deepfake ($M_{\text{Audio}} = 26.65$, $M_{\text{Text}} = 28.81$, $M_{\text{Video}} = 23.25$; $F(2, 599) = 3.16$, $p = 0.043$). A Tukey post hoc test shows a significant difference between text and video ($M_{\text{Text}} = 28.81$, $M_{\text{Video}} = 23.25$, $95CI[-10.78, -0.32]$, $p = 0.034$), but not between video and audio. A separate one-way ANOVA shows a significant difference between type of fake content and suspicion ($M_{\text{Audio}} = 3.88$, $M_{\text{Text}} = 3.99$, $M_{\text{Video}} = 4.27$; $F(2, 599) = 9.88$, $p < 0.001$). A Tukey post hoc test supports this finding such that the video is significantly more suspicious than text (*Text-Video*: $95CI[0.06, 0.49]$, $p = 0.005$), as well as audio (*Video-Audio*: $95CI[0.17, 0.60]$, $p < 0.001$). Thus, Study 1 proved that deepfake videos are more impactful on consumer evaluations, as well as generate a higher level of suspicion.

Study 2

The aim of Study 2 was to observe the effect of suspicion by using a priming method found in Kirmani and Zhu (2007), to increase general suspicion prior to exposure. Four hundred and ninety-eight US participants (Median_{age} = 35-44, 62.37% female) were recruited from Mturk for this 2 (fake video vs. fake audio) x 2 (primed vs. not primed) + 1 control between-subjects experiment. To control for underlying biases towards Mark Zuckerberg, we developed a deepfake video and audio file of a fictitious CEO using the open-source generator, deepfakesweb.org. We built up both the CEO and brand using fictitious news articles. This study also manipulated suspicion by randomly priming individuals prior to exposure with general knowledge of media manipulation. Our results reveal that priming individuals with suspicion prior to exposure has a positive impact on evaluations of the targeted CEO ($M_{\text{Primed}} = 29.79$, $M_{\text{NotPrimed}} = 20.19$, $F(1,378) = 12.04$, $p = 0.0005$), regardless of medium ($F(1,376) = 0.10$, $p = 0.750$). However, we show that evaluations do not return to baseline control.

DISCUSSION

Through two studies and one pilot study, we have been able to show that deepfakes present a novel danger to the reputation of company representative. These insights are important for companies associated to human brands, such as Mark Zuckerberg and Facebook. A deepfake, regardless of medium, has the potential to significantly harm the reputation of these public figures. Our research also uncovers two potential psychological processes of exposure, suspicion and surprise. The former is an important attenuation mechanism reducing the impact of exposure. However, the main limitations to our studies thus far is the failure to return evaluations to baseline. Thus, further studies within this project and future projects must continue to explore non-technical intervention techniques which completely eliminate the negative effects of exposure to deepfake content.

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BOGO Frees You: Promotions and Adventurous Product Choices

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EXTENDED ABSTRACT

Brands increasingly offer adventurous options (e.g., carrot ginger yogurt or cappuccino chips), and marketers often introduce new and novel variants to attract consumers' attention and satisfy variety-seeking needs. To encourage consumers to try these new products, marketers try to lower to cost to do so by employing various promotions (Kotler & Armstrong, 2010). Indeed, promotions can be effective tools to encourage consumers to switch brands, accelerate their repurchases, and stockpile, increasing basket sizes and ultimately consumer spending (Foubert & Gijbrecchts, 2007; Gupta, 1988; Kahn & Louie, 1990; Van Heerde, Gupta, & Wittink, 2003).

However, consumers' reactions to different types of promotional offers vary (Chen, Marmorstein, Tsiros, & Rao, 2012; Hardesty & Bearden, 2003; Kahn & Raju, 1991; Mishra & Mishra, 2011). For instance, while price discount promotions (e.g., 50% price off) and quantity discount promotions (e.g., buy-one-get-one-free or BOGO) offer similar levels of monetary savings to consumers, consumers' reaction to a "free" product is psychologically distinct (Shampanier, Mazur, & Ariely, 2007).

Building on this prior research, we propose and demonstrate that BOGO (vs. 50% off) can be more effective in driving adventurous product choices (controlling for the quantity purchased). This is because free entails no direct monetary cost, but only benefits, which invokes more positive affect and leads to affective (vs. cognitive) processing (Shampanier et al., 2007).

Critically, consumers who engage in affective processing are more likely to be risk-seeking and impulsive (Metcalfe & Mischel, 1999; Sloman, 1996), which suggests that BOGO promotions might be more effective in encouraging consumers to try novel and adventurous products.

Likewise, mental accounting literature shows that potential loss from free choices has relatively lower psychological value and thus might not require opening of a new account (Thaler & Johnson, 1990). Since there is no cost to open a new account, there is also no need to close the account with positive value (i.e., a positive outcome), allowing consumers to experiment with adventurous products that might have a potential downside. Taken together, we propose that a BOGO quantity promotion encourages consumers to engage in affective processing, which increases the choice share of adventurous options. In contrast, a 50% off pricing promotion encourages consumers to engage in cognitive processing because choices still entail cost, which decreases the choice share of adventurous options. Five studies provide empirical support for these predictions by demonstrating that a quantity discount increases the choice of adventurous options compared to a similar pricing promotion, while also testing the proposed process based on affective processing.

STUDY 1A

Method

In a 2 (promotion: BOGO vs. 50% off) between-subjects design, 320 undergraduates who were presented with ten yogurt flavors choose any combination of six. In the BOGO condition, three choices were made at regular price (simply labeled as yogurt 1, 2, and 3) and latter three choices were labeled as free. In the 50% off condition, all six choices were labeled as '50% off'. Among ten flavors, six (strawberry, peach, blueberry, raspberry, honey, and vanilla)

were pre-tested as more traditional and less adventurous while four (pumpkin, jalapeño, sriracha, and carrot ginger) were rated as less traditional and more adventurous. We used the number of adventurous flavors chosen as the dependent variable and analyzed it with a Poisson regression since the dependent variable had a non-normal distribution.

RESULTS AND DISCUSSION

As would be expected, there was no difference in the number of adventurous options chosen in the first three choices (labeled 'full price' or '50% off', respectively; $M_{\text{BOGO}} = .11$ vs. $M_{\text{50%off}} = .09$, $Wald\ x^2 = .27$, $p = .60$); however, in the last three choices (labeled 'free' or '50% off') participants choose more adventurous options in the BOGO condition ($M = .29$) than in the 50% off condition ($M = .18$, $Wald\ x^2 = 3.79$, $p = .05$). These results provide initial evidence that BOGO is driving adventurous product choices more than economically equivalent price discounts.

STUDY 1B

One potential explanation to the effect could be due to differences in assortment size, or changes in the perception of variety with unfamiliar options (Broniarczyk, Hoyer, & McAlister, 1998). To examine this potential explanation and test the generalizability of our effect, study 1B expanded and manipulated the assortment size.

Method

In a 2 (promotion: BOGO vs. 50% off) x 2 (assortment size: small vs. large) between subjects design, 196 undergraduates made six yogurt choices. To manipulate assortment size, participants chose from either 25 or 5 different flavors. In the large assortment condition 10 were more adventurous, and in the small assortment condition 2 were adventurous. In this study, we first asked participants to choose three yogurts without any information about promotional offers. After they made these three choices, participants were informed that there was a promotion going on (either BOGO or 50% off) and so they decided to buy three more yogurts and asked them to indicate what they would choose.

RESULTS AND DISCUSSION

Examining the first three choices, we found main effects of promotion and assortment size ($Wald\ x^2_{\text{promotion}} = .62$, $p = .431$; $Wald\ x^2_{\text{assortment}} = .50$, $p = .497$), as expected. There was also no interaction ($Wald\ x^2_{\text{interaction}} = .10$, $p = .754$). Nevertheless, we controlled for their first three choices (results did not change when we eliminated this control), and found that in the last three choices participants choose more adventurous options in the BOGO condition ($M = .52$) than in the 50% off condition ($M = .28$, $Wald\ x^2 = 14.67$, $p < .001$). The interaction with assortment size was not significant ($Wald\ x^2 = 1.12$, $p = .291$), suggesting that the effect generalizes to different assortment sizes.

STUDY 1C

Next, we examined the potential role of non-monetary opportunity cost. When facing "free" choices, consumers might focus solely on the lack of monetary costs and neglect associated opportunity cost. If so, realization of opportunity cost might lead consumers to perceive free choices psychologically differently, thus eliminating

the BOGO effect. In the next study, we test this potential psychological mechanism.

Method

In a 2 (promotion: price discount vs. quantity discount) x 2 (opportunity costs: small vs. large) between subject design, 322 undergraduates made six yogurt choices. In both conditions, we first asked participants to estimate the average price of yogurt. In the small opportunity cost condition, we told the participants that the actual average price of a yogurt was this number multiplied by 0.9. In the large opportunity cost condition, the multiplier was 1.5. This manipulation was designed to make the opportunity cost salient and we reasoned that when participants realize that the actual price is much higher than their estimation, they would be more thoughtful and possibly take less risks. After the estimation task and getting the feedback, participants saw the promotion and chose six yogurts from an assortment of 10 (as in study 1).

RESULTS AND DISCUSSION

For the first three choices, we did not observe main effects for promotion type or for opportunity cost ($Wald x^2_{promotion} = .02, p = .880$; $Wald x^2_{opportunity_cost} = .22, p = .641$). There was also no interaction ($Wald x^2_{interaction} = .43, p = .514$). Nevertheless, we controlled for the first three choices (results did not change when we did not include this control), and again found that in the last three choices participants choose more adventurous options in the BOGO condition (MBOGO = .39) than in the 50% off condition ($M_{50\%off} = .23, Wald x^2 = 6.56, p = .010$). The main effect of opportunity cost was not significant ($Wald x^2 = 1.21, p = .271$), nor was the interaction with opportunity cost ($Wald x^2 = .15, p = .700$). These results suggest that the effect does not depend on making the opportunity cost salient or not.

STUDY 2

Study 2 tested whether the effect was driven by BOGO increasing adventurous choices or 50% decreasing it, while also ruling out alternative accounts based on several individual differences (e.g., exploratory buying behavior, deal proneness, etc.).

Method

In a 3-cell (promotion: BOGO vs. 50% off vs. control) study, 443 Mturk participants were presented with the same assortment of 10 yogurt flavors. As in study 1B, participants made their first three choices in absence of a promotion. Upon the completion of this choice, they were informed that there was an ongoing promotion so they decided to buying three more yogurts. In the control condition, participants were simply told that they decided to buy three more yogurts. After making all choices, we measured individual traits, using scales of risk perception (Weber, Blais, & Betz, 2002), exploratory buying behavior (Baumgartner & Steenkamp, 1996), deal proneness (Lichtenstein, Burton, & Netemeyer, 1997), emotional stability and openness to experience (Gosling, Rentfrow, & Swann Jr, 2003), and tightwad-spendthrift (Rick, Cryder, & Loewenstein, 2007).

RESULTS AND DISCUSSION

We used orthogonal contrast coding to partition the sum of squares for the 3-cell design (contrast1: -1 = 50% off and control conditions, 2 = BOGO condition; contrast2: -1 = 50% off condition, 0 = BOGO condition, 1 = control condition).

We first looked at the first three choices (which did not receive the manipulation), and, unexpectedly, there was a significant difference on the number of adventurous options chosen ($Wald x^2 = 8.63, p = .013$): participants choose more adventurous options in the

BOGO condition ($M = .26$) than the other two conditions ($M_{50\%off} = .17, M_{control} = .14$; $b_{contrast1} = .18, SE = .06, Wald x^2 = 8.23, p = .004$). The 50% off condition and control condition did not differ ($b_{contrast2} = -.11, SE = .13, Wald x^2 = .71, p = .400$).

We next examined the last three choices (which received the manipulation), while also controlling for the first three choices, and found that participants choose more adventurous options in the BOGO condition ($M = .36$) than the other two conditions ($M_{50\%off} = .21, M_{control} = .27$; $b_{contrast1} = .13, SE = .05, Wald x^2 = 7.27, p = .007$). The 50% off condition and control condition did not differ ($b_{contrast2} = .12, SE = .10, Wald x^2 = 1.51, p = .219$). Not surprisingly, the number of adventurous options in the first three choices predicted the number of adventurous options in the last three choices ($b = .78, SE = .09, Wald x^2 = 82.80, p < .001$). However, the pattern of results remained the same when we did not control for the first three choices: Participants choose more adventurous options in BOGO than the other two conditions ($b_{contrast1} = .18, SE = .05, Wald x^2 = 14.01, p < .001$), and the 50% off and control conditions did not differ ($b_{contrast2} = .07, SE = .10, Wald x^2 = .54, p = .464$).

Further, none of the individual measures moderated this effect ($ps > .13$), suggesting that the effect generalizes beyond a subset of consumers. It is also preliminary evidence that the effect is not due to differences in chronic risk perception, exploratory buying behavior, deal proneness, openness to experience, or and tightwad-spendthrift beliefs.

STUDY 3

Studies so far established that BOGO encourages adventurous options more than 50% off and ruled out potential explanations. However, we have not yet provided evidence for “free” discount in BOGO driving the results via greater affective processing. Study 3 tested this mechanism by encouraging participants to engage in additional cognitive thought, which blocks consumers’ ability to engage in affective processing (Shiv & Fedorikhin, 1999). Thus, we expected the effect to be mitigated in the cognitive processing condition, where participants could not process affectively.

Method

In a 2 (promotion: BOGO vs. 50% off) x 2 (processing style: control vs. cognitive) between-subjects design, 284 undergraduates chose four chips from an assortment of twelve either under BOGO or 50% off promotion. A pretest showed that 7 flavors (classic, barbecue, salt & vinegar, sour cream & onion, lightly salted, wavy ranch) were less adventurous, and 5 flavors (cappuccino, cheddar bacon mac & cheese, Chesapeake Bay crab spice, chile limón, wavy mango salsa) were more adventurous. In the cognitive processing condition, we asked participants to write why they made their flavor choices – what they were thinking, and what consideration they had. In the control condition, participants were asked to write the last time they had chips.

RESULTS AND DISCUSSION

Using a Poisson regression controlling for the first two choices we again found that in the last two choices participants choose more adventurous options in the BOGO condition ($M = .57$) than in the 50% off condition ($M = .38, Wald x^2 = 5.38, p = .020$). Importantly, the interaction with type of processing was significant ($Wald x^2 = 5.70, p = .017$). Specifically, while BOGO led to significantly more adventurous choices in the control condition ($M_{BOGO} = .65$ vs. $M_{50\%off} = .28, p = .001$), this was not the case in the cognitive processing condition ($M_{BOGO} = .51$ vs. $M_{50\%off} = .50, p = .960$). Using a process-by-moderation approach (Spencer, Zanna, & Fong, 2005), this study

provides process evidence for affective as the driver of the increased adventurous option choices under BOGO.

GENERAL DISCUSSION

Across five studies we find that consumers are more likely to choose adventurous options with a quantity promotion (i.e., BOGO free) than an equivalent price promotion (i.e., 50% off). Study 1B and 1C provide robust evidence of the effect across different situations (when assortments are both large and small and when opportunity costs are made salient) and rule out alternative accounts. Study 2 suggests that it is the BOGO that increases adventurous choices rather than the 50% off decreasing adventurous choices. Further, study 3 shows that the effect of the BOGO was mitigated when consumers predominantly engage in a cognitive processing, suggesting that the effect is, at least partially, driven by processing type: promotions framed as “free” encourage consumer to engage in affective processing and the trial of new flavors/variants.

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A Consumer's Perspective on Online Search When Using a Search Engine

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EXTENDED ABSTRACT

We take a consumer's perspective on the process of online search via a search engine. In doing so, we find that how one feels (i.e., their emotion state) at search initiation drives the choice of words used in their search query, and that these words dictate paid search ad clicks.

51% of all online consumers use search engines for product or service search in any month (Global Web Index Report 2020), yet our understanding of this search behavior in marketing is not only limited but also primarily one-sided. Most of the work on online search via a search engine has focused on this ubiquitous search process from a managers' perspective, examining click rates and keyword targeting strategies (Ghose and Yang 2009; Rutz, Trusov, and Bucklin 2011; Joo, Wilbur, and Zhu 2016; Lu and Zhao 2014; Jerath, Ma, and Park 2014; Agarwal and Mukhopadhyay 2016). However, scant work has actually sought to investigate this search behavior from the consumer's perspective.

In this research, we examine online search via a search engine from the vantage point of the consumer, specifically with regard to what impacts the choice of words used to articulate what they are looking for on a search engine. We suggest that how a consumer feels (i.e., their emotion state) at the initiation of search influences the words they use to describe their desired product. Since search engines themselves promote an algorithmic form of search, such that consumers seek to evaluate search results in terms of their matching ability with their search query text, we suggest that the search process via a search engine is cognitive rather than affective in nature. Accordingly, we suggest that one's emotion state influences their online search process via the words chosen in their search query through a cognitive rather than affective process. Specifically, that one's emotion state primes emotion-related words in their available memory (i.e., affect priming; Forgas 1995), increasing the likelihood they will employ emotion-based descriptors in their search query to articulate their desired product (e.g., exciting book).

Product descriptors are consequential in the context of search engines as the words employed in one's search query text not only influence the organic search results a consumer obtains but also whether they are targeted by paid search advertising. Thus, a consumer's response to search results should also be contingent on elements of the words chosen to describe their desired product in their search query text. We suggest that the use of an emotion descriptor leads to the perception that the product they are seeking is perceived to be uncommon or unique, and as a result, consumers perceive targeted paid search ads in their search results for this unique search query to be more relevant, increasing their likelihood to click on the ads. Across nine studies, we examine this multi-stage process of online search via a search engine.

In a pilot test, 458 Mturkers were randomly induced into either a positive, negative, or neutral emotion, before being asked to think about a product they were currently interested in purchasing and told to write down (free response form) the text of the query they would put in the search bar. Responses were coded for containing emotion descriptors (i.e., emotion adjectives), and participants in a positive (19.0%; $Wald=2.76, p=.097$) and negative (19.9%; $Wald=3.49, p=.062$) emotion state were more likely to employ emotion descrip-

tors than those in a neutral state. We replicated this same pattern of findings using a more controlled design and search task for a water bottle (Study 1A) and book (Study 1B).

Study 2 tested for the cognitive process of affect priming driving the observed effect. We randomly induced 605 Mturk participants into a positive, negative, or neutral emotion state and assessed the perceived availability of emotion-based words in their memory by having them write down three adjectives that come to mind when thinking about a book. As predicted, a poisson regression examining the number of times participants used an emotion descriptor, found that those in the positive emotion condition ($Wald=5.65, p=.017$) listed significantly more emotion descriptors than those in the neutral condition; participants in the negative emotion condition listed moderately more ($Wald=2.87, p=.090$). Additionally, we a replication of study 1B involving purchasing a book for another person (study WA1), rather than the self, provided evidence against an alternative account that affect regulation rather than affect priming drives this effect of emotion on descriptor use.

We next assess how this choice of descriptors impacts consumers' responses to search results, specifically paid search advertisements. As an initial assessment, in study 3A we extracted a random sample of search queries generated on a search engine platform that contained emotion descriptors of products and compared the CTR's of those queries with matched queries from the same time frame for the same product but without the emotion descriptor. Across 3,277 pairs of search queries, the observed CTR was higher for queries containing emotion descriptors ($CTR=.09$) than those without ($CTR=.05; t=10.15, p<.001$), giving initial evidence for the effect of emotion descriptor use on paid search ad click behavior. We examined this same effect experimentally in study 3B, replicating the search process using a 2 (emotion: positive vs. negative) x 2 (descriptor: emotion vs. non-emotion) between-subjects design. Emotion condition did not influence ad clicks ($(1)=.054, p=.817$) and thus results were collapsed across emotion. In line with our hypothesis, participants using an emotion descriptor (21.6%) were more likely to click on the ad than those using a non-emotion descriptor (15.7%; $(1)=4.67, p=.031$). Using a similar design while also measuring perceived uniqueness of one's search and ad relevance (Study 4) found these two variables produced a significant serial mediation model ($b=.03, SE=.01, CI_{95} [.011, .050]$).

Lastly, study 5 tested the validity of this search engine customer journey by inducing 604 Prolific participants into an emotion state (positive vs. neutral), having them engage in a descriptor choice task (analogous to studies 1A-1B) and then click on links from a set of search results (analogous to studies 3B-4). A causal pathway test the z-score process for 3 categorical variables (Iacobucci 2012). Our analysis confirming that emotion descriptor choice underlies the connection between emotion state and paid search ad clicks (significant $Z_{mediation}$ score of 3.35).

Overall, our findings provide a consumer-focused perspective on the journey of engaging in online search via a search engine.

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The Design Communication Assessment Scale (DCAS): Assessing and Adjusting the Effectiveness of Product Design Communications

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EXTENDED ABSTRACT

We integrate design theory and well-established scale development procedures to develop a reliable and valid instrument that measures consumer evaluations of design communication (i.e., the product, packaging, or advertisements). We demonstrate increased intentions and even actual sales on Amazon by using our scale to gauge consumer evaluations of design communications.

Be it the actual product, packaging, or advertisements, all communicate information regarding product design. Yet, marketers can often be left wondering if their communicative efforts are left unheard. That is, do consumers truly understand what a product design does and the benefits it provides? To address this issue, our research integrates marketing literature, design theory, interviews with world-renowned designers, and well-established scale development procedures to develop a reliable and valid instrument that measures consumer evaluations of design communication.

Traditional design methods provide substantial aid in the development of product designs, yet new products still fail at high rates. Whereas the reasons for failure are numerous, one of the primary causes is an inability to effectively communicate product design information to consumers. If a consumer does not understand what a product does or how it may provide benefits, then that product will most likely not even enter a consumer's consideration set.

Whereas prior product design scale papers have been developed to help understand the potential success of product designs, the information provided by prior scales does not allow a designer to appropriately respond to any deficiencies. That is, these prior instruments do not use design theory or common design terms, thus leaving designers with little guidance. Further, product design success or failure is contingent on more than just the product design itself. Every aspect of communication surrounding a product design (i.e., the information communicated via the product design itself, the packaging, and advertisements) needs to be considered when optimizing product design success. Thus, to better address this gap, we utilize a designer lens to develop a scale that measures consumer evaluations of design communications (i.e., the various elements that convey information about product designs), establishing an enhanced ability to predict important outcomes

We propose a new Design Communication Assessment Scale (DCAS) anchored in centuries-old design theories that provides more actionable insights than current alternatives so that marketers might appropriately engage with designers to increase effectiveness. Further, the utilization of these theories expands the nomological network that prior work associates with design to a network that more accurately captures how designs are understood by designers – those that will be adjusting design communications. In a crowded market, where marketers are utilizing and consumers are increasingly relying on visuals, it is imperative that marketers can assess and adjust the effectiveness of their design communications. Our multi-dimensional scale allows for this.

Empirically, we engage in traditional scale development procedures via three different stages. The purpose of stage 1 is to develop a reliable and valid scale that reflects the seven dimensions embedded in our conceptual model regarding design communication evaluations. This stage encompasses item generation, followed by assessments of convergent validity, predictive validity, and face validity. Stage 2 establishes the scale's discriminant validity, temporal stability, nomological validity, further predictive validity, and experimental validity. Finally, in stage 3, we demonstrate the generalizability and applicability of DCAS

across two laboratory-controlled studies and establish the real-world validity of this instrument via a field study where increased traffic, orders, and sales were realized for two different products solely sold on Amazon. Consequently, the contributions of our work are both theoretical and practical.

Theoretically, we develop an enriched framework utilizing marketing insights to reconcile and categorize two long-standing design theories. We demonstrate that designs are evaluated via two primary dimensions: the intrinsic (form and function) and the extrinsic (solidity, usefulness, style, eco-consciousness, and uniqueness). The intrinsic dimensions encompass the inherent aspects of a design utilized to determine what a product does, whereas the extrinsic dimensions are utilized to evaluate the benefits that a product could provide to a consumer. For example, the manifestation and ability (i.e., form and function) of a blender are utilized by consumers to determine what it is (i.e., the intrinsic), whereas the appeal as compared to other blenders is utilized by consumers to determine the greater desirability compared to alternatives. Collectively, consumer evaluations of designs can be accurately measured if there is an understanding of both the intrinsic and extrinsic dimensions. To pinpoint what constitutes these extrinsic and intrinsic dimensions of design, we investigated the roots of design theorizing. This endeavor revealed consistent usage of two centuries-old design theories (form follows function and the Vitruvian Triad) that have helped inform current design theorists, but until now these two theories have never been united into a cohesive framework. Further, we demonstrate how two new dimensions, eco-consciousness and uniqueness, have emerged as important aspects for consumers since the development of those long-standing design theories. These actions, enabled through the integration of designer input and marketing theory, provide novel theoretical insights into consumers' evaluations of design communications.

Practically, our work offers an actionable tool for marketers that can improve design communications. By utilizing DCAS, a firm can pinpoint the dimensions of a design that are (or are not) being effectively communicated to consumers, a crucial contribution as designs are more likely to succeed when marketers can promptly respond to consumer insights and experiences. Additionally, our tool uses a common language that designers understand, thereby allowing them the ability to better adjust designs. Consequently, DCAS represents an evaluative bridge that can help marketers engage with designers, gauge latent consumer desires, and respond accordingly in the creation or adjustment of design communications, regardless of product category.

The theoretical underpinnings and face validity engaged in the development of DCAS progresses the field's understanding as to what constitutes the evaluative dimensions of design. We produce a scale that can assess consumer evaluations of product design communications by integrating long-standing design theories with marketing insights. Through the course of our work, we demonstrate the reliability and validity of our scale, along with its higher effectiveness over alternatives. We provide substantial theoretical and practical contributions to the marketing discipline and provide real-world evidence of how our instrument can be effectively utilized to help avoid failure and increase the likelihood of success. We hope that the introduction of DCAS can facilitate a more accurate and comprehensive understanding of design communications hitherto unavailable.

REFERENCES AVAILABLE UPON REQUEST

Disentangling Product Comparisons with the Attribute-Hedonic Model

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EXTENDED ABSTRACT

This research shows that when consumers compare products the context effects for hedonic judgments and attribute judgments operate differently. Whereas attribute judgments contrast with a standard, hedonic judgments assimilate. Because the two judgments are interrelated, it often creates the misleading appearance of a hedonic contrast effect.

Disentangling Product Comparisons with the Attribute-Hedonic Model

Marketers often try to influence how consumers compare products. For instance, many realtors show homes to buyers in a particular order; scheduling the undesirable homes first to make subsequent homes look better (Cialdini 2007). Similarly, Prego spaghetti sauce ran a successful advertising campaign in the early 1990s, comparing its own product with their competitor, Ragu (Pollack 1996). In one commercial, Ragu's sauce appears thin and unappetizing as it seeps into a bowl of pasta, in contrast making Prego's chunkier sauce appear "thicker, more delicious." The widely accepted explanation for these types of situations is a negative effect between expected enjoyment, known as the hedonic contrast hypothesis (Novemsky and Ratner 2003). Substantial evidence appears to support the hedonic contrast hypothesis. Vacation destinations seem more enjoyable compared to unpleasant destinations than pleasant ones (Raghunathan and Irwin 2001). Beverages taste worse when compared to a delicious one (Zellner et al. 2003). Yet, substantial also evidence suggests the opposite. Sometimes beverages taste better when compared to a delicious one (Ghoshal et al. 2014). Faces appear more attractive when compared to attractive than unattractive houses (Carragher et al. 2019). And consumers spend more on products associated with a favorable celebrity than an unfavorable celebrity (Hasford, Hardesty and Kidwell 2015).

Therefore, it's not entirely clear what is driving these effects. Judgments of a product's enjoyment reflect judgments about its attributes, like size and weight, and it's not clear which is creating the appearance of a hedonic contrast effect. In other words, is Prego more desirable because of a contrast along the enjoyment dimension or the attribute dimension (sauce thickness)? The present research proposes the attribute-hedonic model which says that product comparisons occur simultaneously along both attribute and hedonic dimensions, but in opposite directions: attribute judgments tend to show strong contrast effects, while hedonic judgments show weak assimilation effects. Because the attribute contrast effect tends to overshadow the hedonic assimilation effect, it can create the appearance of hedonic contrast effects. In practice, these effects are confounded, so the studies here use various methods to disentangle them.

One study disentangled attribute and hedonic effects by asking participants to evaluate a series of product pairs, a target and a low (vs. high) competitor. In one scenario participants rated two TVs: a target with a 50-inch screen and a competitor with either a 40-inch screen (low) or a 60-inch screen (high). They rated how much they would enjoy each TV (hedonic) and how big each is (attribute). The target TV seemed more enjoyable when compared to the low (vs. high) competitor. On the surface this appears to show hedonic contrast, but a parallel mediation suggests otherwise. The relationship between hedonic judgments was positive, indicating assimilation, which significantly mediated the overall effect. On the other hand, the mediation through the target's attribute judgments showed an in-

direct contrast effect. In other words, the 40-inch TV made the target seem both more and less enjoyable. The same pattern was found for the other scenarios: music subscription services, tablet computers, and internet service providers.

A second study disentangles attribute and hedonic effects using investment scenarios. Because a large amount is more enjoyable than a small amount for gains, but the opposite for losses, investment scenarios allow the hedonic factor to be manipulated separately from the attributes. Participants rated a target (an investment that gained \$1,000) and a competitor, an investment that gained (vs. lost) \$100 (vs. \$10,000). As predicted, the target seemed more enjoyable compared to a small than a large amount, reflecting an attribute contrast: \$1,000 seemed like more money (and therefore more enjoyable) compared to \$100 than \$10,000. Moreover, the target seemed less enjoyable when compared to a loss than a gain, consistent with hedonic assimilation but contradicting the hedonic contrast hypothesis. Moreover, the interaction effect was not significant, inconsistent with hedonic contrast predictions. Moderated parallel mediation analysis fully supported the attribute-hedonic model.

This research disentangles distinct attribute and hedonic effects in product comparisons and shows a clear pattern of hedonic assimilation. Thus the appearance of hedonic contrast is largely due to attributes. Although this research does not rule out the possibility of hedonic contrast, it does raise questions about it, and calls for reconciliation with prior work (Ghoshal et al. 2014; Raghunathan and Irwin 2001; Zellner et al. 2003). The hedonic contrast hypothesis has been studied for over a century. Perhaps one of the reasons for the abiding interest in this topic is that it intuitively rings true. However, this may be a case where we have been misled by our intuition. Hopefully the model presented here can help provide some clarity to improve future decisions.

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Consumers' Reaction to Taste-based Product Modification

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EXTENDED ABSTRACT

Consumers react favorably to quality-based modifications (e.g., more powerful blender). But how do they react to taste-based modifications (e.g., new color for a cereal)? We document taste-based modifications are perceived to alter the product's essence, and are received negatively when applied to products for which the creative process is important.

Companies frequently change their products. It seems intuitive consumers like the new version of a product if a quality-based element is improved (better performing water filter). Quality describes a vertically differentiated product space in which consumers agree over the best mix of characteristics (Tirole 1988).

In contrast, whether consumers like the new version of a product when the modification involves a taste-based element (new food recipe) is less clear. Taste describes a horizontally differentiated product space, where the optimal choice depends on the particular consumer (Tirole 1988).

While prior work focused on quality-based product modifications, we document when and why consumers are reluctant to accept taste-based modifications. We show applying taste-based modifications is perceived as altering the essence of the product (how the product was intended to be). Given that the notion of essence is especially important for creative products (Kalemen & Carey 2006), we find altering the perceived essence is aversive for those products for which the creative process is particularly relevant. While for creative products the creative process is inherently more relevant, companies can emphasize it for almost any product, for example by connecting it to a creative individual (eponymous brands; e.g., Stella McCartney).

This work extends our understanding of how consumers react to product modifications by delineating one type of modifications that typically is aversive to consumers. Further, our proposed process connects this work to the literature on essentialism.

Six pre-registered studies support our theorizing. In Study 1 (N=402) a tomato sauce was modified. In the quality-based condition, the change impacted the shelf life. In the taste-based one, it impacted the flavor. Respondents exhibited a greater preference for the unmodified version of the sauce in the taste-based condition than in the quality-based one ($p < .001$).

In Study 2a (N=200) we pre-tested 8 products for which the creative process was more (novel, song, print, BBQ sauce) or less relevant (reading glasses, pan, bottle opener, detergent). For each, we asked respondents to imagine the company modified some taste-based element (e.g., shape, color). Participants preferred the unmodified version when the creative process is more relevant, and the modified version when the creative process is less relevant (all p -values $< .007$).

In Study 2b (N=292) we set up a booth on campus and asked passerby to complete a short study in exchange for a piece of chocolate. Our DV of interest was their choice of chocolate. They could pick either the original recipe or the modified one. We manipulated the relevance of the creative process by stating the brand was either named after the creator or not. More people picked the original recipe (74%) when relevance of the creative process was high compared to low (60%, $p = .011$).

Study 3 (N=600) takes a moderation approach. We reason if a modification took place in early stages of product development, it should result in smaller alterations of the product's essence and thus be

received more positively by consumers. This is because a product's essence is established during a product's ideation phase, before commercialization (Hick 2008). In the No Modification condition, the design of a sweater was always the same. In both Modification conditions, the designer modified the design. Further, in the Modification/Early condition, the new design was imagined when ideating the sweater. In the Modification/Late condition, the new design was only recently developed. Participants perceived the essence as more intact in the No Modification condition ($M = 5.43$), followed by Modification/Early ($M = 4.93$), and Modification/Late ($M = 4.10$). Participants had a more positive attitude toward the sweater in the No Modification condition ($M = 5.18$) than in the Modification/Late condition ($M = 4.66$, $p < .001$). There was no significant difference between the No Modification and Modification/Early ($M = 5.00$) conditions.

In study 4 (N=601) we manipulated the relevance of the creative process condition by either having an eponymous brand or not. We also manipulated whether the design of a sweater stayed the same or was changed at some point. Respondents had a more positive attitude toward the unmodified product ($M = 5.30$) than the modified one ($M = 4.93$, $p < .001$). We also found a significant interaction ($p = .005$). When the brand was eponymous, participants had a more positive attitude toward the unmodified product ($M = 5.47$) than the modified one ($M = 4.84$, $p < .001$). When it was not, there was no difference. Respondents believed the essence of the product was more intact when the product was unmodified ($M = 5.89$) than when it was modified ($M = 4.68$, $p < .001$). There was no significant interaction on the essence measure. Thus, taste-based modifications are perceived to alter the essence of the product, and this alteration is aversive when applied to those products for which the creative process is deemed relevant.

Study 5 (N=19,392) is a Facebook field study. We collaborated with a restaurant and created two ads for one of their menu items. Between ads, we either emphasized the recipe has changed or that it was always the same. More participants clicked on the ad emphasizing the same recipe (5% vs. 4%, $p = .046$).

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À Vous, but not For You: Multiple Languages on Product Labels Reduce Purchase Intentions

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EXTENDED ABSTRACT

This research examines how product labels containing multiple languages inhibit purchase intentions in mono-lingual consumers. Across three experiments, results show multiple languages on labels influence perceived personalization, which acts as the causal mechanism.

This research extends theory from marketing and communications and proposes labels are a form of recipient design.

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INTRODUCTION

In many parts of the world, product labels come in multiple languages. For example, in parts of the United States, consumers find product packages in English as well as Spanish. In Canada, both English and French can be found on products. Labeling products in more than one language may or may not be required by law, depending on a country, but may also be adopted to appeal to the linguistic diversity of consumers.

In the current research, we explore if product labels that come in multiple languages influence purchase intentions. Specifically, we focus on how ‘monolingual’ consumers (those who speak only one language) respond to labels containing multiple languages. We predict that, for monolingual individuals, product labels that come in their native language as well as others (e.g., English and French for an English-speaking consumer) decrease their purchase intentions. Although some research has examined the effect of product label language on consumer behavior (Ho et al., 2019) or marketing communications (Hornikx & van Meurs, 2017), none have studied the impact of multiple languages present. Also, our focus on monolingual consumers actually covers nearly 75% of the American population (Palmer, 2013); this is despite foreign languages being a requirement in both secondary and tertiary educational institutions.

While it may seem unlikely the number of languages a consumer speaks is a basis of segmentation, monolingual consumers may psychologically interpret such products as being less tailored for them, given the labelling is also explicitly communicating to a group that speaks a different language. Personalization, in turn, affects attitudes and behaviors as products (and advertising) are in a sense perceived as “speaking directly” to the consumer or message recipient (Bleier & Eisenbeiss, 2015; Kreuter et al., 1999; Webb et al., 2005; Wogalter, 1994). Thus, we predict a product that has a label containing multiple languages will result in reduced purchase intentions, because monolingual consumers will view the product as less personal.

METHODOLOGY

Study 1

Study 1 tested if consumers who speak mainly English are less likely to buy a product with the label in both English and French or in both English and Korean, relative to one printed in only English. The findings provide evidence that monolingual consumers who only speak English express lower purchase intentions for a product printed in English and another language that they do not understand (French or Korean).

Study 2

Study 2 examined if monolingual consumers consider a product with labels in multiple languages as less personalized, translating into lower purchase intentions. The findings, coming from monolingual French-speaking consumers, replicate those from Study 1 where participants were monolingual English-speaking consumers. Presenting a label in consumers’ primary language produces greater purchase intentions than a product label with multiple languages present. We further find that perceived personalization, or lack thereof rather, explains the lower purchase intentions. This offers support for our proposed mechanism for why presenting product labels in multiple languages reduces consumers’ intent to buy said product(s).

Study 3

Study 3 manipulated the presumed mediator (perceived personalization) in order to determine if doing so would moderate the effect of multiple-language product labels on consumers’ purchase intentions. The findings offer further evidence that the perceived personalization stemming from a product label in consumers’ native language (rather than multiple languages) can explicate their higher purchase intentions. Effectively, a product label in multiple languages lowers such perceptions, reducing purchase intentions.

GENERAL DISCUSSION

The current research examined whether product labels that include multiple languages can reduce purchase intention among monolingual consumers. The results from three experiments show monolingual consumers (vs. multi-lingual consumers) experience less purchase intention when product labels include additional languages other than their native language. To the best of our knowledge, this is the first research to show the presence of multiple languages on product labels can reduce purchase intentions as consumers perceive the product as less personalized. Second, our findings demonstrate by highlighting how the product is “meant for” a specific group of consumers (e.g., monolingual consumers), this can potentially counteract the effect. Third, our findings demonstrate product labels that include multiple languages are also considered a cue for the degree of personalization. Our focus is on product labels, but our findings may also apply to advertising or website design.

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Windfall Moments: Framing Tax Refunds to Increase Credit Card Debt Repayments among Indebted Consumers

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EXTENDED ABSTRACT

Considering tax returns as ordinary (vs. windfall) income can promote healthy financial habits. However, in one field and two online experiments, we show that windfall frames are more motivating for debt repayment among highly indebted consumers. Windfall income makes indebted consumers think they made more progress in paying their debt.

INTRODUCTION

Previous research has consistently found that, on average, income that is framed as windfall (vs. ordinary) is spent more easily, justifiable and frivolously. This research aims to test whether the opposite holds for indebted consumers with low financial self-efficacy, in the context of framing tax returns. Prior research supports financial advisors' guidance that consumers should think of a tax refund as ordinary income (earned money being returned) rather than windfall income (unearned money being given) if the goal is to discourage spending of the refunded money and promote healthy financial habits. In this research, we show that the contrary holds for a financially vulnerable population – individuals who carry credit card debt and lack self-efficacy.

METHODS AND RESULTS

Study 1 is a field experiment conducted in partnership with Debitize, an app that helps indebted consumers set aside enough funds to pay credit card debt. We first identified users ($N = 200$) who had a tax return direct deposit from the IRS. We sent an email suggesting they use their return money (windfall vs. ordinary frame) to reduce their credit card debt. We expected that the effectiveness of the frame in increasing the odds of making an additional debt repayment would depend on outstanding debt level. A logistic regression confirmed our hypothesis (interaction: $B = .69$, $Z = 2.08$, $p = .04$). For participants with high debt (20.7% of the sample), the windfall frame increased debt repayment, while it decreased debt repayment for those with low debt (35.3% of the sample).

The field experiment provides a high degree of external validity, but we assumed participants had the goal to pay off debt and low financial self-efficacy due to self-selecting in the platform. Study 2 tests our main hypotheses in the lab, by asking participants to imagine they received a tax return of \$1,500 (framed as windfall vs. ordinary). We also manipulated whether they prioritized debt repayment (via current money management stress: high vs. low) and measured their financial self-efficacy. We analyzed the percentage of the refund going to debt repayment via a Tobit model, and found evidence of a three-way interaction as hypothesized ($B = -208.88$, $t(444) = -2.25$, $p = .03$). When financial self-efficacy is high (49.78% of the sample), there is neither an effect of windfall frame, current money management stress, nor an interaction between them (all $ps > .05$). But as hypothesized, as financial self-efficacy decreases (50.22% of the sample), the windfall income frame increases debt repayment only in the absence of current money management stress (i.e., when credit card debt repayment is prioritized; Johnson-Neyman region of significance: $B = -181.95$, $t(444) = -1.97$, $p = .05$).

In Study 3 we prescreened indebted consumers who lack financial self-efficacy, and found that following advice that frames tax

return as a windfall and encourages debt repayment leads to greater perceptions of progress on debt repayment ($M = 6.82$, $SD = 1.69$) than advice that frames the return as ordinary income ($M = 6.45$, $SD = 1.93$; $t(408) = 2.04$, $p = .04$, $d = .20$).

In Study 4, we asked participants (prescreened to expect a tax return and have credit card debt, which was measured) to recall their past year percent tax return allocations into spending, debt, and saving. Consumers' memory is affected by their current goals and vice-versa (see Epley et al. 2006), since the reconstructive process of memory operates similarly to the construction of preferences during decision-making. Importantly, our windfall (vs. ordinary) framing manipulation only told participants that tax returns are a great opportunity "to make consequential financial decisions." Without specifically directing them to repay debt, low self-efficacy individuals with moderate levels of debt (sample mean = \$5,505) allocated more money away from spending (recalled past savings and windfall frame interaction: $B = .37$, $t(199) = 3.14$, $p < .01$). For the average participant, the windfall frame increased allocations for those who recalled allocating at least 58% of their part tax return to savings or debt payment (i.e., away from spending; high goal commitment), while the windfall frame decreased the allocation for those who recalled allocating less than 15% away from spending (low goal commitment). As expected, income frames had no influence in allocations away from spending for those with low level of debt, and the framing effects were stronger for those with higher levels of debt. This study shows that for the windfall frame to be effective in increasing debt repayment, consumers need to have the goal to reduce debt and receive advice that specifically direct them to use the tax refund for debt repayment.

CONCLUSION

We use a combination of lab and field experiments to provide compelling evidence that framing tax returns as windfalls is more effective to help vulnerable consumers to repay debt. This finding is unique and highlights the need to consider consumer heterogeneity in behavioral science. Our findings are relevant to help policymakers, financial institutions, and consumer advocacy groups.

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Adoption of New Technology Vaccines

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EXTENDED ABSTRACT

Many consumers are hesitant to get a life-saving vaccination. But are consumers more hesitant towards certain vaccines than others? In four experiments we show that consumers are unduly averse towards ‘new technology’ vaccines. We explore the underlying reasons for this and propose a strategy to overcome this hesitancy.

INTRODUCTION

We explore aversion towards new technology and ways to overcome this aversion with a simple nudge in the context of vaccine decision making. A plethora of research has shown that consumers are hesitant to receive a potentially life-saving vaccination (e.g., Blaisdell et al. 2016). But are consumers more hesitant towards certain vaccines (i.e., those that are based on a new technology such as mRNA) even if they are more effective? We present four experiments ($N_{\text{total}} = 478$) which test the propositions of a formal model that incorporates ambiguity and other people’s choices into the decision to vaccinate. We show that consumers are unduly averse towards new technology vaccines compared to traditional technology vaccines due to higher perceived uncertainty of side effects. We test a simple nudge based on herd behavior (Banerjee, 1992) to overcome this new technology aversion. By communicating increasing population vaccination rates, we effectively increase uptake of new technology vaccines at a higher rate than uptake of traditional vaccines. Rather than being driven by social conformity or social learning, information about herd behavior seems to alleviate perceived uncertainty (or ambiguity) by narrowing the confidence interval of risk estimates. We do not find evidence of free-riding due to herd immunity.

Methodology and Results

We present four experiments which test the propositions derived from a formal mathematical model. We conceptualize vaccine ambiguity by means of the technology from which a vaccine is derived: new mRNA versus traditional viral vector vaccine technology.

In **study 1a** ($N=80$, recruited via prolific.co, 48% female, $M_{\text{age}}=34$, $SD=10.7$), we show that consumers perceive higher levels of uncertainty stemming from concerns about side effects (and not efficacy) of a new technology vaccine compared to a traditional technology vaccine, despite being told that there are no safety concerns for either vaccine. Participants perceived side effects of a new technology vaccine to be more uncertain than those of a traditional technology vaccine ($M_{\text{new}}=4.20$, $M_{\text{traditional}}=3.20$, $t(78)=2.77$, $p=.006$, $d=.620$).

In **study 1b** ($N=120$, recruited via prolific.co, 69% female, $M_{\text{age}}=37$, $SD=13.5$), we show that consumers are more hesitant to vaccinate with a new technology vaccine even if it is less effective in preventing a disease. We quantify this aversion in the form of an efficacy premium which consumers demand for a new technology vaccine. The average efficacy premium was 19.11 ($SD=14.62$) which was significantly higher than zero ($t(114)=14.01$, $p<.001$). In other words, participants were willing to trade-off 19.11 percentage points in efficacy for receiving the traditional vaccine. Stronger concern about side effects of the new vs. traditional vaccine was positively related to the efficacy premium, controlling for demographics (gender, age, ethnicity), frontline worker status and regular flu vaccination.

Study 2 ($N=149$, recruited via prolific.co, 70% female, $M_{\text{age}}=35$, $SD=11.1$) investigates how aversion towards new technology vaccines can be reduced with a simple herd behavior nudge: communicating increasing population vaccination rates. We employed a 2 (vaccine type: traditional technology vs. new technology) x 6 (population immunization: 1%, 25%, 50%, 65%, 80%, 95%) mixed design, with vaccine type as between-subjects factor. A 2 x 6 mixed design ANOVA yielded a marginally significant interaction effect between the population immunization rate and type of vaccine ($F(5, 732)=1.93$, $p=.087$, $\eta^2=.013$).

For the new technology vaccine, increasing the population immunization rate had a positive effect on willingness to vaccinate for all immunization levels compared to the baseline. For the traditional vaccine, increasing the population immunization rate had a positive effect on willingness to vaccinate for immunization levels higher than 65% but not for lower immunization levels.

Study 3 generalizes the findings beyond the COVID-19 context, exogenously manipulates ambiguity and uncovers the process mechanism. We show that, beyond social conformity and social learning, information about herd behavior reduces uncertainty about side effects of a new technology vaccine and thereby increases its uptake more compared to a traditional technology vaccine.

Discussion

This research shows that consumers prefer certain types of vaccines over others, even if they are less effective in preventing a disease. Vaccines described as using a new technology seem to be ‘second choice’ when compared to traditional vaccine technology.

Interventions based on messages that describe the pro-social benefits of getting vaccinated (Hershey et al., 1994; Trueblood et al., 2021) or promote the autonomy of the decision-maker (Moon et al., 2021) can be effective to encourage vaccine uptake in certain populations. However, new technology vaccines might require a different (or additional) approach. We suggest that interventions and policy campaigns should focus on alleviating the ambiguity surrounding new technology (Zhang et al., 2021).

We conclude that all vaccines are not perceived equal in the eyes of the public. Consumers perceive vaccines that are based on a new technology less favorable and are more hesitant towards them. This could lead to delays in vaccination schedules, missed appointments and a refusal to be vaccinated with a certain vaccine in the hope of receiving an alternative vaccine later. Policy makers and health marketers must take this into consideration when designing vaccination campaigns and take steps to alleviate ambiguity surrounding side effects.

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Visual Storytelling: How Images Transport Us into the Narrative World

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EXTENDED ABSTRACT

The research systematically reviews existing articles in the visual narrative transportation domain. It suggests nine groups of image features that can transport consumers into a visual story, moderating effects, and outcomes of such transportation. Building on the identified research gaps, the authors also list promising research directions for visual-driven studies.

INTRODUCTION

People get absorbed by well-crafted stories. They dive into a movie plot, empathize with book characters, and forget about time while listening to friends' news. The feeling of being lost in a story, or narrative transportation (Green & Brock, 2000), indicates storytelling power and impact. While much research on text-based storytelling exists, little remains known about storytelling through visuals. The current systematic literature bridges this gap. It identifies nine groups of visual features (with 26 subgroups) that facilitate visual narrative transportation, describes transported viewers' responses, and proposes future research avenues for visual-driven studies.

BACKGROUND

Compared to factual pieces, stories lead to belief change (Van Laer et al., 2014) and ultimately affect narrative consumers' attitudes and behaviors (Escalas, 2004). Existing studies on narrative transportation well-document text features transporting readers into the narrative (Green & Brock, 2000; Van Laer et al., 2014). However, little remains known about how images can lead to such transportation. Since visual and textual processing follow different neural paths (Li et al., 2020), failure to account for the type of media leads to fragmented and conflicting scholarly conclusions in the visual narrative transportation studies (e.g., findings of Farace et al. (2020) and Lim and Childs (2020)).

As an emerging construct, visual narrative transportation lacks actionable and clear conceptualization. To bridge this gap, we systematically review articles from marketing and adjacent fields focusing on visual narrative transportation.

METHODOLOGY

The systematic review followed a three-staged approach. First, we used the search strings to find relevant articles in the citation database Web of Science and scanned their titles and abstracts. Since we aimed to extend the well-established theory of narrative transportation to the visual domain, our search words related to narrative transportation either directly or indirectly, through its antecedents. Then, we sourced additional papers using forward and backward snowballing. Finally, we ran an additional search in the most frequently cited journals from the previous steps. After reading the full texts of 312 papers and applying the inclusion criteria, we were left with 68 relevant articles to review systematically.

FINDINGS

Based on a synthesis of the 68 articles selected during screening, we identified nine groups (with 26 subgroups) of visual features that impact the strengths of visual narrative transportation: people, visual, taboo, objects, background, color, composition, verisimilitude, and dynamism. Characteristics of the advertisement, consumer,

and brand moderate these relationships. Transported viewers elicit emotional (emotions), cognitive (appeal, attitude, comprehension/elaboration, perception, recall, recognition, self-brand connection, experience), and behavioral (choice, consideration, intentions, preferences, price premium, sales) responses.

FURTHER RESEARCH SUGGESTIONS

We propose five clear research avenues for future studies. These are divided into three groups based on their place in the developed conceptual model.

Antecedents

First, reviewed studies mainly focus on high-level visual features as antecedents of visual narrative transportation. High-level visual features are semantically meaningful but difficult to extract and analyze using computational methods. Advanced research methods are repeatedly called for as marketing research priorities (e.g., Grewal et al., 2021), so the gradual transition to automatic analysis of low-level visual features appears a fruitful avenue.

Secondly, scholars tend to explore the effect of a single (vs. several) visual feature at a time. This approach may overlook the effects caused by their interaction. Because human perceptions of some visual features can drastically change in the presence of others (Hagtvedt & Brasel, 2017), we strongly advise conducting comprehensive research that considers the interaction effects among visual features.

Thirdly, the present systematic review focuses solely on one image and omits the effects of external factors. Other images, lighting, haptics, and distraction levels might impact image perception and, thus, transportation into the visual narrative. We invite researchers to study the external environment of visual narrative transportation.

Moderators

We identify moderators of the relationship between visual features and visual narrative transportation in the literature. Yet, other significant moderating effects, for example, cultural aspects, may be explored. Culture-induced associations with visual features may affect perceptions and, thus, the responses of a consumer to a visual narrative.

Consequences

Articles included in the systematic review have predominantly analyzed the effect of visual narrative transportation on behavioral intentions (vs. behaviors). As intentions indicate a willingness to perform a particular behavior, the latter is not guaranteed to occur. We encourage researchers to track actual behaviors occurring due to visual narrative transportation and establish whether and under which circumstances behavioral intentions translate into actual behaviors.

CONCLUSION

Our systematic review of visual-driven studies conceptualizes visual narrative transportation. It identifies nine groups of visual features (with 26 subgroups) that impact visual narrative transportation strengths and lists possible moderators and consequences of such transportation. We also set future research agenda for visual-driven studies by highlighting the existing research gaps and suggesting ways to address them.

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Cryptic Signalling: Hidden Markers of Inclusivity in Service Environments

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EXTENDED ABSTRACT

This study examines the use of implicit badges as a way for service providers to show 'cryptic' support for LGBTQ+ community that is recognised by LGBTQ+ members but not the broader population. Results from three experiments show implicit badges provide cryptic support without alienating other segments of the customer base.

To demonstrate inclusivity and support for LGBTQ+ issues, some firms embrace events such as Pride month, like Starbucks with their large rainbow flag that sits atop their Seattle headquarters. Others, like Amazon, adorn their online portals with rainbow flags, and create special PRIDE stores selling rainbow-striped K-Swiss sneakers. By contrast, some organisations encourage staff, including frontline service delivery personnel, to wear uniform badges (like the rainbow flag pin) that represent a cause.

Badges are one of the ingredients that create a 'symbolic servicescape' (Rosenbaum, 2005), where objects and artefacts evoke similar meanings across the customer base. However, not all badges are created equal. This is because some badges, like the ubiquitous rainbow flag, are 'explicit' representations that are well known across the broader population. In contrast, other 'implicit' badges, such as the pink triangle that today represents support for LGBTQ+ people, are less well known across the broader population but are highly significant to members of the sub-culture. While the use of symbolic badges by staff may represent support and inclusivity, it has the potential to alienate certain customers (Bond and Farrell, 2020). One such group is those who identify as politically conservative.

Prior research (Northey, Dolan, Etheridge, Septianto, & Van Esch, 2020) has shown conservatives experience more negative emotions (such as disgust) than liberals when seeing representations of gender or sexuality in advertisements. As a result, we hypothesise (H1) explicit (vs. implicit) badges will elicit anger in politically conservative individuals. We also hypothesise (H2) when conservatives (vs. liberals) view explicit (vs. implicit) badges, their lower levels of trust and increased levels of anger will have a negative influence on expected service quality.

METHOD AND RESULTS

We test our predictions across a pre-test and three experimental studies. For all experiments, data was collected through a research agency in the United States.

FOCUS GROUPS: Prior to running the pre-test, four online focus groups were conducted to establish which badges were appropriate for the studies. From the focus groups, the traditional 'six-striped' rainbow flag was recognised by all participants as an explicit symbol of LGBTQ+ people and Pride. In terms of an implicit badge, it was found the 'pink triangle' badge was known by most of the LGBTQ+ members but was mostly unknown by the heterosexual participants.

PRETEST: The pretest (n=579) was an exploratory study, using a single factor, one level (badges: implicit/explicit) between subjects design to test the badges as either implicit (pink triangle) or explicit (rainbow flag) representations of LGBTQ+ concepts. Results show the rainbow badge (vs pink triangle) is identified as an explicit (vs. implicit) representation of LGBTQ+ concepts (chi-square = 148.23, df=1, p<.001).

STUDY 1a (n=343) was a one factor, two level (badges/no badges) between subjects design to test whether badges (vs no badges) trigger an emotional response (anger) and identify political ideology as a moderating factor. Results (PROCESS model 1; Hayes, 2018) show when viewing explicit (vs. implicit) badges, political conservatives are significantly more likely to feel anger ($B = -1.85$ t (343) = -4.32, $p = .000$) than politically liberal individuals.

STUDY 1b (n=261) was a 2(badge:implicit/explicit) x 2(service provider gender:male/female) between subjects design to determine which badge (explicit or implicit) triggers an emotional response (anger) within an airline service scenario. Results (PROCESS model 1; Hayes, 2018) specifically show that conservatives (vs. liberals) are more likely to experience anger ($B = .94$, $p = .000$) when viewing an explicit (vs. implicit or 'cryptic') badge. The results provide support (H1) for the hypothesised effects.

STUDY 2 (n=274) was a 2(badge:implicit/explicit) x 2(service provider gender:male/female) between subjects design in a hotel service scenario to increase generalisability and confirm the moderated serial mediation model. Results (PROCESS model 85; Hayes, 2018) show moderated serial mediation was significant (index = -.06; CI -.014 - .001), with conservatives experiencing less trust and increased anger when viewing service personnel wearing explicit (vs. implicit or 'cryptic') badges. In turn, this resulted in lower expected service quality ($B = .94$, $p = .000$) for conservatives (vs. liberals), providing support for H2.

DISCUSSION

This research offers several contributions to theory and practice. First, it builds on prior research involving 'cryptic signalling' (Choong, Drennan, Weeks, & Weber, 2021) by showing cause-related uniform badges that are not widely recognised by the broader population provide a form of 'cryptic' or implicit support for members of the relevant sub-culture. The findings also extend our understanding of political ideology in a marketing context. Our results provide evidence conservatives do not need to view the members of any outgroup to experience negative responses. Instead, conservatives experience the same psychosocial, emotional responses simply by being exposed to badges or artefacts that represent the outgroup.

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Effects of Personalization and Ad Algorithm Disclosure on Perceived Creepiness

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EXTENDED ABSTRACT

Online marketing techniques experienced as creepy repeatedly come into crosshairs of consumer behavior research. In three studies we manipulated levels of personalization and ad algorithm disclosure. Results show that consumers feel unsettled, even creeped out, by over-personalization and disclosure of ad algorithms, which negatively affects attitudes and behavioral intentions.

Online marketing techniques experienced as creepy repeatedly come into crosshairs of consumer behavior research. Specific tracking algorithms enable personalized advertising e.g. by automatically investigating consumers' online "lived behavior" (Grassegger and Krogerus 2017). But do consumers perceive personalized advertising as enriching or do they feel spied on, as current research (e.g. Bermes, Hartmann, and Danckwerts 2020) suggests? Furthermore, we are interested in examining ad algorithm disclosure (AAID) whose effects on consumers' responses are still unclear.

Conducting three studies, we manipulated levels of personalization and AAID. We then tested if the effects replicate when attitude toward a well-known retailer is controlled for (study 2) and when the category of the advertised product changes (study 3). Results show that consumers feel unsettled, even creeped out, by over-personalization and AAID, both negatively affecting attitudes and behavioral intentions.

Langer and König (2018, 3) define creepiness as "a potentially negative and uncomfortable emotional response paired with perceptions of ambiguity toward a person, technology or even during a situation." Creepiness in online behavioral advertising is mostly elicited by activities such as social listening or data-driven marketing or occurs when causal ambiguity is present (Torkamaan, Barbu, and Ziegler 2019). This may be enabled by watermarking technologies which refer to triggering advertisements on mobile devices due to detected sound signals, also due to content spoken out loudly (Segijn and van Ooijen 2021).

Past research (e.g. Farman, Comello, and Edwards 2020) has shown the presence (vs. the absence) of personalization in advertisements to violate consumers' privacy, evoking creepiness and negatively influencing brand attitudes and purchase intentions. However, consumers are rather exposed to a continuum of personalization in online settings. We assumed that [H1] the higher the level of personalization (low vs. medium vs. high), the lower the behavioral intention towards the marketer and this effect to be serially mediated by perceived creepiness (M1) and in turn more negative attitude towards the ad (M2).

For AAID, effects are rather unclear as they may increase ad effectiveness (Kim, Barasz, and John 2019) or consumers responding with creepiness to transparency explanations (whether vague or precise, Eslami et al. 2018). We supported the latter view and assumed that [H2] if information regarding ad algorithms is disclosed (vs. not disclosed), the behavioral intention towards the marketer is lowered and that this effect is serially mediated by perceived creepiness (M1) and in turn a more negative attitude towards the ad (M2) as well as the serial indirect effect of H1 to be reinforced when ad algorithm information is disclosed (vs. not) [H3].

In a pretest ($N=56$) we designed causal ambiguity vignettes varying in perceived personalization and participants were randomly assigned to one of three experimental groups (personalization: low vs. medium vs. high). Participants were instructed to imagine themselves meeting a friend in a coffee shop and discussing their forthcoming move. The subject shows photos on a cell phone of the new flat to his/her friend and

subsequently places the phone somewhere visible. It was indicated that no online mobile search had yet taken place. While conversing, the subject mentions – as well as keeping current furniture – a wish to purchase a new furniture item which varied between the three groups: a red leather sofa vs. a gray armchair vs. a white desk. The mover goes home, checks his/her social media apps and receives an ad from an online furniture store advertising a red leather sofa from a fictitious online brand for all three groups. For the red leather sofa group, the ad exactly depicts the item from the previous conversation, representing high personalization. The gray armchair group reflects medium personalization, because the same product category (living room furniture) is promoted. The white desk group refers to low personalization because a different product category is promoted. However, as mentioned earlier, no previous online search took place, suggesting the coffee-shop conversation may have been spied upon. The three groups differed significantly in perceived personalization and this manipulation (iv personalization) was thus also used for study 1 and 2 which our participants were randomly exposed to (between-subjects design) in our online studies (snowball system). For study 3 (3x2-between-subjects-design), we used the same scenario but changed the product category to kitchen equipment (grill with oven function=high_pers, microwave=medium_pers, dishwasher=low_pers). Manipulation checks confirmed successful experimental manipulations in all studies ($N_{Study_1}=252$, $N_{Study_2}=218$, $N_{Study_3}=312$). AAID was manipulated in only study 3 which participants were either exposed to (in-fographic educating about watermarking) or not.

Results of study 1 (multicategorical serial mediation analysis, sequential coding for iv personalization, Hayes 2018), indicated medium (vs. low personalization) and high (vs. medium personalization) leading to more perceived creepiness, deteriorating attitude and ultimately resulting in less behavioral intention for a fictitious retailer. These serial mediation effects could principally be replicated for a well-known brand (study 2) and for a further advertised product category kitchen equipment (study 3), showing support for H1.

Results of study 3 (PROCESS, model 6), showed AAID (vs. no AAID) leading to more perceived creepiness, deteriorating attitude and ultimately resulting in less behavioral intention (confirming H3) but not attenuating the indirect serial mediation effects of H1 (thus rejecting H3, though only present for participants exposed to AAID when comparing medium to high personalization).

Our research is among the first to manipulate personalization levels and to use a causal ambiguity scenario, showing highly personalized advertising leading to perceived creepiness and thus deteriorating ad attitudes. For AAID, we detected similar negative effects implicating a need for more nuanced and differentiated consumer education approaches. As we covered a rather specific form of personalization, further research will test if the effects generalize to different scenarios (e.g. spying experiences during online searches).

From a theoretical standpoint, our research contributes to the relevance of "creepiness research" and from a consumer protection standpoint we argue that perceived creepiness may serve as a potential warning system of consumers' personal information eventually being tapped.

Considering implications, future research will cover a more equal gender balance (mostly females participated) and findings of scenario technique results must be tested in a field study to enhance external validity.

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How artificial intelligence influences trust and customer orientation in the banking sector

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EXTENDED ABSTRACT

This research examines how financial advice received from an artificial intelligence system (vs. human) influences investment intentions in a retail banking context. Furthermore, it identifies trust and perceived 'customer orientation' as causal mechanisms influencing investment intention, with high involvement as a key boundary condition moderating the effects on investment intention.

Purpose

The global banking sector is huge. In 2021, despite the effects of COVID-19, annual revenue from the global banking system came in above US\$5.5 trillion. Nonetheless, global banking revenues are under intense pressure and the global pandemic has made many banks rethink their strategy and tactics. As a result, there is a digital revolution occurring in the banking sector that is likely to reshape the industry considerably. Specifically, one area where banks have started investing heavily is in the use of artificial intelligence (AI) and automation.

Artificial intelligence has been defined as a system's ability to interpret and learn from external data and use that learning to flexibly adapt to a situation in order to achieve specific goals (Kaplan & Haenlein, 2019). In a banking context, AI allows for robotic process automation that is a quick and simple way for banks to automate a wide range of processes and speed up the processing of big data (Perez-Vega et al., 2021). Till recently though, the use of AI in banking and finance has primarily centred around areas such as asset management, algorithmic trading, credit underwriting and blockchain-based finance as a way to drive cost reductions and productivity enhancements (OECD, 2021). However, recent years have seen a number of fintech companies leading a wave of disruption in the financial services industry (Rosenbaum, 2022). Central to this disruption has been the growth in Robo-advisors, which are digital platforms that provide automated, algorithm-driven financial advice with little or no human supervision (Frankenfield, 2022). In the US alone, it is projected Robo-advisors will soon be managing over \$1 trillion of Americans' wealth (Iacurci, 2022). Part of this growth may be attributed to the fact the ease and usefulness of Robo-advisors has a positive influence on attitudes towards and adoption of the technology (Belanche et al., 2019). However, recent research (Zhang et al., 2021) has suggested consumers prefer human advisers with high expertise over Robo-advisors. That said, there is currently limited understanding why this might be the case.

In summary, this research examines how financial advice received from an artificial intelligence system (vs. human) influences investment intentions in a retail banking context. Furthermore, it identifies trust and perceived 'customer orientation' as causal mechanisms influencing investment intention, with high involvement as a key boundary condition moderating the effects on investment intention.

As such, we propose the following hypotheses:

Hypothesis 1: In a finance context, human (vs. AI) investment advice will have a positive (negative) influence on intention to invest when involvement is high.

Hypothesis 2: In a finance context, human (vs. AI) investment advice will have a positive (negative) influence on trust when involvement is high, which results in higher (lower) investment intention via customers' perceived customer orientation.

To answer these questions, the current research set out to examine how financial advice provided by a human advisor (vs. AI-driven Robo-advisor) influences investment intentions in a retail banking context.

METHODOLOGY AND ANALYSIS

We test our predictions across two experimental studies.

Study 1 was a 2(Financial Advice: Human/Robo-advisor) x 2(Involvement: high/low) between-subjects experiment. Participants (n=165) were recruited through a research agency in the United States (mean age=37yrs; 63.6% male). Two fictitious scenarios were created by the authors for the experiment, based upon the fictitious financial planning service provider "Moneymaker". The AI vs Human (B= 1.67, p<.007) and Investment Involvement manipulations (B= 1.55, p<.012) had significant direct effects on intention to invest.

Study 2 replicated S1, designed as a 2(Financial Advice: Human/Robo-advisor) x 2(Involvement: high/low) between-subjects experiment. The results demonstrate the type of financial advisor (B= .90, SE=.36, p=.013) and level of Involvement (B= .99, SE=.36, p=.006) had a significant negative direct effect on belief in financial advice. Further, as predicted the two-way interaction between financial advisor (Human vs Robo-advisor) and level of involvement (high vs low) was significant (B= -.54, SE=.23, p=.019), providing initial support for H2.

GENERAL DISCUSSION

The current research examined how the source of financial information received by an investor influences their investment decisions. The results from two experiments provide strong evidence that when consumers receive investment advice from an AI-enabled system (rather than from a human), it reduces their intention to invest.

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Rational Addiction in Mobile Consumption

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EXTENDED ABSTRACT

In two pre-registered RCTs, we investigate how (forward-looking or myopic) consumers respond to monetary incentives offered to reduce smartphone usage. Our results provide support for the theory of rational addiction (forward-looking habit formation) and show that pre-announcing future targets and incentives can be a cost-effective intervention to kickstart behavioral change.

Understanding how to incentivize consumers to change a behavior depending on the nature of inter-temporal consumption is important for marketers. We develop a model that examines how a (forward-looking or myopic) consumer responds to temporary monetary incentives offered to reduce the consumption of a good depending on the nature of inter-temporal consumption (habit forming or satiating). We empirically test our predictions in the domain of mobile usage since many consumers would like to reduce their smartphone usage but fail to do so.

Excessive smartphone usage has become a growing concern across the world. The average consumer now spends around four hours every day looking at their smartphone. Cross-sectional and longitudinal studies have shown negative associations between screen time and academic performance (Giunchiglia et al., 2018), performance at work (Liu, Ji, & Dust, 2020) as well as wellbeing (Twenge & Campbell, 2019) and sleep (Hisler, Twenge, & Krizan, 2020).

Based on theory of rational addiction (Becker & Murphy, 1988), we empirically test if pre-announcing targets and incentives for future screen time reduction can reduce current usage even when subjects are not yet incentivized. Rational addiction implies that people are forward-looking and rational when forming a habit (i.e., maximizing lifetime utility by taking into consideration future consumption; (Becker & Murphy, 1988). This implies that incentives paid in the future to encourage behavior change could lead consumers to anticipate and change their behavior even prior to receiving incentives. Thus, one could cost-effectively instigate behavioral change in the present by incentivizing behavior in the future.

METHODOLOGY

We conducted a pre-registered RCT ($N = 110$; 74 females; $Age = 21.1$, $SD = 2.25$) at a international university with the aim to reduce the mobile screen time of our subjects by 25% from baseline usage, by providing monetary incentives and targets. After a baseline period of seven days, we randomized subjects into three conditions: 1) Control (C) condition, 2) Full Incentives (FI) treatment, 3) Anticipated Incentives (AI) treatment. Subjects in the C condition ($N = 33$) had no targets or monetary incentives. Subjects in the FI treatment ($N = 39$) were paid 2€, for each day during period 1 and 2 (nineteen days) whenever their screen time was at least 25% lower than their baseline. Conversely, subjects in the AI condition ($N = 38$) were paid 2€ for each day only during period 2 (ten days) whenever their screen time was at least 25% lower than their baseline usage. Importantly, subjects in the AI condition were informed about their period 2 incentives and targets at the beginning of period 1 itself, nine days prior to period 2. In the post-treatment period, we removed the targets and incentives. We collected individual-level panel data on daily mobile screen time over the entire course of the study. A

follow-up study was also conducted focusing only on AI and C condition to replicate the results of the first study.

RESULTS

We find that when future targets and incentives are pre-announced, subjects behave in a forward-looking (rather than myopic) manner and reduce their mobile usage as predicted by habit formation models even before they are actually incentivized to do so (rather than increase consumption as predicted by satiation models). Using difference-in-difference OLS regressions, we find that subjects in the FI condition not only reduced their screen time during the incentive periods but also sustained a lower usage than the control condition during the post-treatment period. Importantly, subjects in the AI condition anticipated and pre-emptively reduced their smartphone usage (compared to the C condition) in period 1, even prior to the incentivized period 2. This anticipatory reduction was primarily driven by heavy users of smartphones (i.e., those with higher baseline usage). Consistent with predictions of habit formation, we show that the reduction in post-treatment usage is driven mainly by subjects who have lower usage during the treatment periods. The results of a follow-up RCT replicate and supplement the findings of RCT 1.

DISCUSSION

Our RCTs provide an empirical demonstration of rational addiction. We identify the subject group that responds to future incentives (in our case heavy mobile users). In addition, we precisely estimate the effect of anticipated vis-à-vis actual incentives in inculcating and sustaining a behavioral change. For marketers, this is important because anticipation treatments could effectively support the most vulnerable (heavy) users at a lower cost.

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Spending the most on those who need it the least: Gift-givers buy more expensive gifts for affluent recipients

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EXTENDED ABSTRACT

Gift-giving is a widespread prosocial behavior. Typically, in prosocial activities, consumers favor helping those in need. However, we show that when giving gifts, consumers spend more on relatively wealthy (vs. unwealthy) recipients. We also shed light on the psychological processes that lead gift-givers to act this way.

Gift-giving is a widespread prosocial behavior. Typically, in prosocial activities, consumers favor helping those in need. However, we posit that when giving gifts, consumers spend more on gifts for wealthy (vs. unwealthy) recipients.

When buying gifts, givers are influenced by various motives, which can be categorized as other-oriented (i.e., altruistic) or self-oriented (i.e., egoistic; Austin & Huang, 2012). During a gift-giving decision, a giver may be influenced by both types of motives simultaneously (Sherry, 1983). Typically, the two sets of motivations work in opposite directions (e.g., Givi & Galak, 2020). However, we show that, in the current setting, an other-oriented and a self-oriented motive work in tandem to produce the same outcome: givers spending more on relatively wealthy (vs. unwealthy) recipients (**H1**).

First, we propose that givers purchase more expensive gifts for wealthy (vs. unwealthy) recipients due to an other-oriented motive—a desire to select a well-liked gift. It is well-established that consumers' preferences are influenced by their financial status (e.g., Dubios & Duquesne, 1993). Anticipating this correlation, when deciding between expensive and less expensive gifts, givers should be more likely to purchase the former when the recipient is wealthy (vs. unwealthy), because they should see wealthy (vs. unwealthy) recipients as having stronger preferences for expensive gifts (**H2**).

Second, we suggest that givers purchase more expensive gifts for wealthy (vs. unwealthy) recipients due to a self-oriented motive—a desire to signal financial status. Consumers have an innate desire to signal being of high status (e.g., high financial status; Argyle 1994). Individuals sometimes use gift-giving as a means to signal high financial status; specifically, they give flashy and expensive gifts (van de Ven, 2002). The desire to signal high financial status can be influenced by the consideration of the recipient's feelings (Arnett & Sidanius, 2018). While sending a signal of high financial status to a wealthy person likely has only a minimal effect on how the other person feels about themselves, conveying this type of signal to someone who is unwealthy makes them feel quite bad because it highlights their low financial status. Thus, givers should be less (vs. more) likely to choose an expensive gift when the recipient is unwealthy (vs. wealthy), because they are less (vs. more) motivated to signal being of high financial status (**H3**).

Across three studies, we tested our hypotheses. All experiments employed one between-subjects factor (Recipient: *Wealthy* vs. *Unwealthy*). In Study 1, participants imagined they were purchasing a gift for their friend, Jordan, and learned information about Jordan, including Jordan's salary (\$25,000 vs. \$250,000) and filler material. Then, participants read a vignette in which they were buying an Amazon gift card for Jordan's birthday and were asked to 1) indicate what priced Amazon gift card they would purchase for Jordan (open-ended), and 2) choose which of three Amazon gift cards (\$20, \$40, or \$60) they would buy for Jordan. Analysis of the open-ended dependent measure indicated that participants spent 29% more when the recipient was wealthy versus unwealthy ($M_{Wealthy} = 59.38$, $SD_{Wealthy}$

$= 34.15$ vs. $M_{Unwealthy} = 46.17$, $SD_{Unwealthy} = 28.58$; $F(1, 179) = 7.91$, $p = .005$). In the *Wealthy* condition, 51.6% of participants chose the \$60 card, 29.0% chose the \$40, and 19.4% chose the \$20 gift card, whereas in the *Unwealthy* condition, 33.0% of participants chose the \$60, 36.3% chose the \$40, and 30.7% chose the \$20 gift card (Wald $\chi^2(1, N = 181) = 6.51$, $p = .011$). Participant income had no effect in any of the three studies and is not further discussed.

In Study 2, participants read Jordan's salary (\$35,000 vs. \$280,000) and filler information, and chose between a \$25 and a \$50 Amazon gift card for Jordan's birthday. Participants then indicated how much Jordan would like each of the two gift cards (1-7 scale). We created a "liking difference" measure by subtracting participants' liking ratings for the \$25 card from the \$50 card. Participants also indicated how motivated they were to appear wealthy to Jordan when buying the gift (1-7 scale). On average, participants spent roughly 57% more when the recipient was wealthy versus unwealthy ($M_{Wealthy} = 63.81$, $SD_{Wealthy} = 39.87$ vs. $M_{Unwealthy} = 40.53$, $SD_{Unwealthy} = 20.81$; $F(1, 292) = 39.98$, $p < .001$). Additionally, 79.0% of participants in the *Wealthy* condition chose the \$50 card compared to only 54.3% in the *Unwealthy* condition (Wald $\chi^2(1, N = 294) = 19.32$, $p < .001$). Bootstrapped mediation revealed that, both "liking difference" (95% CI = [.01, .64]) and signaling (95% CI = [.04, .45]) mediated the discrepancy in choices across the two conditions.

In Study 3, participants read filler information as well as Jordan's salary (\$40,000 vs. \$300,000), chose between a \$10 and a \$50 bottle of wine as Jordan's winter holiday gift, and completed mediator measures like the ones from Study 2. 81.6% of participants in the *Wealthy* condition chose the \$50 bottle of wine compared to 57.6% in the *Unwealthy* condition (Wald $\chi^2(1, N = 273) = 17.86$, $p < .001$). Bootstrapped mediation revealed that both the "liking difference" (95% CI = [.01, .64]) and signaling (95% CI = [.42, 1.51]) mediated the discrepancy in choices across the two conditions.

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The Numerical Processing Likelihood Model

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EXTENDED ABSTRACT

The authors reconcile conflicting findings on how numeracy relates to numerical biases by proposing the numerical processing likelihood model. More numerate individuals emphasize relative representations of information when tasks call for it, but absolute representations to a greater degree on other tasks, leading to predictably less or more bias.

A key numerical information processing bias is the unit effect, in which a difference that is represented with a larger number is perceived as greater than the same difference represented with a smaller number (Pandelaere et al. 2011).

Because the unit effect stems from absolute processing of the numbers by neglecting the units in which information is expressed, many researchers hypothesize that the unit effect should be weaker for those who are more numerate, who possess a greater “ability to process basic probability and numerical concepts” (Burson et al. 2009; Cadario, Parguel, and Benoit-Moreau 2016; Peters et al. 2006; Tangari, Burton, and Davis 2014). However, while Tangari et al. (2014) found a weaker unit effect among the more numerate, Cadario et al. (2016) found a *stronger* unit effect. Prior theory cannot account for this reversal.

The unit effect stems from over-relying on the absolute difference between numbers. However, a substantial amount of prior marketing research highlights the emphasis consumers place not on absolute differences but on relative differences (Hsee, Yu, Zhang, and Zhang 2003; Kwong and Wong 2006; Wong and Kwong 2005). A new theory of numerical cognition ought to offer insights on variation in both the unit effect and proportional sensitivity.

We propose that differences in the way the more (vs. less) numerate process numerical comparisons lead to either a larger or smaller unit effect and proportional sensitivity. The Numerical Processing Likelihood Model is a motivation-ability model – the motivation and ability to process numerical information in particular ways conjointly determine how that numerical information affects perceptions. Specifically, the weights applied to the absolute and relative difference representations depend on an individual’s motivation and ability to focus on either representation. Some tasks motivate a greater comparative focus on the absolute difference, while other tasks motivate a greater comparative focus on the relative difference. Some individuals have a greater ability to discriminate between these task types than others. The Numerical Processing Likelihood Model predicts an interaction between motivation and ability such that more capable people should prioritize the appropriate difference representation. This leads to smaller or larger unit effects for the numerate (compared to the less numerate), depending on the motivation to rely on relative vs. absolute differences, respectively. Our theory also brings proportional sensitivity under the same umbrella, suggesting that sometimes the more numerate will exhibit stronger proportional sensitivity, while at other times they will not. We test this new theory of numerical cognition in five studies (two preregistered).

In Study 1 (N=200), participants were assigned to a 2 condition (scale: contracted, expanded) between-subjects design, which used the same scenario as Pandelaere et al. (2011, Study 5). We expected individuals to view this as a relative task. Afterward, participants responded to the objective numeracy scale (Weller et al. 2013; $\alpha=.84$). A multilevel regression model of ln-WTP revealed that the more numerate were more sensitive to the proportional difference (interaction, $b=.57$, $p<.001$) and exhibited an attenuated unit effect (interaction, $b=-.29$, $p=.002$).

Study 2 (N=200) was preregistered (<https://aspredicted.org/blind.php?x=wj7pj6>); participants were assigned to a 3 comparison type (low single [e.g., 1 vs. 2], high hundred [e.g., 100 vs. 200], high single [e.g., 101 vs. 102]) within-subjects design. The low single vs. high hundred contrast tests the unit effect, while the low single vs. high single contrast tests proportional sensitivity. Participants were told they would be comparing two machines on the basis of how quickly they can produce units, which was expected to induce an interest in relative improvement. They reported their perceived difference and completed the numeracy scale ($\alpha=.69$). We modeled the effects of comparison type, (mean-centered) numeracy, and their interaction as fixed, with a random intercept per participant. The unit effect was significantly weaker for the more numerate (DID [difference-in-differences]= -22.06 , $p<.001$). Proportional sensitivity was significantly stronger for the more numerate ($DID=-29.12$, $p<.001$).

Study 3 (N=196) was also preregistered (<https://aspredicted.org/blind.php?x=pi2ew6>) and followed the same format as Study 2, except participants compared two telephone queues on the basis of wait times, which was expected to induce an interest in the absolute difference (numeracy $\alpha=.69$). The unit effect was significantly stronger for the more numerate ($DID=6.85$, $p=.007$). Proportional sensitivity did not significantly differ across numeracy levels ($DID=-2.53$, $p=.315$).

Study 4 (N=152) tested whether this discrimination in weighting across task types was intentional. Participants were assigned to a 2 task type (more absolute, more relative) within-subjects design. Within each task type, participants saw two situations and rated the extent to which the absolute or relative difference was more important for each and numeracy ($\alpha = .72$). There was a task type x numeracy interaction ($p < .001$). More numerate (+1SD) individuals were more discriminating across task types ($M_{\text{absolute}}=2.17$ vs. $M_{\text{relative}}=4.28$, $p<.001$) than less numerate (-1SD) individuals ($M_{\text{absolute}}=2.84$ vs. $M_{\text{relative}}=3.80$, $p<.001$).

Study 5 (N=603) examined how discriminating about the tasks affects the response patterns depending on participants’ numeracy by manipulating task type within the design. We used a 3 comparison type (low single, high hundred, high single) between-subjects design, and participants were presented with both task types – an absolute sports situation and relative transmission situation – and tasked with evaluating the difference between these numbers. They also reported absolute-relative perception and numeracy ($\alpha=.72$).

We again found the hypothesized task type x numeracy interaction on absolute-relative perception ($p<.001$). For perceived differences, the attenuation of the unit effect for relative (vs. absolute) tasks was greater among the more numerate, consistent with our theorizing that they would discriminate across task types to a greater degree (DDD [difference-in-difference-in-differences]= -11.82 , $p=.005$). Likewise, the accentuation of proportional sensitivity for relative (vs. absolute) tasks was greater among the more numerate ($DDD=8.50$, $p=.053$).

We contribute to the literature on numerical cognition by presenting the Numerical Processing Likelihood Model and showing that individuals are selective of their processing approach when making evaluations, depending on the task involved and their level of numeracy. As a result, the more numerate can be less or *more* biased than the less numerate, depending on the type of processing that is required for a task.

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Understanding What Cringe Is and Why We Want to Talk About It

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EXTENDED ABSTRACT

While many consumers can relate to “cringeworthy” experiences, no research has examined its causes and consequences. We find that cringe occurs when a consumer observes an actor who inappropriately attempts to curry social favor. We also show that consumers want to share cringeworthy experiences with others via word-of-mouth.

What makes an action cringeworthy? Although research on cringe as an emotion is scant, it is an experience that resonates with many people. Drawing from work investigating vicarious embarrassment (e.g., Paulus et al. 2018), we define cringe as a novel form of vicarious embarrassment in which an observer is in a state of emotional discomfort due to an external entity (e.g., a person or brand) miscalculating the appropriate way to curry social favor that—instead of gaining social favor—acts in a way negatively violating established social norms.

This conceptualization of cringe shares characteristics of both vicarious and “traditional” embarrassment (Krishna et al. 2019), including feelings of social discomfort and negative emotional valence. However, the present research hypothesizes two appraisal dimensions (Smith and Ellsworth 1985) through which cringe differs from vicarious and traditional embarrassment. The first appraisal dimension is the source of the social transgression (self vs. other) while the second is whether the entity miscalculated the appropriate way to gain social favor (no vs. yes). The first appraisal dimension distinguishes vicarious embarrassment and cringe from traditional embarrassment, while the second dimension distinguishes cringe from vicarious embarrassment.

When appraising that one miscalculates the proper way to curry social favor, we hypothesize that the observer should feel an elevated sense of social savviness due to perceiving themselves as more socially savvy than the transgressor. Additionally, while vicarious embarrassment is associated with feelings of empathy (Krach et al. 2011), we predict the observer will have a negative attitude towards the offending entity when observing cringe. Therefore, both an elevated sense of social savviness and a negative attitude towards the transgressor are unique to cringe, distinguishing it from vicarious and traditional embarrassment.

If cringe momentarily enhances one’s sense of social savviness, it may also lead consumers to share cringeworthy experiences as a form of self-enhancement. That is, consumers will share the cringeworthy actions of another entity in order to bolster their own social standing via downward social comparisons (Gibbons and Buunk 1999; Hogg 2000). Indeed, discussing cringeworthy behavior reinforces their own social status while highlighting their understanding of the appropriate way to gain social favor.

Study 1 tests the similarities and distinctions between cringe, embarrassment, and vicarious embarrassment. Participants were assigned to a single factor (emotion: neutral, embarrassment, vicarious embarrassment, cringe) between-subjects design. They read a scenario about a coffee shop, wherein they witnessed another customer behave in a way eliciting one of the target emotions. As predicted, results revealed cringe was elicited when (1) one observed an actor committing a social transgression and (2) one appraised the actor miscalculated the proper way to gain social favor. Observing cringe

also heightened senses of social awareness and increased negative attitudes towards the actor (all p 's < .001).

Study 2 tests the effect of cringe on word-of-mouth behavior in an advertising context and the mechanism of boosted social savviness. This study used a single-factor (ad type: neutral, cringe) between-subjects design. Participants were asked how likely they would be to share the ad and how socially aware they felt compared to others. Participants reported a greater likelihood to share the cringeworthy ad ($M = 3.14$ vs. $M = 2.38$; $t(195) = -2.74$, $p = .007$) and elevated social savviness after viewing the cringeworthy ad ($M = 3.87$ vs. $M = 2.46$; $t(195) = -5.03$, $p < .001$). Hayes’ (2018) PROCESS Model 4 revealed that our elevated social savviness mediated the effect on sharing ($B = .59$, 95% CI: .32, .95).

Study 3 tested a potential moderating factor of social comparisons: if consumers share cringe to highlight their own social standing, then the tendency to share should be amplified for consumers who naturally engage in more social comparisons. Thus, participants reported their natural tendency to engage in social comparisons (Gibbons and Buunk 1999) before completing a similar task as study 2. Specifically, participants saw one of two ads (type: bad, cringe) and completed the same measures as study 2. Results revealed a significant interaction between advertisement type and social comparison tendency ($B = .98$, $t = 3.23$, $p = .001$). Participants with a lower tendency for social comparisons more likely to share the cringeworthy ad ($M = 3.12$) than the bad ad ($M = 1.60$; $B = 1.52$, $t = 6.45$, $p < .001$). Participants with high social comparisons were even more likely to share the cringeworthy ad ($M = 4.01$) than the bad ad ($M = 1.41$; $B = 2.60$, $t = 11.01$, $p < .001$).

Study 4 examined consumers’ tendency to share cringe depending on whether the cringeworthy act originated from one’s in-group or out-group. Using self-brand connections (Escalas and Bettman 2003), participants were asked how closely they associated with several brands, including Tesla. Participants were then assigned to one of two conditions (article: neutral, cringe) to read a news article about Tesla CEO Elon Musk. We predicted that sharing cringeworthy experiences would be amplified for those with low self-brand connections to Tesla since the article bolsters one’s social standing without self-indictment, but lower sharing for those high in self-brand connection. Results revealed participants with a lower self-brand connection were more likely to share the cringeworthy article ($M = 3.26$) than the neutral ($M = 2.46$; $B = .79$, $t(334) = 3.29$, $p = .001$), whereas participants highly identified with Tesla (+1 SD) showed no difference in their likelihood of sharing the articles ($p = .73$). Furthermore, the cringeworthy article elevated participants feelings of social savviness ($B = 1.21$, 95% CI: .87, 1.54) in all cases, but increased social savviness resulted in elevated sharing of the cringeworthy article at low levels of connection to the brand ($B = .43$, 95% CI: .28, .57) but not at high levels (95% CI: -.04, .28).

This research establishes what cringe is and how it motivates word-of-mouth behavior through an elevated sense of social savviness. Our work contributes to the emotions literature by conceptualizing the emotion cringe and delineating it from other forms of embarrassment, while also showing that cringe increases word-of-mouth sharing.

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Experience for Me, Material for You: Consumers Underestimate the Experiential Advantage for Others (vs. Self)

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EXTENDED ABSTRACT

Despite evidence suggesting the hedonic benefits of experiential purchases over material purchases (Weingarten and Goodman 2021), consumers continue to buy material goods for others. For instance, consumers predominantly choose to give material gifts, despite the social and hedonic benefits of giving experiential gifts (Chan and Mogilner 2017; Goodman and Lim 2018; Yang, Koo, and Hwang 2022). Why are consumers not making more experiential purchases for others? Do they fail to predict the experiential advantage for others (vs. themselves)?

We examine these questions and propose an asymmetry in how consumers perceive others' materialism compared to themselves, which results in consumers' underestimation of the experiential advantage for others (vs. themselves). Our research builds on the better-than-average effect, which demonstrates that people are motivated to evaluate themselves more favorably relative to others (Alicke and Govoron 2005; Brown, 2012). Materialism is often viewed as an unfavorable personality trait (Van Boven, Campbell, and Gilovich 2010); thus, we expect people to view themselves as less materialistic than others. Based on this process, we propose that consumers believe that others will enjoy experiences (vs. material goods) less than themselves (studies 1 and 2) and that this belief is due to the biased perception that others are more materialistic than themselves (study 3 and 4).

Study 1 was designed to provide an initial test of whether gift givers and recipients have a different view of happiness from experiential (vs. material) gifts. The study manipulated perspective (giver vs. recipient) across participants and measured gift type (1=material to 7=experiential). We asked participants to write down a specific gift that they recently either gave or received, depending on condition. Then, participants assessed the happiness from the gift (Nicolaio, Irwin, and Goodman, 2009), such that recipients rated their own happiness and gift givers estimated the happiness of the recipients. Then, participants indicated whether they perceived the gift as more experiential or more material. We found a significant interaction between perspective and gift type ($B = .066, t = 2.22, p = .027$). For gift recipients, experiential gifts were associated with greater happiness than material gifts ($B = .10, t = 2.35, p = .02$). Gift givers, however, did not predict that more experiential gifts would lead to more happiness than material gifts ($B = -.03, p = .43$).

Study 2 extends this finding beyond gift giving and examines whether people believe they are more likely to make an experiential (vs. material) purchase in the pursuit of happiness compared to others. After reading the definition of material and experiential purchases, participants answered two questions, one for the others and one for the self (order counterbalanced): They rated (1) which purchase (9 = material, 1 = experiential) others would be most likely to make to increase their happiness and (2) which purchase they would be most likely to make to increase their happiness. As expected, participants thought that other people would be more likely to make a material (vs. experiential) purchase to increase their happiness ($M_{\text{other}} = 5.27$) compared to themselves ($M_{\text{self}} = 4.30; F(1,288) = 30.14, p < .001$).

Studies 3 and 4 examined the better-than-average process underlying this self-other asymmetry of experiential consumption. We proposed that consumers would view themselves as less materialistic

than others due to the self-serving bias. If this is the case, the self-other asymmetry should be mitigated for (1) consumers who do not perceive materialism as negative (i.e., consumers high on material values; study 3), and (2) consumers who do not perceive others as more materialistic than themselves (study 4).

To test our theory, study 3 examined moderation by consumers' material values. We randomly assigned participants to one of two perspective conditions (self vs. other, between-subjects) and measured material values. Depending on condition, participants indicated which purchase either they or most other people would be more likely to make to increase their happiness. Lastly, participants completed the Material Values Scale (MVS; Richins 2004). We found a marginal interaction between perspective material values ($B = .42, t = 1.90, p = .06$). For less materialistic people (-1 SD), we replicated our previous findings: participants thought that other people were less likely to make an experiential (vs. material) purchase to increase their happiness compared to themselves ($B = -.60, t = 3.02, p = .003$). For more materialistic people (+1 SD), however, this self-other difference was eliminated ($B = -.07, t = .34, p = .74$).

Study 4 further examines self-other asymmetry in perceived materialism by measuring not only participants' material values, but also participants' perception of others' material values. The study design was similar to study 3, but with added questions measuring material values for "most other people." First, we examined whether participants viewed themselves as 'better-than-average' in terms of their materialism by examining the MVD score (materialism of others -materialism of the self). Consistent with the better-than-average effect, we found that a MVD score was significantly greater than zero ($M = .81; t(314) = 20.24, p < .001$), suggesting that participants rated others as higher in material values compared to themselves. Second, we examined whether this self-other misperception in material values moderates the self-other asymmetry in the experiential advantage. As predicted, we found a significant interaction between perspective and MVD ($B = -.75, t(311) = 6.97, p < .001$). Specifically, participants predicted that others would prefer an experiential (vs. material) purchase less compared to themselves as they perceived other people as more materialistic than themselves.

In sum, the current research identifies a self-other bias towards materialism perceptions, whereby consumers feel that others are more materialistic than themselves. This effect leads consumers to mistakenly underestimate the experiential advantages for others relative to the self, leading consumers to choose more material purchases for others. The results provide important practical and theoretical implications for gift giving, perceptions of materialism of others, and experiential consumption.

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Luxury Tiers: The Curvilinear Effect of Luxury Consumption on Perceived Competence

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EXTENDED ABSTRACT

Prior research suggests consumers' perceived competence increases with luxury consumption. By contrast, we demonstrate an 'inverted-U' relationship whereby consumers' perceived competence is greatest when consuming moderate (vs. low, high) luxury goods. This result arises from attributions tethered to intrinsic motivation and has implications for both marketers and consumers.

Luxury consumption produces positive social evaluations beyond personal value to the consumer. For example, observers gave more preferential treatment (e.g., higher salaries, compliance, donations) toward individuals when they wore luxury brands because they perceived the individual to have higher status (Lee, Ko, and Megehee 2015; Nelissen and Meijers 2011; Sundie et al. 2011; Wang and Griskevicius 2014). This prior research implicitly suggests that luxury consumption would also offer a positive and linear relationship with one's competence since both are agentic traits that appear to move in parallel in social evaluations (Bellezza, Gino, and Keinan 2014; Fiske et al. 2002).

However, although both status and competence are agentic traits, we argue they are not inherently interchangeable. Status is concerned with one's position within society, whereas competence is concerned with one's skills and abilities (Abele et al. 2016; Carrier et al. 2014; Fiske et al. 2007). However, luxury consumption has largely ignored understanding the differential impact of these two constructs. We submit that, in some cases, this distinction would be less important because status and competence do covary. This might be particularly true when researchers look at simple comparisons between binary categories (i.e., non-luxury versus luxury goods) which only allow for testing and predicting linear relationships. Yet, in practice, it is not as straightforward as brands being either categorically non-luxury or luxury; brands or products can fall within various luxury tiers (Chung and Kim 2020). For example, within the backpack category, JanSport, Samsonite, and Prada represent lower (or non-luxury), more moderate luxury, and higher luxury, respectively.

We propose the concept of "luxury tiers" allows for novel predictions about the relationship between luxury consumption and perceived competence (vs. status). Whereas luxury consumption should positively and linearly affect status perceptions due to associated financial costs, we predict that luxury consumption will exert a curvilinear or 'inverted-U' relationship on perceived competence. Consumers should be perceived as more competent when wearing or using moderate-luxury brands, compared with both low- and high-luxury brands. We hypothesize and explain that this curvilinear relationship is a result of inferred intrinsic motivation (Sun, Bellezza, and Paharia 2021; Wang 2022). Perceived competence is a well-established function of intrinsic motivation (Bandura 1982; Deci 1975). We predict moderate-luxury consumers should be perceived as the most competent because moderate-luxury goods strike a balance between having high product quality (i.e., an intrinsic reason for consumption) but not an excessive amount of brand status (i.e., an extrinsic reason for consumption that undermines one's intrinsic motivation).

We test our theorizing across three experiments using various product categories (e.g., clothing, wine) and different luxury cues (e.g., price, brand name).

In experiment 1, participants ($N = 300$ MTurk) saw a backpack for a fictitious brand "Oasis" and were asked to evaluate the person who owns the product. We manipulated luxury via the price of the product: low (i.e., \$9.99), moderate (i.e., \$39.99), and high (i.e., \$299.99). Participants rated their perception of the consumer's competence ($\alpha = .95$; Brambilla et al. 2011) and status ($\alpha = .98$; Cannon and Rucker 2019). In line with prior work (Nelissen and Meijers 2011), a oneway ANOVA revealed a significant linear effect of luxury consumption on perceived status ($M_{\text{low}} = 2.56$, $M_{\text{moderate}} = 3.30$, $M_{\text{high}} = 5.29$; $F(2, 297) = 99.72$, $p < .001$). Importantly, a oneway ANOVA also revealed a significant curvilinear effect of luxury consumption on perceived competence ($F(2, 297) = 3.23$, $p = .041$). The consumer was perceived as more competent in the moderate-luxury condition ($M = 4.95$) than in both the low-luxury ($M = 4.56$; $t(196) = 2.47$, $p = .014$) and high-luxury conditions ($M = 4.62$; $t(196) = 1.99$, $p = .048$).

In experiment 2, participants ($N = 501$ Prolific) were asked to evaluate the host of a dinner party serving wine. Participants were randomly assigned to one of nine luxury tiers operationalized via the price of the wine (e.g., \$6.99, \$26.99, \$96.99). Participants rated their perception of the consumer's competence ($\alpha = .94$) and status ($\alpha = .97$) using the same items as in the previous study. In line with prior work, there was only a positive linear effect of luxury consumption on perceived status ($\beta = 0.39$, $t = 3.51$, $p < .001$). In contrast, there was a curvilinear effect of luxury consumption on perceived competence ($\beta = -0.02$, $t = -2.14$, $p = .03$).

Experiment 3 provides evidence of the psychological process and operationalizes luxury using real brand names. Participants ($N = 300$ MTurk) were randomly assigned to view and imagine the owner of one of three backpacks: low or non-luxury (i.e., JanSport), moderate (i.e., Samsonite), and high (i.e., Prada). Participants rated the perceived competence of the backpack owner ($\alpha = .93$). Then, participants indicated their perceptions the consumer purchased the backpack for intrinsic reasons ($\alpha = .90$; e.g., quality, enjoy its features) and extrinsic reasons ($\alpha = .96$; e.g., to impress others, prestige). A oneway ANOVA revealed a significant effect of luxury consumption on perceived competence ($F(2, 297) = 10.99$, $p < .001$). The consumer was perceived as more competent in the moderate-luxury condition ($M = 5.34$) than in the low-luxury ($M = 5.05$; $t(198) = 2.11$, $p = .036$) and high-luxury conditions ($M = 4.68$; $t(198) = 4.77$, $p < .001$). To provide evidence of the psychological process, we ran a sequential contrast coded multicategorical mediation using the PROCESS macro for SPSS. Intrinsic motivation mediated the effect of luxury consumption on perceived competence (moderate vs. low luxury: $\beta = 0.18$, bootstrapped 95% CI = [0.03, 0.34]; high vs. moderate luxury: $\beta = -0.63$, bootstrapped 95% CI = [-0.84, -0.45]). Extrinsic motivation did not significantly mediate the effects.

In conclusion, studying luxury tiers can reveal the occurrence of curvilinear relationships. In this research, consuming moderate-luxury goods provides a stronger signal of competence than both low- and high-luxury goods. We also provide evidence for the psychological mechanism: inferred intrinsic motivation. Our research demonstrates the importance of moving from studying luxury in a binary fashion (i.e., non-luxury vs. luxury) to studying luxury tiers.

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Economic Inequality Shapes Consumers' Engagement in the Sharing Economy

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EXTENDED ABSTRACT

Four mixed-method studies ($N=83,626$) find that economic inequality lowers user-provider interpersonal trust, thus discouraging consumers from using and contributing to the sharing economy. Our results suggest that rising or statically high economic inequality could hinder the long-term development of the sharing economy by hurting demands and supplies.

The sharing economy has boomed in the past decade. The literature has identified extrinsic and intrinsic motives for using the sharing economy, as well as, how they interact with other antecedents such as demographic segments, types of shared assets, and characters of platforms (e.g., high vs. low con-sociality) (e.g., Benoit et al. 2017; Milanova and Mass 2017; Perren and Kozinets 2018). In this research, we aim to identify a fundamental socioeconomic antecedent (vs. individual or platform-level antecedents) and examine how it affects consumers' engagement, which incorporates *usage*—the focus of prior research and *contribution*—an understudied aspect yet critical to the success of the sharing economy.

We propose that economic inequality in a region (e.g., state, country) discourages consumers from engaging in the sharing economy in the region because it undermines their interpersonal trust in providers or users from the region, which is a crucial driver of the sharing economy. We conducted four mixed-method studies ($N=83,626$) in multiple contexts of the sharing economy (e.g., p2p lending, lodge-sharing, and ridesharing), and adopted various operationalizations of economic inequality and measures of consumers' engagement.

In study 1, we constructed and analyzed an archival dataset ($N=83,115$). The primary data source is the Prosper listing data. Each listing includes the "borrower's state" information, providing a suitable empirical context to explore the relationship between economic inequality and consumers' engagement in the sharing economy. Then, we added *Gini* indices retrieved from Census Bureau based on the borrower's state and the listing year, and the year-state-level *Gini* served as a quantified measure of economic inequality (i.e., focal IV). We also calculated the *average lending amount (ALA)* for each listing (=original loan amount/the number of lenders) and treated it as the proxy of engagement (i.e., DV). Next, we included *median household incomes* retrieved from Census Bureau as a year-state-level covariate, as well as three listing-level covariates: 1) *Prosper score*—an integrated metric of borrower's credibility, as well as the 2) *estimated return* and 3) *duration* of the listing. Moreover, we created a product term to capture the interaction between *Gini* and *Prosper score* because both are expected to affect interpersonal trust, the antecedent of *ALA*. Finally, we added fixed state and month effects to control unobservable state and time shocks.

Since *ALA* is left-skewed with a few extreme outliers, we took logarithm transformation of it and used robust linear regression for estimation to address the heteroscedasticity and outlier issues. As predicted, *Gini* negatively correlates with the *ALA* ($B=-2.89$, $95CI=[-4.90, -.88]$), suggesting that as *Gini* increases by 0.1, lenders would lend 28.89% less on average for a listing. In addition, there was a significant interaction between *Gini* and *Prosper score* that the negative effect of *Gini* diminishes as the *Prosper score* increases. Study 1 provides field evidence for our propositions; however, the results are essentially correlational (vs. causal). The rest experimental studies address this major limitation.

In study 2 ($N=121$), we told participants they would invest in an international p2p lending platform. Then, they read a mock listing that showed the borrower's location (i.e., a foreign country). Next, partici-

pants read the country's income distribution, which had a high (vs. low) variance, serving as the manipulation (adapted from Payne, Brown-Iannuzzi, and Hannay 2017). Further, participants indicated their interpersonal trust, lending amount, and willingness to choose this borrower over other borrowers. As predicted, participants in the *high (vs. low) inequality* condition were less willing to choose borrower ($p=.003$, $\eta^2=.073$) and intended to lend less ($p=.007$, $\eta^2=.060$), which were mediated by interpersonal trust ($a*b_{willingness}=-.58$, $95\%CI=[-.92, -.28]$; $a*b_{lending}=-185.65$, $95\%CI=[-376.06, -37.10]$). Study 1 and 2 document the negative effect of economic inequality on consumers' engagement in terms of contribution, as well as interpersonal trust as the mechanism. Study 3 and 4 switch to the aspect of usage and retest these propositions in other contexts, using different manipulations.

In study 3 ($N=202$), we told participants they would work in a foreign country for three months. Then, they read a mock Google webpage that described the country as one of the world's most unequal (vs. equal) countries (e.g., Gini index of 0.6 vs. 0.2 and the 5th vs. 160th (out of 164) ranking in the global inequality database), serving as the manipulation (validated by a pretest). Next, participants indicated their willingness to choose a lodge-sharing service over a comparable hotel for accommodation. As predicted, participants in the *high (vs. low) inequality* condition were more likely to choose the lodge-sharing service ($p=.019$, $\eta^2=.027$).

Study 4 used the cover story of study 3 but administered a more implicit manipulation. Specifically, participants were presented with street-view pictures with high-inequality (vs. neutral) cues (adapted from Waldfogel et al. 2021). Next, participants indicated their interpersonal trust and willingness to choose a ridesharing service over other available transportations when arriving at the airport. As predicted, participants in the *high inequality (vs. control)* condition were more likely to choose the ridesharing service ($p=.049$, $\eta^2=.024$), which again was mediated by interpersonal trust ($a*b=-.33$, $95\%CI=[-.59, -.11]$).

Four studies convergently support our propositions. These consumer-level findings suggest that rising economic inequality could hinder the long-term development of the sharing economy by hurting demands and supplies.

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Simple or Complex Logos? The Impact of Logo Complexity on the Brand Perception

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EXTENDED ABSTRACT

In this article, we show that logo complexity (simplicity) can impact consumers' perceptions of the brand: complex logos can activate a prestigious brand image while simple logos can activate an approachable brand image. Employing mixed methods (field surveys, IAT, and experiments), we provide converging support for this proposition.

Despite the prevalence of logo redesign, existing research remains silent on how logo complexity versus simplicity might influence brand perceptions. The current research addresses this important question. Specifically, we show that logo complexity (simplicity) enhances the perceived prestige (approachability) of a brand.

Logo complexity is defined as the amount of detail in a logo (Snodgrass and Vanderwart 1980). In other words, a complex logo tends to have more visual elements (Henderson and Cote 1998), which can make consumers infer that the brand has a more intricate product design. As prestigious brands (e.g., luxury brands) are known for refined details (Fionda and Moore 2009), a brand with an intricate product design should be perceived as more prestigious. We hypothesize that logo complexity can increase the perceived prestige of a brand and this effect is mediated by the perceived intricacy of the brand's product design.

By contrast, logo simplicity boosts brand approachability because a simple (vs. complex) logo is relatively easier to process. Prior research suggests that a sense of fluency usually reduces psychological distance (Alter and Oppenheimer 2008). Following the same logic, people should perceive a brand with a simple logo to be psychologically more approachable. We hypothesize that logo simplicity can increase the perceived approachability of a brand and this effect is mediated by the processing fluency of the logo.

In Study 1a, we compared the logo complexity of the top 30 luxury brands and top 30 fast-fashion brands listed on Ranker.com. Two hundred US participants from MTurk rated the logo complexity ("To what extent do you feel this logo is complex"; 1 = very simple, 9 = very complex). We found that logos of luxury brands were rated more complex ($M = 4.42$) than those of fast-fashion brands ($M = 3.57$, $F(1,58) = 5.96$, $p = .02$).

In Study 1b, we identified a secondary dataset on brand personality perceptions (Lovett, Peres, and Shachar 2014) and selected the top 100 brands in 2010 from Interbrand.com (only 69 brands' information was available in the secondary dataset). We selected three brand personality traits related to prestige (upper class, prestigious, glamorous) and three related to approachability (down-to-earth, unapproachable [reverse-coded], and friendly). We averaged them to form a prestige index and an approachability index. We recruited 150 US participants from MTurk to rate the logo complexity. A correlational analysis yielded a significant positive correlation between logo complexity and brand prestige ($r = .41$, $p < .001$), and a significant negative correlation between logo complexity and brand approachability ($r = -.24$, $p < .05$).

In Study 2, 70 US participants from MTurk completed the IAT in which they sorted visual patterns (simple vs. complex) or brand names (e.g., Gucci, H&M) into one of the two disjunctive categories ("Complex or Luxury Brand" and "Simple or Mass-Market Brand" vs. "Complex or Mass-Market Brand" and "Simple or Luxury Brand"). If participants mentally associate complexity (simplicity)

with prestige (approachability), their reaction time would be shorter in the compatible block. Following Greenwald, Nosek, & Banaji (2003), we computed an IAT D-score, which was significantly greater than zero ($D = .53$, $t(69) = 10.61$, $p < .001$). This indicates that people have a positive association between complexity (simplicity) and brand prestige (approachability).

In Study 3, we manipulated the complexity of two logos. One hundred eighty-eight US participants from Prolific read a news article about the logo revamp of a fictitious brand Y.L.M.A. In the complex (simple) condition, participants were told that the new design has more details (eliminates extra details) and reflects elaborateness (minimalism). They were shown the two logos with an arrow in between to illustrate the direction of the logo change. Participants rated brand prestige (upper class/sophisticated/prestigious; 1 = not at all, 9 = very much) and brand approachability (down-to-earth, approachable, unpretentious; 1 = not at all, 9 = very much). The brand having a more complex new logo ($M = 6.36$) was perceived as more prestigious than the brand having a simpler new logo ($M = 5.68$; $F(1, 196) = 5.76$, $p = .02$). The brand having a simpler new logo ($M = 5.77$) was perceived as more approachable than the brand having a more complex new logo ($M = 3.83$; $F(1, 196) = 57.88$, $p < .001$).

In Study 4, 200 US participants from Prolific evaluated a logo of a luggage brand and saw either a complex or a simple logo. Participants rated brand prestige and brand approachability as in Study 3. Participants also rated the intricacy of product design ("I feel the product design of this brand shows great intricacy," "I feel the products of this brand are made with fine details;"; 1 = not at all, 9 = very much) and the processing fluency of the logo (1 = not at all fluent/difficult to process, 9 = very fluent/easy to process, adapted from Luffarelli, Mukesh, and Mahmood 2019). We replicated the effect of logo complexity (simplicity) on brand prestige (approachability) as in Study 3. Mediation analyses with perceived intricacy of product design and processing fluency as paralleled mediators showed that only perceived intricacy of product design significantly mediated the effect of logo complexity on perceived brand prestige (indirect effect = 1.34, 95% CI = [.90, .181]). Only processing fluency significantly mediated the effect of logo complexity on perceived brand approachability (indirect effect = -.42, 95% CI = [-.73, -.18]).

In Study 5, 200 US participants from Prolific imagined they were going to attend a social gathering and choosing a T-shirt to wear at the gathering. They were primed with a goal to look either upper class or approachable. Participants in the prestige-signaling condition were more likely to choose the T-shirt with a complex logo (66.00%) than those in the approachability-signaling condition (37.00%; $\chi^2 = 16.84$, $p < .001$).

The current research adds to the existing research on understanding the antecedents of brand prestige and brand approachability by identifying a novel visual element of brands: logo complexity. This research also bears important implications for marketing practitioners.

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Easy Calculation or Easy Result: The Paradoxical Effects of Decimal Numbers

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EXTENDED ABSTRACT

This research investigates under which condition consumers prefer to exert more mental effort in simple calculations involving decimal numbers. We find that when the calculation outcome is made salient, consumers prefer to calculate two decimal numbers to reach a rounder outcome. This calculation process triggers a positive affect, roundup/round-down pleasure.

Decimal numbers are ubiquitous in the marketplace. They exist in the form of retail prices, tips, and sales taxes. Consumers often need to perform simple arithmetic calculations involving decimal numbers. Decision theory has established that consumers prefer to minimize their mental effort to preserve the limited cognitive resources (Simon 1955; Bettman, Luce, and Payne 1998). Relatedly, research in numeric cognition supports that people have a strong preference for easier-to-process round numbers (e.g., 5.00, 10.00) over precise numbers (e.g., 4.92, 10.37) (Kettle and Häubl 2010; Thomas, Simon, and Kadiyali 2010). These findings together present a paradoxical effect of decimal numbers in mental calculations: while adding/subtracting a *round number* (e.g., 2.00) to/from a decimal number (e.g., 4.92) eases the calculation process, it produces decimal results (e.g., 6.92/2.92); adding/subtracting a *decimal number* (e.g., 2.08/2.92) to/from a decimal number (e.g., 4.92) increases the calculation complexity but leads to easier-to-process round results (e.g., 7.00/2.00). Will consumers prefer easy calculations or easy results?

Although the easy calculation is the by-default preference given that consumers are cognitive misers, this research posits that when *the calculation result is salient*, the goal of reaching round number results gets activated. This prediction is consistent with the findings that people exert extra effort to achieve a round number goal even when a precise number goal is provided (Pope and Simonsohn 2011). When cognitive effort is interpreted as means to achieve a goal, people view effort more positively and are more willing to exert mental effort (Briñol, Petty, and Tormala 2006; Labroo and Kim 2009). Thus, when the round results goal is activated, consumers are more willing to engage in effortful calculations involving decimal numbers.

Goal achievement triggers positive affect, which intensifies towards and after goal attainment (Higgins 1997; McCrea and Vann 2018). We posit that consumers also experience positive affect when reaching the round results, which is specific to the feelings of completion, accomplishment, and comfort of rounding up and down the numbers. We term it the “round up/down pleasure”. This affect plays two roles: it explains why consumers will engage in effortful calculations (i.e., mediator) to reach round results, and it also predicts who is more likely to do so depending on their levels of commitment to round number goal (i.e., moderator; (Kruglanski et al. 2018).

Studies 1a and 1b tested that the preference for easy results can influence consumers’ purchase decisions. Participants were imagining that they were shopping for groceries online and they saw the basket total (a decimal number). They had to choose one final product to add to their basket. In study 2a [2b], participants chose the quantity [brand] of the product. The result salience was manipulated between-subjects: half of the participants had to track their spending by entering the basket total after making the choice. The other half did not do so. Both studies found that when the calculation result was salient, participants significantly increased their choices of roundup options.

Study 2 tested the preference for easy results in the sales promotion context. We asked participants to evaluate a sales promotion by first calculating the sales price by subtracting the discount from

the original price (a decimal number). We manipulated the discount such that in the easy result [easy calculation] condition, the discount rounded down the original price [was a round number]. After, participants rated their purchase intentions and round-down pleasure. Participants reported greater purchase intentions and greater round-down pleasure in the easy result condition. A mediation test confirmed that round-down pleasure mediated the effect of discount type on purchase intention.

Study 3 tested the preference for easy results in the tipping context. The bill total was manipulated between-subjects (\$42.00 vs. \$41.40 vs. \$41.48). Participants were asked to choose from three tipping options: \$8.00, \$8.60, and \$8.52 and enter the bill total. The roundup pleasure was measured as the moderator. A chi-square test showed that participants in each bill total condition had the highest probability of choosing the roundup tip option. Further, a floodlight analysis confirmed the moderating effect of roundup pleasure: for consumers who were committed to round results, they would pick the roundup tip regardless of the bill total, which varied the calculation difficulty. Consumers who were less committed to this goal would do so only if the calculation was easier (i.e., when the bill total was \$42.00).

Taken together, this research demonstrates that when the calculation result is made salient, consumers prefer round numbers more as the calculation result rather than the calculation input. This preference influences a range of consumer decisions such as product choices, promotion evaluations, and tipping.

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The Effect of Recycled Packaging on Perceived Product Naturalness

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EXTENDED ABSTRACT

Across five studies, we demonstrate that consumers perceive products in recycled (vs. regular) plastic packaging as more natural due to higher CSR beliefs, whereas this effect does not hold for recycled versus non-recycled cardboard packaging. Moreover, higher perceived naturalness of products packaged in recycled plastic leads to increased purchase intention.

Manufacturers can offer solutions to address climate change by reducing packaging waste through, among other things, recycling of packaging (Adekomaya & Majozi, 2020; Hopewell et al., 2009; Humphrey, 2009; Nordin & Selke, 2010). Yet, packaging design and materials also impact product perceptions and consumption (Becker et al., 2011; Magnier et al., 2016; Silayo & Speece, 2007).

Package design can create halo effects in which the presence of package design elements can cause consumers to make inferences about the product itself (Bui, Tangari, and Haws 2017; Chandon 2013; Koo and Suk 2016). Previous research on packaging materials focused on comparing the effect of different packaging materials such as cardboard or glass versus plastic (Bhardwaj, 2019; Magnier et al., 2016) on product naturalness perceptions. Yet, the current research focuses on differences in naturalness perceptions inferred from the same packaging material (recycled vs. regular plastic and cardboard). Whether a package is recycled or not might be a diagnostic cue for consumers to assess products' naturalness.

Using recycled packaging implies that companies are invested in protecting the environment. Favourable information that conveys a company's good deeds for the environment such as recycling can make consumers think that the company attaches importance to CSR. When firms signal concern for their stakeholders through corporate-level CSR actions they should also be invested in providing their customers with products containing healthier ingredients and few preservatives (Peloza et al., 2015) and thus higher product naturalness perceptions could occur.

We further argue that the effect of recycled packaging on perceived product naturalness will only be present for unsustainable materials such as plastic and not another type of sustainable material such as cardboard because this is regarded as natural and less harmful for the environment in itself (Bhardwaj, 2019; Lindh et al., 2016; Otto et al., 2021; Peters, 2016).

We tested the following hypotheses in five studies:

- Hypothesis 1: Products in recycled plastic packaging are perceived as more natural than products in regular plastic packaging.*
- Hypothesis 2: A recycled packaging material results in higher naturalness perceptions than a non-recycled regular packaging material for plastic packaging but not for cardboard packaging.*
- Hypothesis 3: CSR beliefs mediate the relationship between recycled plastic packaging and perceived product naturalness.*

The results of Study 1A and 1B denote that products in recycled plastic are perceived as more natural than products in regular plastic packaging.

Study 2 showed that regardless of which product type, products in recycled plastic are perceived as more natural than products in regular plastic packaging. Moreover, a mediation analysis revealed that recycled (vs. regular) plastic packaging increased perceived product naturalness, which, in turn, increased purchase intentions.

Study 3 showed that products in recycled plastic are perceived as more natural than products in regular plastic packaging. There was no such difference for cardboard packaging.

Study 4 showed that both food and non-food products in recycled plastic are perceived as more natural than food and non-food in regular plastic packaging. Moreover, a serial mediation analysis revealed that recycled (vs. regular) plastic packaging increased CSR beliefs of the company, which in turn increased perceived product naturalness, which subsequently increased purchase intentions.

Our research makes several contributions. First, we extend research on structural packaging and naturalness by providing evidence that consumers perceive products in recycled (vs. regular) plastic as more natural, which positively affects purchase intentions. Second, we extend literature on sustainable packaging by revealing the influence of whether packaging is recycled or not. Unlike previous research which focused on comparing different packaging materials (e.g., cardboard vs. plastic, glass vs. plastic) (Bhardwaj, 2019; Magnier et al., 2016), the current research focuses on differences within the same packaging material (recycled vs. regular plastic and cardboard). Moreover, previous research compared sustainable versus non-sustainable packaging that explicitly differed in visual appearance (e.g., color, glossiness) (Magnier et al., 2016), which could be an important confound. In our research we keep these variables constant. Third, we make a theoretical contribution by demonstrating why recycled plastic packaging triggers naturalness perceptions. By addressing that CSR beliefs explain the effect, we show that recycled packaging can have an effect on beliefs about corporate-level information, which in turn can have an effect on product-level attributes such as naturalness (Peloza et al., 2015). By looking at a subtler CSR cue as well as extending it to non-food products, we answer Peloza et al.'s (2015) call for more research on the information location of CSR activities as well as product category extension beyond food products.

This research has many implications, among others for public policy makers, as recycled packaging seems to be a double-edged sword. On the one hand, public policy makers might continue to encourage or mandate using recycled plastic as a packaging material and use product naturalness perceptions as an advantage to convince manufacturers to address packaging waste and associated climate change. Product manufacturers can also benefit from our insights as using recycled plastic packaging would reinforce companies' CSR beliefs, which positively influences perceived product naturalness and purchase intentions of their products. On the other hand, the results are important for public policy makers to control greenwashing practices. Our research contributes to a better understanding of how greenwashing through packaging can be used to manipulate consumer perceptions. Hence, public policy makers have to see whether the pros (climate) outweigh the cons of recycled packaging (biased product naturalness perceptions).

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Effect of Political Ideology on Online Interpersonal and Information Evaluation

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EXTENDED ABSTRACT

We examine whether and how conservatives and liberals differ in their reliance on online sources when there is no objective truth. A field study and three experiments show that conservatives in comparison to liberals are less skeptical of online reviewers, and in turn, are find online reviews more useful.

Are conservatives or liberals more susceptible to online information? While much attention is given to examine this question in different scholarly fields, most research is limited to examining how conservatives and liberals differ in susceptibility to claims that are factually wrong. It is unclear if consumers' political beliefs influence their susceptibility to online information that is subjective opinions.

In this research, we examine the influence of consumers' political beliefs on their susceptibility to online reviews. Unlike online information studied in this area of research, online reviews are information about consumers' preferences for products and services that is subjective and does not have an objective truth. Consumers are never right or wrong to believe the idiosyncratic preferences presented in online reviews. Existing literature has two main accounts on how political ideology influences online information susceptibility: (1) ideological motivated reasoning (Washburn and Skitka 2018) and (2) underthinking (Pennycook and Rand 2019). Both accounts address whether conservatives and liberals differ in truth discerning, but they cannot be applied to a context where there is no verifiable fact.

We propose that consumers' political ideologies affect their skepticism toward online reviewers and, in turn, how useful they find the opinions they encounter online. On one hand, foundational research on influence of political ideology suggests people who are more conservative often endeavor to reduce threats and maintain order (Jost, Nosek and Gosling 2008), a pattern suggesting right leaning individuals may be more closed to opinions of anonymous others.

On the other hand, as we argue in this research, conservatives are less skeptical than liberals toward online reviewers in order to satisfy their desire for common beliefs. Conservatives in comparison to liberals have greater desire for common beliefs, which stems from their stronger epistemic and relational desire (Jost et al. 2003; Jost, Ledgerwood and Hardin 2008). Trust is inseparable in the process of creating common beliefs (Echterhoff et al. 2009). When individuals are skeptical of another person, they could not relate to this person and rely on her or his views to help them better understand target topics or things. Hence, when people want to rely on someone's opinion to better understand something, being skeptical of this person does not facilitate the goal of achieving common beliefs. Therefore, conservatives are less skeptical than liberals toward online reviewers.

We first conducted a field study using a publicly available data set published by Yelp. We used the business zip code as a proxy for general political leaning by matching zip codes to counties and states using a database generated from sources including the U.S. Postal Service and U.S. Census Bureau. Negative binomial regression analyses were used to examine effects on the number of review useful votes on Yelp. All three models showed that political ideology has a significant effect on the number of useful review votes (all $p < .001$). County political ideology percentage ($\beta = .061$), state political ideology percentage ($\beta = .119$), and state PVI ($\beta = .097$) all have positive coefficients, suggesting more conservative reviewers give higher number of useful review votes.

In study 1 ($N = 203$), we tested our prediction in an online experiment by showing each participant five online reviews of different products. They rated each review either helpful (coded 1) or unhelpful (coded 0), and their perceived helpfulness is the sum of their ratings. Their preferences for news broadcasting stations ($p = .056$, $M_{\text{Fox}} = 4.615$, $M_{\text{CNN}} = 4.480$, $M_{\text{MSNBC}} = 4.000$), U.S. presidential candidates ($\beta = .130$, $SE = .023$, $p = .064$), and taxation and immigration policies ($\beta = .164$, $SE = .043$, $p = .020$) are predictive of their perceived review helpfulness.

In study 2 ($N = 122$), we tested our underlying mechanism by measuring reviewer skepticism (reliable, honest, trust; Packard, Gershoff, and Wooten 2016). Conservatives compared to liberals rated an online review more helpful, and this effect is mediated by reviewer skepticism ($CI = .008$ to $.195$). Review attribution (product quality vs. reviewer taste) does not mediate the effect.

In study 3 ($N = 303$), we manipulated skepticism by priming participants using news articles. If our conjecture is supported, conservatives and liberals should behave similarly when they are primed with high or low skepticism. Political ideology was measured using donation choices. The results showed a significant interaction effect between political ideology and skepticism manipulation ($p = .043$). Political ideology did not affect review helpfulness in high skepticism ($p = .754$), but conservatives compared to liberals rated the review more helpful in the low skepticism ($b = .254$, $SE = .075$, $p < .001$, $CI: .107$ to $.401$) and control ($b = .288$, $SE = .078$, $p < .001$, $CI: .135$ to $.440$) conditions. The results supported our prediction, but it also showed that it is difficult to get liberals to reduce their skepticism.

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What underlies the Nutri-Score effect? A multi-methods approach

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EXTENDED ABSTRACT

While the Nutri-Score (=front-of-pack label) has been found to be an effective tool to improve food choices, it remains unclear why and for whom it affects buying behavior. We adopt a multi-methods approach and show that the Nutri-Score works because it activates consumers' health goals, irrespective of their health concern.

To reduce the obesity problem, different front-of-pack labels have been introduced. This paper focuses on the European Nutri-Score nutrition label. While the effectiveness of the Nutri-Score ("Nutri-Score effect") has been shown in several lab and real-life experiments (e.g., Herberg, Touvier and Salas-Salvado 2021; Dubois et al. 2020), evidence on why and for whom the Nutri-Score works is lacking.

The current grocery shopping environment constantly exposes consumers to cues that activate short-term hedonic goals (e.g., tempting foods), at the cost of long-term investment goals (e.g., one's health; Geyskens et al., 2008). To reduce hedonic goal activation, several external cues (e.g., dieting advertisements) have been introduced to activate health goals and encourage healthier purchases ("health goal priming", Papiés, 2016). We propose that the Nutri-Score serves as an external cue that activates health goals, which in turn leads to healthier food choices.

Hypothesis 1: The presence (vs. absence) of a Nutri-Score activates participants' health goals which improves the healthiness of shopping baskets.

Research pointed out that the primed concept (i.e., health) leads to the motivational benefits that support goal pursuit more strongly when a person values the specific concept (Papiés and Aarts, 2016). Therefore, we expect that the more health-concerned consumers are, the more likely it is that exposure to the Nutri-Score activates their health goals.

Hypothesis 2: The effect of the presence (vs. absence) of the Nutri-Score on the healthiness of the shopping baskets is stronger the more health-concerned consumers are.

We adopted a multi-methods approach and set up an **experimental-causal-chain design** (study 1 and study 2) and a **measurement-of-mediation design** (study 3A and study 3B) to investigate whether an activation of health goals underlies the "Nutri-Score effect".

Study 1 investigated the impact of the Nutri-Score (presence vs. absence) on the activation of health goals. We recruited 309 participants ($M_{\text{age}}=30$, $SD=15.26$, 63.4% women) in an online between-subjects experiment. Participants were shown different product packages on which the Nutri-Score was present or absent. Afterwards, we measured health goal activation. An independent samples t-test revealed that health goal activation was (marginally significantly) larger when the Nutri-Score was present (vs. absent; $M_{\text{present}}=4.34$, $SD=.67$; $M_{\text{absent}}=4.19$, $SD=.73$; $t(307)=-1.81$, $p=.071$). The moderation analysis (Process Model 1, Preacher and Hayes, 2004) revealed no significant interaction between the Nutri-Score and health concern ($t(307)=.76$, $p=.446$), indicating that the Nutri-Score activates participants' health goals, irrespective of their health concern.

Study 2 tests the relationship between an activation of health goals and the healthiness of the shopping baskets. We recruited 341 participants (77% women, 40.8%: <30yo, 28.8%: 30-49yo, 30.4%: >50yo) in an online between-subjects experiment (health goal activation: yes vs. no). We manipulated health goal activation by means of a scrambled-sentences task (Geyskens et al., 2007). Afterwards, participants shopped for groceries in a simulated online web store. We calculated the healthiness of participants' shopping baskets based on the Nutri-Score. An independent samples t-test indicated that participants in the health goal activation (vs. no) condition composed significantly healthier shopping baskets ($M_{\text{healthgoal}}=3.36$, $SD_{\text{healthgoal}}=0.34$, $M_{\text{nohealthgoal}}=3.28$, $SD_{\text{nohealthgoal}}=.35$, $t(338)=-2.06$, $p=.040$). Based on the findings of study 1 and study 2, we conclude from this experimental-causal-chain design that the Nutri-Score effect is mediated by an activation of health goals, confirming *H1*.

The purpose of **study 3A** is to provide further evidence for our hypotheses in a measurement-of-mediation design. We recruited 122 participants (69% women, 63.1%: 30yo, 18.9%: 30-49yo, 18%: >50yo) to participate in an online between-subjects experiment (Nutri-Score: presence vs. absence). Participants shopped for groceries in a simulated online web store. Afterwards, we measured health goal activation by means of an existing scale (Henselmans et al., 2011). An independent samples t-test showed that participants' shopping baskets were significantly healthier when the Nutri-Score was present (vs. absent; $M_{\text{present}}=3.33$, $SD=.40$, $M_{\text{absent}}=3.15$, $SD=.44$, $t(120)=-2.35$, $p=.020$). A mediation analysis (Model 4, Preacher and Hayes, 2004) revealed that the Nutri-Score effect is significantly and fully mediated by an activation of health goals ($ab=.08$, 95%CI=[.016;.173]). The Nutri-Score activated participants' health goals (coefficient=.44, $t(120)=2.84$, $p=.005$), which in turn improved the healthiness of shopping baskets (coefficient=.19, $t(120)=4.45$, $p<.001$), providing evidence for *H1*. A moderated mediation analysis (Model 8) revealed no significant interaction between the Nutri-Score (absence vs. presence) and health concern on health goal activation (a path; coefficient=-.01, $t(120)=-.02$, $p=.943$) nor on the healthiness of the shopping baskets (c path; coefficient=.03, $t(120)=.26$, $p=.794$), rejecting *H2* (moderated mediation: coefficient=-.002, 95%CI=[-.062;.079]). Hence, the Nutri-Score activates health goals and improves the healthiness of the shopping baskets, irrespective of participants' health concern.

Study 3B replicates the findings of study 3A but we measured health goal activation with a different scale. We recruited 225 participants (68.2% women, $M_{\text{age}}=28$, $SD=14.06$) in a between-subjects experiment (Nutri-Score: presence vs. absence). Participants shopped for groceries in a simulated online web store. The independent samples t-test pointed out that participants' shopping baskets were significantly healthier when the Nutri-Score was present (vs. absent; $M_{\text{present}}=3.24$, $SD=.52$, $M_{\text{absent}}=3.09$, $SD=.55$, $t(223)=-1.99$, $p=.047$). A mediation analysis (Model 4) indicated that the Nutri-Score indeed activates consumers health goals ($t(223)=4.25$, $p<.001$) which in turn improved the healthiness of participants' shopping baskets ($t(223)=2.48$, $p=.014$). In line with study 3A, a health goal activation fully mediates the Nutri-Score effect ($ab=.05$, 95%CI=[.008;.103]), confirming *H1*. A moderated mediation analysis (Model 8) revealed no significant interaction between the Nutri-Score (absence vs. presence) and health concern on health goal

activation (coefficient=-.03, $t(223)=-.16$, $p=.870$) nor on the healthiness of the shopping baskets (coefficient=.03, $t(223)=.39$, $p=.700$), rejecting $H2$ (moderated mediation: coefficient=-.002, 95%CI=[-.032;.027]). This shows that the Nutri-Score activates participants' health goals, irrespective of their health concern.

In line with existing studies, we show that the Nutri-Score improves the healthiness of participants' food choices in experimental-causal-chain and in a measurement-of-mediation design. Our results reveal that the Nutri-Score works because it activates consumers' health goals, irrespective of how health-concerned they are. Moreover, the Nutri-Score positively affects the healthiness of the shopping baskets of both more and less health-concerned individuals. Our findings are promising for the effectiveness of the Nutri-Score and as such create relevant guidance for public policy makers on whether or not to introduce the Nutri-Score as mandatory element on packages.

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Neutrality is Complicit: Effect of Political Ideology on Neutral Brand Preference

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EXTENDED ABSTRACT

Although recent research examines how consumers react to corporates picking a side in sociopolitical issues as part of their marketing, little is known about remaining neutral. We show that conservatives compared to liberals prefer neutral position brands, because neutrality aligns well with their preferences to justify and uphold existing system.

Brands often take public stances on controversial sociopolitical issues. Corporate sociopolitical activism (CSA) illustrates the increasing overlap between brand positions and ideological identities. While consumer activism provides opportunities for brands, they also risk boycotts. Recent surveys show that 83% of chief marketing officers believe brands should not take a stance on sociopolitical issues, but two-thirds of consumers believe otherwise. Thus, there is a significant disconnect between marketers' beliefs and consumers' expectations.

Brands' neutral position could be communicated explicitly via public announcement or by remaining silent. We argue that a neutral stance is perceived as maintaining the status quo. As the name indicates, CSA is a form of activism. When firms take a stand on sociopolitical issues, they seek to create societal change by influencing the attitudes and behaviors of others (Eilert and Nappier Cherup 2020). Brands with a neutral stance are doing the opposite of advocating societal change and are supporting the current status quo.

We argue that conservatives, compared to liberals, prefer brands with neutral stances. Conservatism is associated with support for the status quo and upholding of tradition, while liberalism is associated with progressive societal change and political movements (see Jost et al., 2009 for a review). Specifically, conservatives compared to liberals score higher in system justification motivation (Jost and Banaji 1994), which explains individuals' motivation to "justify and rationalize the way things are, so that existing social, economic, and political arrangements tend to be perceived as fair and legitimate" (Jost and Hunyady 2005, p. 260). Conservatives' greater desire to justify and legitimize the existing system led them to resist change even when the status quo was not in their favor.

We first conducted a pilot study ($N = 151$) to test our assumption that neutrality is perceived as maintaining the status quo. Participants rated neutrality as maintaining status quo ($M = 5.449$) more than pro-conservative stance ($M = 3.069$) and pro-liberal stance ($M = 3.137$; $p < .001$).

In study 1A ($N = 150$), borrowing from Hydock et al. (2020), participants imagined they were shopping for sneakers, and one of the fictitious brands refused to take a position on immigration. Conservatives compared to liberals rated the neutral position brand more positively ($\beta = .302$, $SE = .080$, $p < .001$). In study 1B ($N = 200$), participants read a news article about ASOS (real apparel brand) wanting to remain neutral in the sex- versus gender-based toilet debate. They were asked to decide how much they wanted to spend their bonus payment (£0.50) to enter a lucky draw to win a £15 ASOS voucher. The amount they spent was proportionate to their chance of winning the lucky draw. Conservatives spent more than liberals ($\beta = .157$, $SE = .010$, $p = .026$).

In study 2 ($N = 200$), we showed participants of a news article that a headphone brand had no comment when journalists asked for comment on gun control (i.e., remain silent). Conservatives

compared to liberals have more positive attitude ($\beta = .368$, $SE = .051$, $p < .001$). Political ideology indirectly affected brand attitude via system justification motivation ($b = .118$, $CI: .061$ to $.179$; Kay and Jost 2003).

In study 3 ($N = 604$), participants were randomly assigned to one of the three brand position conditions (pro-life vs. pro-choice vs. neutral). Indicator coding was used with neutral being the reference condition (D1 = vs. pro-life, D2 = vs. pro-choice). Political ideology had significant interaction with both D1 and D2 on brand attitude (both $p < .001$). Liberals reported more positive brand attitude for pro-choice ($b = -.487$, $SE = .066$, $p < .001$), and conservatives reported more positive brand attitude for pro-life ($b = .574$, $SE = .073$, $p < .001$). Conservatives also reported more positive brand attitude for neutral brand ($b = .424$, $SE = .071$, $p < .001$). While conservatives compared to liberals like pro-conservative and neutral brands more, neutrality is not perceived as pro-conservative.

In study 4, we manipulated status quo alignment, and 202 Texas residents and 200 California residents were recruited. Those from Texas (California) were in the conservatism (liberalism) favored condition, and they read a news article on the abortion laws of Texas (California). This study was conducted before the overturn of Roe vs. Wade in 2022. The article describes how the current abortion laws in that state are pro-life versus pro-choice. In both conditions, the article stated that businesses are taking stances, and a particular sunglasses brand took a neutral stance. The interaction between political ideology and location significantly impacted attitude ($p = .013$). Conservatives have more positive attitude than liberals in both Texas ($b = .373$, $SE = .056$, $p < .001$) and California ($b = .168$, $SE = .060$, $p = .005$) conditions, but the effect is weaker in California than in Texas. This finding is consistent with the system justification literature, whereby conservatives uphold and legitimize the status quo even when it is disadvantageous to them.

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Omnichannel Sense of Coherence in Consumer-Brand Encounters

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EXTENDED ABSTRACT

Omnichannel sense of coherence (OSC) is conceptualized as the perceived coherence of encounters with a brand's multiple marketing channels. A scale consisting of three principal dimensions: Coordination, consistency, and convenience is developed. Five studies demonstrate OSC's validity, reliability, and ability to predict shopping efficiency, patronage intentions, and perceived product quality.

Prior research on multichannel, customer journey design, and omnichannel marketing takes a firm perspective to determine whether to offer similar products, services, and information across distribution channels. Missing from these approaches is a way to assess how consumers evaluate the extent to which channels function as a unified entity and what this implies for consumers' downstream attitudes and behavior (Bolton et al. 2022). To address this research gap, we introduce the concept of omnichannel sense of coherence (OSC).

Building on research in psychology and sociology on perceived coherence (Letiche et al. 2011), we suggest that dimensions of OSC are likely to include perceptions that a brand's channels are interconnected, share similar information, and are adaptable to the consumer search buying process. To test these ideas, we conducted five studies.

Studies 1 and 2 took a grounded theory approach to identify the dimensions of OSC. Study 1 consisted of focus-group sessions with university students ($N = 32$) who were asked to describe their definitions of coherence when thinking about shopping in two or more brand-owned channels. In Study 2, participants ($N = 23$ U.S. consumers) were exposed to descriptive information for two retail apparel brands (i.e., a brand that allowed them to interact with channels in a simple and coordinated way), and a brand that did not have these features. Participants then responded to open-ended questions asking which of the two brands they felt was more coherent and why. Based on Studies 1 and 2, we identified three primary dimensions of OSC:

- *Coordination.* Consumers perceive coherence when they can interact with the multiple channels of a brand in a simple, integrated, and coordinated way.
- *Consistency.* Consumers perceive coherence when information and stimuli are similar across brand-owned channels.
- *Convenience.* Consumers perceive a brand as coherent if its channels are accessible whenever needed.

To measure these dimensions of OSC, we developed an initial pool of 40 items that we presented to a group of 14 retail managers who assessed the items' appropriateness for measuring OSC. This led to retaining 12 items.

Study 3 assessed the convergent and discriminant validity of the 12-item OSC scale ($N = 363$ U.S. consumers). A factor analysis showed there were three factors with three items each. For each factor, one item with low communality was eliminated. Factors obtained were in line with our prior qualitative item categorization of coordination, consistency, and convenience as components of OSC. A confirmatory factor analysis indicated a good model fit for the OSC 9-items, three dimensions scale ($\chi^2 = 67.03$; $df = 24$, $CMIN/df = 2.79$; $p < .001$; $CFI = .97$; $TLI = .95$; $RMSEA = .07$).

Study 4 examined whether OSC better predicts consumer perceptions of utilitarian aspects of a brand's channels than a related, but conceptually different, measure—Effective Customer Journey Design (ECJD; Kuehn et al. 2019). While ECJD captures broad consumer perceptions of how brand touchpoints consistently convey brand image, OSC has a narrower focus on the extent to which a retailer's stores work well together, provide consumers with similar information, and are

adapted to the consumer's lifestyle. Given this more concrete focus, OSC should better predict utilitarian aspects than ECJD, such as perceptions that a brand facilitates searching for products and services. We recruited U.S. consumers ($N = 179$) who selected a brand from which they had bought a product or searched for information about using two or more brand-owned channels and evaluated shopping efficiency, ECJD, and OSC. Findings confirm the discriminant validity of OSC from ECJD and shopping efficiency. Hierarchical regression analyses show that OSC dimensions ($r^2_{adj} = .56$) better predict shopping efficiency than ECJD ($r^2_{adj} = .32$; comparison, $F(6, 172) = 39.98$; $p < .001$).

Study 5 assessed whether OSC dimensions can explain why an omnichannel (vs. unichannel) implementation of brand policies may have different outcomes for consumer perceptions and behavioral intentions. Study 5 also examined whether OSC can capture the potential compensatory role of omnichannel implementation of brand policies that limit the consumer's ability to access. Because omnichannel offerings give consumers greater flexibility and fit with their lifestyles, they may compensate for channels that constrain consumers, such as limitations on how long consumers have to return items.

U.S. participants ($N = 549$) were randomly assigned to one condition in a 3 (channel implementation: unichannel online vs. unichannel retail store vs. omnichannel) \times 2 (return policy: extended vs. limited) between-subjects experimental design. Participants were shown information about a new apparel brand. They were then provided with information about brand's return policy. In the omnichannel condition, products could be returned in both online and retail stores. In the unichannel conditions, returns were limited to either the online or retail store. The extended return policy condition allowed products to be returned within one year for a full refund. The limited return policy condition allowed returns only within 14 days of purchase.

MANOVA results revealed significant interactions between channel implementation and policy for patronage intention, product quality, and OSC. To test our proposition that the mediating role of OSC would be moderated such that greater differences would be found for a limited than an extended return policy, we ran a moderated mediation analysis. Results show that omnichannel implementation leads to greater OSC, which enhances patronage intentions and perceived product quality. However, these effects are stronger for limited return policies that are less adapted to consumer lifestyles.

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A Comprehensive Computational Comparison of Attentional and Decision Processes in Consumer Choice

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EXTENDED ABSTRACT

We fit and compare 63 distinct decision rules and a 9-parameter attention model on five eye-tracking datasets involving risky, intertemporal, and effort-allocation decisions. Our tests allow us to quantitatively predict novel behavioral effects and determine the core cognitive mechanisms that determine information sampling and decision-making in consumer choice.

Understanding the cognitive processes underlying attention and choice is key to a complete theory of consumer decision-making. Attentional dynamics affect the external reliability of preferences measured via conjoint; manipulating attention towards an item affects choices; modeling attention is key to understanding web search. While models of attention and choice are widely studied in marketing, psychology, and economics, few attempts have been made to combine and comprehensively compare models of decision and attentional processes across multiple datasets. This paper proposes a general computational framework for jointly modeling attention and choice. We test our framework by developing and fitting a 9-parameter computational attention model and 63 decision models on five eye-tracking datasets. This combined framework allows us to predict which option participants choose, whether they decide to terminate or continue sampling, and if they decide to continue sampling, which piece of information they choose to sample. Further, our framework tests multiple assumptions about the consumer decision-making process—e.g., the relationship between attention and choice. Taken together, our framework provides a nuanced computational account of consumer decision processes.

When faced with a choice between options, a person must search their environment for information about the options and combine that information to decide whether to continue searching or stop searching and choose an option. For instance, when faced with an intertemporal choice between two monetary payouts delivered at different delays, they may start by looking at the top left piece of information (e.g., \$10), then the bottom left (e.g., 0 weeks), then the top right (e.g., \$15), then the bottom right (e.g., 2 weeks), then back at the top right (e.g., \$15), and then making a decision to stop sampling and choosing an option (e.g., \$15 in 2 weeks).

To capture the above process, we use novel technical insights to split the modeling problem. Decision models predict people's decision to continue sampling and, if they decide to terminate sampling, which option they choose; attention models predict which piece of information people will sample.

Decision models have traditionally been broken down into two categories: static models, which predict only choices, and dynamic models, which predict choices and other aspects of decision processes. A standard static model, the Weighted Additive (WAD) model, assumes that people calculate the utility of an option by weighting attributes and adding these weighted values together. There are various ways to simplify this calculation: e.g., assuming both attributes receive equal weight. These simplifications make different predictions about qualitative patterns seen in the data. For instance, the equal weighting model makes different predictions about how attribute differences relate to choice than the WAD model.

Dynamic models assume people accumulate evidence for options, and when the evidence reaches a threshold, people choose an option. In the simplest case, dynamic models assume people accu-

mulate attribute values regardless of where they are looking. However, recent work has shown that making evidence accumulation dependent on attention, e.g., evidence accumulates at a higher rate for the fixated option, can lead to superior fits to the data and make critical qualitative predictions. Dynamic models also generally assume that evidence accumulation begins with the first fixation on a piece of choice information and continues until people choose an option.

Within our framework, we can combine the assumptions of static and dynamic decision models. For instance, our WAD Accumulator model assumes that people accumulate the weighted additive utilities of options. This accumulation begins once people have looked at each unique piece of information. Other models assume that utility accumulation depends on which option is being looked at. Combining these assumptions leads to 63 distinct decision models.

While our decision models relate to attention to choice, they do not predict what information people attend to. Our attention model formalizes this process and prior numeric summaries of attention. For instance, it assumes that people may be more likely to sample within an option, within an attribute, or on a never-before-sampled piece of information. Further, the model formalizes the relationship between option value and attention. Specifically, it allows for attention to be directed towards an option with a high attribute value.

We fit these models to data from previously published eye-tracking datasets on risky, intertemporal, and effort allocation decisions. The traditional dynamic decision models were outperformed by models that combined the assumptions of static and dynamic models. Specifically, WAD models that assumed complete search and attention related to evidence accumulation captured key qualitative patterns and fit best quantitatively. This result suggests that prior dynamic decision models may have underspecified how people combine choice information. Our attentional model results suggest that people's attention is drawn toward options with high attribute values. A critical debate revolves around whether attention to an option increases valuation or whether options with high values receive more attention. Our results suggest that both processes may be at play.

Our framework presents a principled method for understanding decision and attentional processes, which is key to designing consumer-centered choice environments.

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Tiered Discounts As Multiple Numeric Reference Points

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EXTENDED ABSTRACT

Tiered discounts introduce multiple dollar thresholds with increasing discount percentages. We find that tiered discounts with smaller increments between thresholds encourage higher consumer spending compared to those with larger increments. This effect is driven by consumers' increased motivation to reach higher thresholds when the increment size between thresholds is smaller.

Retailers often use discounts to incentivize consumers to buy more (Chen et al., 1998; Inman & McAlister, 1993), such as a tiered discount which introduces multiple spending thresholds that correspond to different discounts. When designing a tiered discount, a firm decides what amounts to set as thresholds and the distance, or increment size, between those thresholds. For example, Saks Fifth Avenue advertises tiered discounts on their website (spend \$400 or more, receive 20% off; spend \$1200 or more, receive 30% off) (Stoll, 2018). While industry experts suggest that retailers offer tiered discounts to target different consumer segments that might find different spending thresholds more appealing (Mohamed, 2018), an unexplored research question is how tiered discounts' threshold values (and corresponding increment sizes) might act as reference points that subconsciously *alter* consumers' motivation and thus the amount of money they spend. A threshold (e.g., spend \$100 or more) offers a dollar numeric prompt, which may serve as a reference point for consumers' spending and affect real choices (Della Bitta et al., 1981; Huang, 2016; Palmeira & Srivastava, 2013; Wansink et al., 1998). However, a tiered discount is different from previously studied promotions because this discount presents multiple thresholds concurrently to consumers. In fact, consumers may view tiered discount thresholds (i.e., reference points) as goals to strive for (Heath et al., 1999).

We find that tiered discounts with small increments between thresholds lead to higher consumer spending than those with large increments. This effect occurs because the close spacing of the thresholds lead consumers to feel more motivated to reach higher tier thresholds (i.e., reach a goal). Maximizing moderates this effect; maximizers (vs. satisficers) may feel inclined to reach a higher threshold (Schwartz et al., 2002). This research makes both a theoretical contribution to the literature by exploring the psychological consumer response to tiered discounts and a managerial contribution by informing retailers how to design effective tiered discounts.

Study 1 (pre-registered) explores this effect in the field; this quasi-experiment ran for two consecutive weeks. In the small tier condition, the promotion offered "spend \$10+, save 10%; spend \$20+, save 20%; spend \$30+, save 30%." In the large tier condition, the promotion was "spend \$10+, save 10%; spend \$30+, save 30%." We compared net sales after discounts and found that consumers ($N = 240$) spent more in the small increment condition than in the large increment condition ($M_{\text{small}} = \$16.49$; $M_{\text{large}} = \$13.86$; $F(1, 238) = 5.00, p < .05$).

Study 2 (pre-registered) tests the effect in a within-subjects lab experiment. Students ($N = 226$) saw four different tiered promotions (order randomized): large increment (spend \$100+ receive 10% off, spend \$500+ receive 30% off), small increment – numerous tiers (spend \$100+ receive 10% off, spend \$200+ receive 15% off, spend \$300+ receive 20% off, spend \$400+ receive 25% off, spend \$500+ receive 30% off), small increment – low (spend \$100+ receive 10% off; spend \$200+ receive 15% off), and small incre-

ment – high (spend \$400+ receive 25% off; spend \$500+ receive 30% off). After viewing each tiered discount, participants rated how much they would spend (slider scale: \$0-\$1000). We found a significant effect between conditions ($F(3, 225) = 55.92, p < .001$). Contrasts revealed that participants in the large increment condition were willing to spend significantly less ($M = \$106.88$) than those in the small increment – numerous ($M = \$142.77$; $F(1, 225) = 41.03, p < .001$) and the small increment – high conditions ($M = \$203.00$; $F(1, 225) = 71.76, p < .001$). However, there was no difference between the large increment condition and the small increment – low condition ($M = \$108.64$; $F(1, 225) = .15, p > .10$). We reason that the small increment – low condition was not different from the large condition given that the highest tier was lower than in the other small conditions and supports a goal process theory, tested in the next study.

Study 3 (pre-registered) tests the process: consumers feel more motivated to reach a higher threshold and maximizing moderates. Amazon MTurk workers ($N = 188$) imagined they found the perfect chair (\$150) in a store offering a tiered discount: small increment condition (spend \$100+ get 10% off; spend \$200+ get 15% off; spend \$300+ get 20% off; spend \$400+ get 25% off; spend \$500+ get 30% off) or a large increment condition (spend \$100+ get 10% off; spend \$500+ get 30% off). Participants indicated how motivated they were to spend more to reach a higher tier (not at all = 1, very motivated = 7), WTP (open ended), and maximizing tendency (Schwartz et al., 2002). Participants in the small condition ($M = \$189.96$) were willing to pay significantly more than the large condition ($M = \$159.72$); ($F(1, 186) = 23.15, p < .001$) and were more motivated to reach a higher tier ($M_{\text{small}} = 3.95, M_{\text{large}} = 2.34$; $F(1, 186) = 44.73, p < .001$). Moderated mediation (PROCESS Model 8) revealed a significant interaction between tier increment size and maximizing ($b = 3.91, t(183) = 2.01, p = .05$). Floodlight analysis showed that below 5.61 on the maximizing scale, a discount with a small tier increment size had a nonsignificant effect on spending. However, when consumers scored above 5.61, there was a positive effect on spending (at 5.61: $b = 6.15, t(183) = 1.97, p = .05$). For the mediator motivation, the indirect effect was supported for both high maximizers ($axb = 10.49, SE = 2.64, 95\% CI = [5.77, 16.28]$) and low maximizers ($axb = 8.18, SE = 2.40, 95\% CI = [3.79, 13.31]$).

We find that threshold levels within a tiered discount can guide consumer spending and choices. This effect is driven by motivation to reach a higher goal and moderated by maximizing. This paper begins a conversation on how promotions that present multiple dollar reference points affects spending.

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Psychological Contracts in the Sharing Economy: How Consumers Respond to Getting Reviewed

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EXTENDED ABSTRACT

We provide the first empirical investigation of managerially relevant outcomes from consumers being reviewed. Even though reviews emanate strictly from peers, we show that consumers retaliate against the platform by generating negative word of mouth (NWOM) about the platform, across five studies, in multiple contexts (e.g., homestay, car share).

Imagine you rent a vacation home through a platform such as Airbnb. Upon your return, you are surprised to find out that your host has left you a negative review. Do you hold the sharing economy platform accountable even though the review came directly from the host?

This research is the first to examine a turn of the tables in which consumers, rather than products or firms, are being reviewed. We propose and find that when consumers get a negative review, they will engage in negative word of mouth (NWOM) about the platform. Integrating sharing economy (Eckhardt et al. 2019) and psychological contract (Morrison & Robinson 1997) literatures, we propose that consumers form psychological contracts with the platforms, which stipulate that the platform is obligated to ensure they do not receive an unwarranted negative review. Such a psychological contract breach leads to feelings of betrayal by the platform and NWOM.

Across 5 studies, including an actual peer-to-peer platform with real behaviors and three different contexts (multi-product platform, home sharing, and car sharing), we illustrate the impact of review valence on NWOM about the platform (study 1). In support of our conceptualization, by manipulating reciprocal obligation fulfillment we establish that a psychological contract breach accounts for our findings (study 2). We then examine how platform policies may impact perceived harm and injustice from a negative review, thereby moderating the effect of the review valence on betrayal and NWOM (studies 3-5). We demonstrate that the effect is intensified when the platform endorses (does not endorse) a host; does not allow (allows) a response to the review; and makes the review public (keeps it private).

Study 1

Student participants (N=87) joined a pilot program for an ostensibly real peer-to-peer platform called *Students4Students*, in which students borrow and lend a variety of items. Participants were matched with lenders, came to a classroom to pick up their reserved textbook and used the book with a realistic task. After returning the book and later logging into their *Students4Students* accounts, they received either a 5-star or a 2-star review from their lender. We assessed NWOM behaviors using participants' star ratings and review comments posted on a review site, *SharingEconomyStories.com*.

Participants gave *Students4Students* a lower star rating on *SharingEconomyStories.com* when they received a negative review ($M_{Neg} = 4.1$) than when they received a positive review ($M_{Pos} = 4.6$; $F(1, 85) = 7.88$; $p = .006$). Further, participants posted more negative/neutral (vs. positive) comments about the platform when they received a negative (36.4%) than a positive review (16.3%; $\chi^2(1) = 4.51$; $p = .034$).

Study 2

Participants (N=222) imagined they had rented a house from Vacation Connections, a P2P platform. They did (did not) follow all the house rules and received a positive or negative review. We measured NWOM and perceived betrayal by the platform.

We found a significant interaction on NWOM ($F(1, 208) = 42.64$; $p < .001$). When participants received a positive review, NWOM did not differ depending on their perceived obligation fulfillment ($p > .12$). However, when participants received a negative review, they reported greater NWOM when they fulfilled their obligations ($M = 5.28$) than when they did not ($M = 3.14$; $F(1, 208) = 61.14$; $p < .001$; $h^2 = .23$). These effects were mediated by betrayal.

Study 3

Participants (N=360) received a positive or negative review from a Vacation Connections host and were told that their host was (was not) a Premier Partner endorsed (not endorsed) by Vacation Connections. We found a significant interaction on NWOM ($F(1, 337) = 240.7$; $p = .023$). When participants received a positive review, host endorsement had no impact on NWOM ($M_{No} = 2.4$ vs. $M_{Yes} = 2.2$; $F(1, 337) = .39$; $p > .38$). However, when they received a negative review, participants reported increased NWOM when the platform endorsed the host ($M_{No} = 5.2$) than when they did not ($M_{Neg} = 4.6$; $F(1, 337) = 5.73$; $p = .017$). We found a similar pattern on the valence of the posted comments, with effects mediated by betrayal.

Study 4

Participants (N=362) received a positive (negative) review and read that the Vacation Connections response policy allows (does not allow) guests to respond to hosts' reviews. We found a significant interaction on NWOM ($F(1, 348) = 7.064$; $p = .008$). When participants received a positive review, response opportunity had no impact on NWOM ($M_{No} = 1.8$ vs. $M_{Yes} = 1.6$; $F(1, 348) = .86$; $p > .35$). However, in the case of a negative review, participants reported increased NWOM intentions when the platform provided no opportunity ($M_{No} = 5.5$) vs. an opportunity ($M_{Neg} = 4.5$; $F(1, 348) = 23.29$; $p < .001$) to respond to the review. We found a similar pattern of results on the valence of posted comments with effects mediated by betrayal.

Study 5

Participants (N=367) imagined renting from *Car Connections*, a car sharing platform. Participants read that their review from the host would be private (public) and then read either a positive or negative review. We found a significant interaction on NWOM ($F(1, 350) = 7.74$; $p = .006$). When participants received a positive review, NWOM did not differ whether public or private ($M_{Pub} = 1.69$ vs. $M_{Priv} = 1.87$; $p > .40$). However, when participants received a negative review, NWOM was greater when the platform made the review public ($M = 5.24$), than when it was kept private ($M = 4.54$; $F(1, 350) = 9.27$; $p = .003$). A two-way ANOVA on the *SharingEconomyStories.com* star rating revealed a similar pattern of results with effects mediated by betrayal.

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When Identity Threat Does Not Lead to Compensatory Consumption: The Role of Implicit Theory

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EXTENDED ABSTRACT

Do people engage in compensatory consumption to repair their threatened identity? Across six studies, we find that incremental theorists (but not entity theorists) are likely to do so, and that the underlying mechanism is their perceptions of products' efficacy in identity expression, with pricing and compensation domain as boundary conditions.

Extensive research has shown that consumers purchase identity-signalling products, a behaviour known as compensatory consumption, to offset an identity threat (Mandel et al., 2017), but much less is known about who is (un)likely to cope with an identity threat via compensatory consumption. This issue is important, because compensatory consumption can be effective in identity repair (Rustagi and Shrum 2018). To fill this gap, this research explores how consumers' implicit theory affects their compensatory consumption.

There are two implicit theories: incremental theory, the belief that one's self is malleable and can be developed; and entity theory, the belief that one's self is fixed and cannot be changed (Dweck and Leggett 1988). Incremental (vs. entity) theorists tend to take positive actions in response to adverse situations (Allard and White 2015). We expect that in an adverse situation where an important identity is threatened, incremental theorists will be motivated to bolster their identity through compensatory consumption. As incremental theorists' mindset is malleable and subject to change across different contexts (Hogreve et al. 2021), we further predict that incremental theorists' compensatory consumption is mediated by their heightened perceptions of products' efficacy in expressing their identity in the threat (vs. non-threat) context. In contrast, because entity theorists' mindset is fixed, we predict that when threatened, entity theorists' perceptions of products' identity expression efficacy will not be heightened, and accordingly, they will not be motivated to engage in compensatory consumption.

Compensatory consumption can be categorized into within-domain compensation, where people seek out products that signal achievements in the threatened identity; and across-domain compensation, where people seek out products that signal achievements in an identity disassociated with the threat (Lisjak et al. 2015). We predict that incremental theorists are more likely to adopt within-domain compensation than across-domain compensation. Incremental theorists do not form product attitudes easily. Their attitude formation involves a high level of assessment that requires rich cognitive resources to process information (Kwon and Nayakankuppam 2015). An identity threat may deplete incremental theorists' cognitive resources and impede their attention to external information. Compared with across-domain products, within-domain products provide more relevant information to the identity threat, and thus, require fewer cognitive resources for incremental theorists to process.

Literature also documents that incremental theorists perceive a positive relationship between effort and favourable outcomes (Dweck and Leggett 1988). Pricing of products reflects the monetary effort that consumers need to make (Grewal, Marmorstein, and Sharma 1996). Compared with buying identity-signalling products at full price, buying the products at a discount involves "less effort" because of the reduced price. Accordingly, incremental theorists may view discounts as cues of reduced effort that are unfavourable for identity reconstruction/repair. Therefore, we predict that incremental theorists are likely

to bolster their identity by buying full-priced products, but not products on sale.

We test our predictions in six studies. Study 1a ($n = 370$) initially supports that an impaired identity (low sense of power) motivates incremental (vs. entity) theorists to engage in compensatory consumption. We measured participants' sense of power, implicit theory, and purchase intentions for a power-linked product (designer sunglasses). As predicted, the less power incremental theorists had, the higher their purchase intentions ($\beta = -.33$, $t(360) = -2.51$, $p = .01$), whereas entity theorists did not show the same pattern ($\beta = .15$, $t(360) = 1.19$, $p = .24$). These results were replicated in Study 1b ($n = 299$) and extended to a different power-linked product (designer coat). Study 2 ($n = 232$) examines the observed effect in a 2 (implicit theory: incremental vs. entity) \times 2 (power threat: yes vs. no) between-subjects experiment where implicit theory and power were both manipulated. Supporting our prediction, only incremental theorists increased their desire for power-linked products when experiencing a power threat ($F(1,223) = 4.87$, $p = .03$), but not entity theorists ($F < 1$, $p = .59$). Study 3 ($n = 260$) demonstrates the indirect effect of identity expression efficacy on incremental theorists' compensatory consumption. The research design followed Study 2, while participants' implicit theory was measured, along with their perceptions of products' power expression efficacy and desire for the products. As predicted, for incremental theorists, the indirect effect of perceived power expression efficacy on desire for power-linked products was significant (indirect effect = .45, 95% CI = [.1030, .8308]), whereas for entity theorists, this indirect effect was insignificant (indirect effect = .01, 95% CI = [-.3276, .2946]).

Study 4 ($n = 409$) supports that incremental theorists prefer within-domain (vs. across-domain) compensation, and it increases the generalisability of the effect of implicit theory by extending the identity threat to the intelligence domain. In a 2 (implicit theory: incremental vs. entity) \times 3 (identity threat: non-threat vs. intelligence threat vs. power threat) between-subjects design, all participants indicated their subscription intentions for intelligence-linked magazines (*The Economist* and *National Geographic*). As predicted, incremental theorists reported higher subscription intentions in the intelligence threat condition than non-threat condition ($\beta = .44$, $t(396) = 2.40$, $p = .02$), but insignificant different subscription intentions between the power threat and non-threat condition ($\beta = .16$, $t(396) = .89$, $p = .37$). Entity theorists reported insignificant different subscription intentions across the conditions ($ps > .32$). Study 5 ($n = 323$) supports that incremental theorists compensate with full-priced (vs. sale) products. In a 2 (implicit theory: incremental vs. entity) \times 2 (power threat: yes vs. no) \times 2 (price condition: full-priced vs. on sale) between-subjects design, the procedure followed Study 3. As predicted, threatened incremental theorists reported higher desire for the full-priced products than unthreatened incremental theorists ($\beta = .61$, $t(308) = 1.97$, $p = .049$), but not for the products on sale ($\beta = -.20$, $t(308) = -.71$, $p = .48$).

To conclude, this research extends the literature on compensatory consumption and implicit theory. It shows for the first time that in response to an identity threat, incremental theorists, but not entity theorists, increase their desire for identity-signalling products, with the pricing and compensation domain as the boundary conditions.

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Investigating consumers' hesitant adoption of medical artificial intelligence

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EXTENDED ABSTRACT

Three experiments corroborate affective trust as an underlying mechanism explaining consumers' low adoption intention of medical artificial intelligence (AI). Consumers high in digital autonomy, respectively digital health literacy, display higher affective trust in medical AI and are more likely to adopt it.

Unlocking the potential of artificial intelligence (AI) for healthcare is one of the major challenges medical companies and policy makers are currently facing (World Health Organization, 2021). Medical AI has the potential to revolutionize healthcare by improving diagnoses and reducing costs related to medical treatments (Agarwal et al., 2020; Longoni et al., 2019; Yokoi et al., 2021). Medical AI are algorithms that analyze patients' data to provide advice in the context of healthcare such as diagnoses and treatment recommendations (based on Castelo et al., 2019; Longoni et al., 2019). Increasingly, AI begins to outperform human experts in medical tasks (Brinker et al., 2019; Haenssle et al., 2018; Chen et al., 2020). However, consumers tend to be reluctant to use medical AI (Dietvorst et al., 2015; Longoni et al., 2019; Promberger & Baron, 2006) and prefer to interact with a human doctor over a medical AI (Castelo et al., 2019). This preference may arise from trust beliefs, as Promberger and Baron (2006) found that patients tend to trust physicians more than a computer program.

Based on Attachment Theory (Bowlby, 1969), we propose that consumers' *affective* trust in medical AI as the medical caretaker plays a pivotal role for its adoption. Even though the adoption of AI is essential for the exploitation of its full potential (Agarwal et al., 2020), research on the causes of the low adoption of medical AI and potential ways to address it remains scarce (Longoni et al., 2019; Cadario et al., 2021). The present study addresses this lack of research via three online consumer experiments identifying affective trust as an underlying mechanism explaining consumers' low adoption intention of medical AI. Further, this study explores digital autonomy (i.e., consumers' preference for being capable of making their own choices with the help of digital self-service technologies instead of service personnel (based on Kim et al., 2016)) and digital health literacy (i.e., consumers' ability to find and process digital health information (Norman & Skinner, 2006)) as potential levers to increase consumers' affective trust building and, consequently, medical AI adoption.

We employed scenarios in medical contexts involving either a human doctor or medical AI. With chronic diseases being promising use cases for medical AI (U.S. National Health Council, 2014), Study 1 and 2 were set up in the context of an online diabetes risk analysis, Study 3 featured the diagnosis of a chronic headache via a health app. Study 1 tests whether affective trust mediates the relationship between the healthcare provider (AI vs. human) and consumers' adoption intention (H1 and H2). Studies 2 and 3 additionally consider digital autonomy (H3, Study 2) and digital health literacy (H4, Study 3) as potential moderators.

Study 1 followed a 2 (healthcare provider: AI vs. human) x 1 between-subjects design. The results of Study 1 demonstrate that the healthcare provider (AI vs. human) influences consumers' adoption intention. Consumers' adoption intention is higher for the human healthcare provider compared to the medical AI. More importantly, mediation analysis (Model 4, Preacher & Hayes, 2004) reveals that

affective trust fully mediates the relationship between healthcare provider and consumers' adoption intention. Compared to the human healthcare provider, consumers appear to adopt medical AI less due to a lack of affective trust. The results of Study 1 support H1 and H2.

Study 2 again used a 2 (healthcare provider: AI vs. human) x 1 between-subjects design. Study 2 validated the findings of Study 1. This time, we additionally controlled for consumers' disposition to trust (McKnight et al., 2002). Further, the results of Study 2 show that consumers' digital autonomy significantly moderates the effect of the healthcare provider on affective trust. Thus, low digital autonomy strengthens the effect of the healthcare providers on affective trust, whereas high digital autonomy weakens it, providing evidence for H3.

Study 3 used a 2 (healthcare provider: AI vs. human) x 2 (digital health literacy: low vs. high) between-subjects design. First, we introduced the option of a headache diagnosis facilitated by a health app to all participants. Participants in the high digital health literacy condition then saw a short step-by-step guide that introduced the functionality of the health app. Participants in the low digital health literacy condition did not see the step-by-step guide. Again, the indirect effect of the healthcare provider on adoption intention via affective trust was significant. Moreover, Study 3 confirms digital health literacy as a situational factor that significantly attenuates the effect of the healthcare provider (AI vs. human) on affective trust, providing support for H4. Increasing digital health literacy appears to be an effective measure to influence consumers' affective trust building in medical AI and, consequently, adoption intentions. The direct effect of the healthcare provider on adoption intention remains significant even when including affective trust, suggesting a complementary mediation (Zhao et al., 2010). There seems to be an omitted variable additionally mediating the relationship of the healthcare provider on adoption intention.

The contribution of the present study is threefold. First, despite consumers' persistent hesitation to adopt medical AI, the underlying mechanisms of consumers' low adoption of medical AI are rarely explored (Longoni et al., 2019; Promberger & Baron, 2006). Applying insights from interpersonal trust research to AI-human interactions, our research adds to prior literature by proposing affective trust as an underlying mechanism explaining consumers' low adoption intention for medical AI. Second, we contribute to a better understanding of influencing factors that may strengthen consumers' affective trust in medical AI and, consequently, their adoption intention. Specifically, we shed light on the impact of consumers' digital autonomy and digital health literacy as two moderators. Finally, based on our findings, we provide healthcare stakeholders seeking to foster acceptance of medical AI, such as medical companies, physicians, companies marketing medical AI, and policy makers, with practical guidance on how to increase consumers' affective trust in and adoption of medical AI.

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Renting as a Coping Strategy: The Effect of Unethical Product Attributes on Choice Between Renting and Buying

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EXTENDED ABSTRACT

We demonstrate that consumers choose a renting option over a buying option for a product with an unethical attribute to reduce anticipated guilt. This effect of presence (vs. absence) of unethical product attributes on increasing the choice of the renting option is attenuated when consumers are less guilt-prone.

While owning through buying has traditionally been the most dominant mode of consuming products, renting is becoming more prevalent. Prior work has identified factors that may influence consumers' choice between renting and buying, including economic costs (Bardhi and Eckhardt 2012; Lamberton and Rose 2012), personal characteristics (e.g., consumers' desire for freedom and variety; Durgee and O'Connor 1995), and contextual factors (e.g., salience of global versus local identity, Nie et al. 2022). However, limited research examined how a specific product attribute—other than economic attributes like price—influences such choices. In this research, we show that the presence of unethical product attributes impacts consumers' choice between buying and renting.

We define unethical attributes as attributes associated with violations of well-established moral standards, such as unfair labor practices like child labor and moral transgression of a manufacturer/producer like a movie director harassing an employee. Since consumers have a strong desire to avoid negative emotions such as anticipated guilt, they engage in various coping strategies when encountering unethical attribute information, such as ignoring or forgetting unethical product information (Ehrich and Irwin 2005; Rezek, Irwin, Zane, and Ehrich 2018). Similarly, we argue that consumers would use renting to cope with negative emotions associated with using an unethical product because consumers feel more detached from a rented product than an owned product. Specifically, we propose that the presence (vs. absence) of unethical product attributes increases the choice of the renting option over the buying option (even when both options are priced equally). This is because consumers anticipate feeling less guilt from renting (vs. buying) a product with unethical attributes.

In study 1 (Prolific, $N = 320$), participants read a scenario describing that they found a dress shirt that they liked. Participants in the unethical attribute present condition additionally read that the manufacturer had been confirmed to use child labor. Then, they indicated their choice between the two purchase options: Buy at \$79.00 or rent at \$19.00. As predicted, more participants chose renting in the unethical attribute present (vs. absent) condition (68.1% vs. 41.3%, $p < .001$). Participants felt less anticipated guilt from renting than buying in the unethical attribute present (vs. absent) condition ($M_{\text{present}} = 2.94$ vs. $M_{\text{absent}} = 4.28$, $p < .001$). Anticipated guilt significantly mediated the effect of unethical attribute on the choice (95% CI = [1.25, 2.48]). In study 2 (MTurk, $N = 323$), we replicated the findings of study 1 using an incentive-compatible choice measure. Importantly, we set the same price for the buying and renting options to rule out the alternative explanation that our findings could be due to the difference in price between the buying and renting options.

In study 3, we provided further support for the anticipated guilt mechanism by examining a moderating role of guilt-proneness. Guilt-proneness refers to the "extent to which individuals tend to experience guilt across situations" (Tangney and Dearing 2002, p. 251). Individuals who are high on guilt-proneness tend to experi-

ence higher levels of guilt in response to a guilt-inducing event or behavior (Fleeson 2001). This finding suggests that more guilt-prone consumers would feel stronger anticipated guilt from considering using a product with unethical attributes. Therefore, we predicted that the effect of unethical attribute on increasing the choice probability of renting over buying will be attenuated for less guilt-prone consumers.

We collected data in two waves. In the first wave, we measured the individual difference in guilt-proneness by giving them three scenarios and asking how much guilt they would feel in each of the three scenarios (adopted from GASP scale; Cohen et al. 2011). A few days after the first wave, participants completed the main survey. A total of 446 participants (MTurk) completed both first and second waves. In the main study, all participants read a description of a highly rated movie that a famous director directed. Participants in the unethical attribute present condition additionally read that the movie director sexually harassed a staff while filming the movie. They then indicated the choice between the two purchase options on Youtube: Buy at \$4.99 or Rent at \$4.99. There was a marginally significant interaction between unethical attribute and guilt-proneness in the choice ($p = .08$). As predicted, the Johnson-Neyman analysis revealed that when the guilt-proneness score was equal to or greater than 4.70 on a 7-point scale, the presence (vs. absence) of unethical attribute significantly increased the rental choice (22.4% vs. 13.6%).

So far, in studies 1-3, participants chose between the two options: buying and renting. In study 4 (MTurk, $N = 322$), we examined whether the effect holds when we add the no-choice option to the choice set. After participants read a scenario that was similar to the one used in study 3, they chose among the three options: buy at \$4.99 vs. rent at \$4.99 (for 30 days) vs. no-choice. As expected, a multinomial logistic regression revealed that the presence (vs. absence) of unethical attribute marginally significantly increased the relative choice probability of the renting option over the buying option ($p = .07$; Renting_{present} = 10.7% vs. Renting_{absent} = 6.7%; Buying_{present} = 61.6% vs. Buying_{absent} = 81.6%). In other words, consumers were more likely to choose a renting option (vs. a buying option) in an unethical attribute present condition even when the no-choice option was available.

In summary, we demonstrated that consumers were more likely to rent than buy when a product featured an unethical attribute to reduce anticipated guilt using both physical (clothing) and digital products (movie). This effect was attenuated for consumers with lower guilt-proneness. Our findings contribute to the growing literature on renting and access-based consumption by identifying non-financial product attributes, specifically unethical product attributes, as a factor that can impact consumers' renting versus buying choices. Consumers use renting as a coping strategy. Our findings also provide managerial implications for brand manager by suggesting that companies can direct their promotional efforts to encourage renting when the negative publicity breaks out.

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The Effects of Image Properties on Consumer Sharing: An Examination of Saturation, Brightness, and Perceived Image Naturalness

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EXTENDED ABSTRACT

This research demonstrates that image saturation and brightness drive consumer sharing of brand-generated content. Specifically, image saturation has a negative U-shaped effect on sharing—an effect differentially driven by arousal and image naturalness. However, the negative effect of high saturation on sharing can be counteracted by decreasing image brightness.

Firms benefit when customers share brand-generated content (BGC) online. One factor that should predict BCG sharing is the saturation of a post's image. Viewing images with higher saturation increases arousal (Valdez & Mehrabian, 1994), which in turn increases information spread (Berger 2011). Research has yet to test the effect of saturation on sharing, likely because transitive linkages suggest the effect should be obvious (thus, perhaps uninteresting). Despite positive linear effects between saturation and arousal, and arousal and sharing, we propose image saturation may elicit other responses that could limit the positive effect of saturation on sharing.

Consumer decisions to share BCG are affected by how their audience will perceive the content (Magsamen-Conrad 2014). Because highly saturated images are often perceived as unnatural (de Ridder 1995), consumers may hesitate to share them. Thus, overly saturated images may increase arousal (positive effect on sharing), but may also be viewed as unnatural (negative effect on sharing). We therefore propose the effect of saturation on sharing will demonstrate an inverted U-shaped relationship. Because this relationship suggests there is an inflection point at which increasing saturation decrease sharing due to image unnaturalness (despite increased arousal), firms might be interested in shifting this inflection point upward to maximize the positive effect of saturation on sharing. Our theory suggests firms might do this by making highly saturated images appear more natural. Because highly saturated images appear brighter (Allan 2020), decreasing image brightness should offset their unnatural properties (Khan et al. 2014). We propose saturation and brightness will interact, such that reducing image brightness will increase the range of the positive effect of saturation on sharing.

In Study 1, we collected Tweets shared by DJIA corporations from 2017-2021 ($n=32,833$). We conducted an OLS regression with retweets as the dependent variable. Using Python, we measured image saturation and brightness at the pixel level (means calculated for each image). Our focal predictor was average saturation. We also squared this value to test our proposed curvilinear effect. Brightness was included as a moderating variable—interaction terms were calculated between brightness and both linear and quadratic saturation terms. The model also included various controls pertaining to properties of the tweet (e.g., hue, sentiment, complexity) and company (e.g., account followers). As predicted, there was a positive linear effect of saturation on sharing ($b=1.36$, $p<0.00001$), and a negative quadratic effect ($b=-1.67$, $p<0.00001$)—the effect of saturation on sharing was positive for saturation below 40.65%, and negative above this point. There was also an interaction between brightness and quadratic saturation ($b=1.74$, $p<0.001$), as the saturation inflection point shifted upward when brightness was lower ($-1SD$; 44.19%), but downward brightness was higher ($+1SD$; 38.32%).

In Study 2, Prolific participants ($n=500$) saw a Tweet featuring a vineyard—the only difference between conditions was aver-

age image saturation (20%, 35%, 50%, 65%, 80%). Participants reported retweet intentions, arousal, and image naturalness (7-point scales). Saturation significantly predicted sharing ($F(1,496)=3.98$, $p=.003$), in an inverted U-shaped pattern. The 65% ($M=2.63$) and 50% ($M=2.51$) conditions reported higher sharing intentions than the 20% ($M=1.93$), 35% ($M=2.05$), and 80% ($M=2.15$) conditions. Saturation also predicted arousal ($F(1,496)=8.43$, $p<.001$), however this effect was more linear. The 80% ($M=4.22$) and 65% ($M=4.22$) conditions reported higher arousal levels than the 20% ($M=3.75$), 35% ($M=3.95$), and 50% ($M=4.15$) conditions. Saturation also predicted image naturalness ($F(1,496)=6.89$, $p<.001$)—this also revealed an inverted U-shaped pattern. The 50% ($M=6.01$) and 65% ($M=5.86$) conditions perceived the image to be more natural than the 20% ($M=5.38$), 35% ($M=5.68$), and 80% ($M=5.35$) conditions. Mediation analyses suggested that as saturation increased from lower levels, arousal and sharing both increased. However, at high saturation levels (80%), arousal remained high, but sharing decreased due to decreased image naturalness.

In Study 3, 309 undergraduates completed a 2(saturation: high/normal) x 2(brightness: normal/low) experiment. Participants viewed a tweet from Starbucks featuring an image with varied saturation and brightness based on condition. Participants reported sharing likelihood, arousal, and image naturalness. A 2x2 ANOVA of sharing revealed a significant interaction ($F(1,305)=7.42$, $p=.007$). Saturation did not affect sharing when brightness was normal ($M_{High}=1.35$; $M_{Normal}=1.28$; $F(1,305)=.01$, $p=.670$), however there was a positive effect of saturation on sharing when brightness was low ($M_{High}=1.88$; $M_{Normal}=1.21$; $F(1,305)=18.04$, $p<.001$). A 2x2 ANOVA of arousal revealed only a main effect of saturation ($F(1,305)=19.27$, $p<.001$), as the high saturation increased arousal when brightness was normal ($M_{High}=4.25$; $M_{Normal}=3.92$; $F(1,305)=5.39$, $p=.021$) and low ($M_{High}=4.38$; $M_{Normal}=3.82$; $F(1,305)=15.09$, $p<.001$). A 2x2 ANOVA of image naturalness revealed an interaction ($F(1,317)=15.28$, $p<.001$). The highly saturated image was perceived as less natural when brightness was normal ($M_{High}=3.97$; $M_{Normal}=5.17$; $F(1,305)=31.35$, $p<.001$), but equally natural when brightness was low ($M_{High}=5.20$; $M_{Normal}=5.22$; $F(1,305)=.004$, $p=.948$). Mediation analyses suggested higher saturation positively affected arousal and sharing in general. However, this effect was mitigated by decreased image naturalness when brightness was normal, yet it persisted when brightness was low, as highly saturated images were seen as more natural.

In sum, this research confirms image saturation leads to emotional arousal, which increases sharing. Notably, the effect of saturation on sharing (via arousal) is not linear. Within lower saturation ranges, increased saturation increases arousal and sharing. However, within higher ranges, the effect of saturation on arousal is overridden by reduced image naturalness.

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The Impact of Disadvantage on Self-Efficacy and Locus of Control

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EXTENDED ABSTRACT

We look at how a sense of disadvantage (feeling worse off than others) impacts consumer locus of control. We find that consumers who feel disadvantaged adopt an external locus of control which impacts associated consumption behaviors (superstitious consumption, reliance on a higher power, etc.), mediated by decreased feelings of self-efficacy.

Inequality is rising at an alarming rate worldwide. In the United States, for example, the top 1% have had incomes increased five times the level as those in the bottom 90% between 1979 and 2015 (Jetten, 2019). While income is an easy to measure metric of inequality, consumers can experience inequality across a number of different domains (race, gender, sexual orientation, etc.), making it a salient occurrence in many consumers' lives.

In the present work, we are particularly interested in studying how inequality impacts those on the disadvantaged (versus the advantaged) end. Specifically, we study how a *sense of disadvantage*, the feeling that one is worse off due to inequalities (Rucker et al., 2018), impacts the decisions that consumers make. Building on the notion that consumers tend to justify current social arrangements and standings (Jost & Banaji, 1994; Pratto et al., 1994), we propose that a sense of disadvantage leads consumers to adopt an external locus of control which impacts their consumption behaviors. Furthermore, we demonstrate that the effect of sense of disadvantage on locus of control is mediated by decreased feelings of self-efficacy. We argue that this is due to "legitimizing myths" that are internalized by individuals with a sense of disadvantage (Jost & van der Toorn, 2012; Pratto et al., 1994), leading them to falsely believe that they are less capable than more advantaged individuals. In response, those who feel disadvantaged divert their efforts to call on external forces (e.g., superstition, fate, religion, etc.) for positive outcomes. See figure 1 for our conceptual model.

We test our hypotheses across 4 studies. In study 1, we use a correlational study to investigate the relationships between disadvantage, self-efficacy, and locus of control. Participants ($N = 302$) responded to scales measuring their own sense of disadvantage, self-efficacy, and locus of control. A sense of disadvantage was significantly associated with an external locus of control ($p < .001$) and decreased feelings of self-efficacy ($p < .001$). Feelings of self-efficacy mediated the relationship ($CI_{95\%} [-.287, -.165]$).

In study 2, we sought to manipulate feelings of disadvantage and measure locus of control via participants' willingness to engage in superstitious consumption (Randall & Desrosiers, 1980; Tobacyk et al., 1988). Participants ($N = 399$) were randomly assigned to a 2 (disadvantage vs. advantage) \times 2 (lucky vs. control) between-subjects design. Participants first imagined that they were a sports fan of a professional team and were at a disadvantage or advantage in an upcoming game. They then read a scenario that manipulated whether they thought their current shirt they normally wear to games was lucky or not. We then measured participants' likelihood to purchase a new shirt to wear to the upcoming game and their performance expectations assuming they did not buy the new shirt, opting to wear their current one. When their current shirt was framed as lucky, participants who felt disadvantaged were less likely to purchase the new one ($p = .008$). Those that felt disadvantaged likewise felt an increase in performance expectations when their current shirt was

framed as lucky ($p < .001$), while there was no difference for those that felt advantaged ($p = .196$).

In study 3, we sought to provide mediational evidence through self-efficacy, and measured external locus of control in a third domain: reliance on a higher power (such as God). Participants ($N = 200$) were randomly assigned to a 2 (disadvantage vs. advantage) \times 2 (pray vs. not pray) between-subjects design. Participants were manipulated to feel that they were either an advantaged or disadvantaged job candidate interviewing for a job. They were told that some people pray for help before an important interview and were then presented with the second manipulation—they either did or did not pray before their interview. We then measured their performance expectations of the interview and feelings of self-efficacy. For those that felt disadvantaged, the act of praying before the interview increased both performance expectations ($p = .020$) and self-efficacy ($p = .005$). However, for those that felt advantaged there was no difference for either performance expectations ($p = .694$) or self-efficacy ($p = .532$). A significant index of moderated mediation indicated that self-efficacy mediated this relationship ($CI_{95\%} [-.34, -.03]$).

In study 4, we sought to provide additional evidence of the mediation process by manipulating the mediator. We do so through a growth mindset intervention because a growth mindset has been linked with increased feelings of self-efficacy (Burnette et al., 2020; Diseth et al., 2014; Taberero & Wood, 1999). Participants ($N = 424$) were randomly assigned to a disadvantage (continuous) \times 2 (mindset: growth vs. fixed) between-subjects design. Participants first answered a scale on how disadvantaged they felt financially. Participants were then presented with the mindset manipulation that manipulated whether they felt that performance and skills could be improved (growth) or not (fixed). We then presented participants with a financial tool app intended to help them improve financial performance and measured their likelihood to purchase the app and their willingness-to-pay. Significant interactions indicated that for the financially vulnerable consumers, a growth mindset reduced the likelihood of purchasing the app ($p = .019$) and their willingness-to-pay ($p = .009$). This demonstrates that those who feel disadvantaged reduce their reliance on external tools when presented with a growth mindset.

Across 4 studies, we demonstrate that feeling disadvantaged leads consumers to adopt an external locus, as evidenced by measuring locus of control, and an increased reliance on superstitious products, a higher power, and external tools. We further show that this relationship is mediated by reduced feelings of self-efficacy, through measuring self-efficacy and manipulating by a mindset intervention.

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The Benevolence of Actively Inflicting Misfortune: When and How Schadenfreude Increases Donations

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EXTENDED ABSTRACT

Can schadenfreude occur when the observer actively inflicts misfortune? Three studies examine this question using a common marketing context: donation appeals that involve inflicting misfortune (e.g., pie tosses, dunk tanks). We show that individuals who inflict mild misfortune on a deserving target experience increased schadenfreude, which leads to increased donations.

Schadenfreude, pleasure in another's misfortune, is a positive emotion, characterized by joy and happiness (Sundie et al. 2009). However, rejoicing in others' misfortune can be morally hazardous (Ben-Ze'ev 2014). Three characteristics can reduce this hazard: mild misfortune (Berndsen and Feather 2016), target deservingness (Feather 2008), and the observer's passive role in misfortune (Ben-Ze'ev 2014). The latter is considered critical yet, remains empirically unexamined. We address this gap.

Contrary to prior theorizing, we propose and show that schadenfreude can occur when consumers actively inflict misfortune. While schadenfreude theory suggests actively inflicting misfortune reflects sadism (Ben-Ze'ev 2014), research in law and philosophy suggests bringing measured punishment on deserving targets is socially just (Furby 1986; Keijser et al. 2002). This social justice is in line with schadenfreude's nature, suggesting that schadenfreude can emerge when the observer inflicts misfortune. We test this proposition in an applied marketing context: misfortune-involving donation appeals (e.g., pie toss, dunk tank). We propose that because schadenfreude represents a pleasant, desired state, its activation will increase donations (Ferguson and Bargh 2004). These predictions were tested across three studies. Complete results are in Table 1.

Study 1 used a 2 (target deservingness: high/low) by 2 (activity: passive/active role in misfortune) between-subjects design (undergraduates; $N = 210$, $M_{age} = 21.64$, 68% female). Participants indicated how much they would donate to dunk a high (vs. low) deservingness target or passively watch others dunk the target (\$0-\$10 scale). Participants then completed four schadenfreude measures (Feather and Sherman 2002; Leach et al. 2003; Sundie et al. 2009; van Dijk et al. 2006; averaged: $\alpha = .95$).

We predicted greater schadenfreude and donations when the target was high (vs. low) in deservingness in both active and passive conditions (no interaction). Further, we predicted schadenfreude would mediate donations. An ANOVA using deservingness, activity, and their interaction to predict donations showed the predicted non-significant interaction ($p = .80$) and significant main effect of target deservingness ($p < .0001$), with higher donations in the high (vs. low) deserving condition regardless of passive/active condition ($ps < .003$). Schadenfreude significantly mediated this pattern (Hayes 2017).

In Study 2 we address an alternative explanation of playfulness. Because targets are volunteering, inflicting misfortune may be playful, rather than harmful. However, playfulness should decline when the target did not volunteer (Mollick and Rothbard 2014). In contrast, target volunteering is not a condition for schadenfreude. Hence, we predicted volunteering would have no impact on donations or schadenfreude.

Participants (Prolific; $N = 158$, $M_{age} = 33.03$, 50% female) completed a preregistered between-subjects study (volunteer/not/control). Participants imagined that a fundraiser allowed them to dump a bucket of ice water on the head of a deserving target that had either volunteered or not volunteered to participate. As a control condition, we

included a no-misfortune appeal, a regular donation booth. Participants indicated how much they would donate (\$0 - \$100) and completed the schadenfreude measures from Study 1.

An ANOVA using appeal condition to predict donation amount ($p = .02$), showed that relative to the no-misfortune control condition ($M = \$6.81$), donations significantly increased in both the volunteering ($M = \$18.38$, $p = .008$) and non-volunteering ($M = \$15.62$, $p = .04$) conditions. As further predicted, the difference between the volunteering and non-volunteering conditions was NS ($p = .52$). Schadenfreude significantly mediated donations.

Study 3 examined the role of misfortune severity while also ruling out sadism. Contrary to prior work, our prior studies show that active inflictors of misfortune can enjoy schadenfreude. Thus, we posit that the line between schadenfreude and sadism lies not with one's the passive/active role, but with misfortune severity. Consistent with the role of schadenfreude in studies 1-2, we expect that sadism, will not drive donations when misfortune is mild. However, when misfortune is more severe, we expect it may no longer be perceived as socially just (Gromet et al. 2006). Thus, but when misfortune is more severe, as sadistic tendencies increase—so will donations, because only sadists enjoy severe misfortune (Burris and Leitch 2018).

To test this interaction, we conducted a two factor between-subject study with manipulated misfortune severity (mild/more severe) and measured sadistic tendencies. Participants (Prolific; $N = 267$, $M_{age} = 35.73$, 50% female) imagined attending a fundraiser where they could either dump a bucket of ice water (mild misfortune) or Tase a deserving target for five seconds (more severe misfortune). Participants indicated how much they would donate to participate (\$0 - \$200) and completed the sub-clinical sadism scale (Plouffe et al. 2017).

An ANOVA using misfortune condition, sadistic tendencies, and their interaction to predict donation amount revealed the predicted interaction of severity by sadism ($p = .001$). Planned slope analysis revealed that, as predicted, there was no impact of sadistic tendencies on donations when misfortune was mild ($p = .24$), and a significant impact when misfortune was more severe ($p = .002$). In the severe condition, means showed donations increased as sadistic tendencies increased (starting at .96 SD above the mean; see Figure 1). These findings suggest it may be more useful to distinguish between schadenfreude and sadism using misfortune severity rather than active/passive observer.

Across three studies, we offer key theoretical and applied contributions. First, we broaden the definition of schadenfreude. Whereas prior theorizing suggests it only occurs when the observer plays no role in bringing about misfortune, we find that schadenfreude can occur even when the observer actively inflicts misfortune. Second, we refine the distinction between schadenfreude and sadism, showing it relies not on the passive versus active role of the observer, but on misfortune severity.

Practically, these findings suggest that schadenfreude is more prevalent than previously theorized. Further, prior theorizing suggests that: "Because of our passivity in schadenfreude, it is likely that this emotion is not very important in terms of the choices we make..." (Ben-Ze'ev 2014, p. 84). Yet, since we demonstrate that schadenfreude can emerge in an active context, its behavioral effects may have been underestimated. Future work can continue to explore schadenfreude's behavioral impact, further contributing to our understanding of this complex and interesting emotion.

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The Dynamics of Self-Control

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EXTENDED ABSTRACT

Self-control is a critical determinant of consumer behavior. We quantify how self-control conflicts evolve in real-time, and use it to test competing models (sequential impulse inhibition vs. simultaneous competition). By revealing the diversity of self-control, we approach a more nuanced understanding of what self-control is and how to support it.

Self-control – the ability to elect long-term goals in the face of short-term temptations -- is a critical faculty of human cognition. Despite the importance of self-control, the cognitive processes enabling self-control are not well understood. Most contemporary models center impulse inhibition: effortfully inhibiting prepotent motor responses towards a temptation, yielding a stage-based evolution of choice. Other theories, in contrast, emphasize dynamic competition between goal and temptation, yielding a more integrative evolution of choice. Until now, methodological limitations have made direct assessment of the evolution of self-control decisions impossible. Here, we use mouse-tracking – a dynamic, real-time measure of decision-making in which we measure participants' computer mouse movements as they make intertemporal payoff decisions (e.g., \$5 today vs. \$20 in 3 months). We develop a novel quantitative approach of analyzing these data that captures the rich temporal and spatial evolution of each decision.

METHODS

Participants. A total of 522 (188, 137, 90, and 107 for studies 1-4) undergraduate students participated in exchange for research credit.

Mouse-tracking procedure. Each trial started with a screen that was blank except for a “start” button placed at the bottom-center. Once participants clicked this button, their cursor disappeared and the delay amounts (e.g., “today” and “180 days”) and the amounts (e.g., “\$25” and “\$40”) appeared in the top-left and top-right corners of the screen. Participants then made their choice by navigating the mouse to one of the two response options. In total, participants completed 180 (Study 1), 195 (Studies 2-3), or 210 (Study 4) trials. In studies 1 and 4, participants were incentivized with real money (via a lottery).

Functional data analysis. We then separated the x and y components of the trajectory, such that we had two time-series vectors each of length 101. For each of these, we generate a smoothed trajectory using basis splines, specifying knots at each timepoint, resulting in a 103 basis functions. For each trajectory we estimate the linear combination of these functions using penalized regression such that result curves are penalized proportional to their smoothness. This resulted in 206 coefficients (103 for x and 103 for y) per trajectory.

Hierarchical clustering. We next subjected these 206 coefficients to agglomerative hierarchical clustering. Specifically, we calculated the Euclidean distance between the 206 coefficients of each of the 46,774 trajectories, resulting in a $46,774 \times 46,774$ distance matrix that served as the basis for the hierarchical clustering algorithm. We then conducted agglomerative hierarchical clustering, which begins by treating each trajectory as its own cluster, and then combines the two closest clusters (according to the above distance matrix) into one cluster. The algorithm then repeats this process iteratively, at each step combining the next two most similar clusters, until the two most dissimilar trajectories have been combined. This results in a binary tree, known as a dendrogram, that details when each trajectory was com-

bined. Dendrograms enable the investigation of homogeneous collections (clusters) of trajectories that are the most dissimilar from other clusters in each split. The top cluster of the dendrogram contains all trajectories. The first split divides the data into two clusters, such that the trajectories in each group are more similar to one another than they are to any in the alternative cluster. As one goes further down the tree, these large clusters further subdivide into their subcomponent parts.

RESULTS

When examining the first split of the data, trajectories appear to categorize into two primary classes: (1) a trajectory that appears consistent with impulse inhibition: an initial and immediate deflection towards the smaller-sooner, followed by a correction back towards the larger-later, and (2) a trajectory that appears consistent with dynamic competition: a gradual evolution towards the larger-later. These results are notable for two reasons. First, these results suggest that impulse inhibition and dynamic competition are indeed the two predominant models that best describe the variability in our data. In other words, using this data driven approach, we find that the largest differentiator of choice evolution is whether trajectories appear discrete (i.e., arriving via impulse inhibition) or graded (arriving via dynamic competition), and, notably, we find evidence for both approaches. Second, however, is that the two clusters are not of equal size – in fact, trajectories were more than twice as likely to be clustered as dynamic (31,496 trajectories, 67.34%) as impulse inhibition (15,278 trajectories, 32.66%). This suggests that, while both impulse inhibition and dynamic competition represent real routes to choosing long-term over short-term, dynamic competition appears to be considerably more frequent.

Who Relies on Impulse Inhibition? One critical distinction between models emphasizing effortful impulse inhibition and dynamic competition is what it means to have good self-control – is impulse inhibition characteristic of those with good or poor self-control? We thus test whether more myopic individuals – that is those who are less patient and discount future rewards more – are more likely to demonstrate impulse inhibition. Using mixed effects models with random effects for subject and choice, we find that as (log-transformed) discount rate increases, participants are more likely to rely on impulse inhibition, $b = .23$, $SE = .02$, $Z = 14.18$, $p < .001$. In other words, people who are less patient showed relatively greater reliance on impulse inhibition than those who were relatively more patient. This result held even when controlling for the difference in subjective value of the two choices on that trial, $b = .20$, $SE = .02$, $Z = 11.15$, $p < .001$.

CONCLUSION

There exist multiple competing theories and conceptualizations of self-control. By taking advantage of the rich spatial and temporal data offered by mouse-tracking, it appears that there are multiple routes to successful self-control – stage-based impulse inhibition and integrative dynamic competition. Notably, impulse inhibition appears to be both in the minority, and characteristic of those with poor self-control. By quantifying the diverse ways in which participants elect long-term over short-term, we can begin to build models of self-control that more comprehensively reflect the realities of the decision-making process.

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The Golden Quadrant of Solid and Liquid Consumption

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EXTENDED ABSTRACT

Prior research conceptualizes solid (i.e., enduring, ownership-based) and liquid (i.e., ephemeral, adaptable) consumption along a single continuum. By contrast, we propose that solid and liquid consumption are best represented by two orthogonal dimensions. We show that market offerings which land in the ‘golden quadrant’ (high-solid/high-liquid) reap the highest consumer value.

Solid consumption characterizes market offerings that are enduring and ownership-based (Bardhi and Eckhardt 2017). For example, purchasing a book from Amazon or purchasing a Toyota Camry are examples of solid consumption. By contrast, *liquid consumption* characterizes market offerings that are ephemeral and adaptable (Bardhi and Eckhardt 2017; Bardhi, Eckhardt, and Arnould 2012). For example, checking out a book from the library or reserving a rental car through Enterprise are instances of liquid consumption. Thus, solid consumption primarily offers consumers value in the *security* associated with physical ownership, whereas liquid consumption primarily offers *flexibility* associated with having access to an assortment of products to accommodate consumers’ changing preferences (Bardhi and Eckhardt 2017).

Current theories categorize consumption along a single continuum from purely solid to purely liquid, with the midpoint representing a mixture of solid and liquid (Bardhi and Eckhardt 2017). This continuum perspective suggests a tradeoff, such that solid consumption offers high security but low flexibility, whereas liquid consumption offers low security but high flexibility. By contrast, we propose that solid and liquid consumption are better understood as two orthogonal dimensions (H1). We put forth a 2 (high vs. low solid) \times 2 (high vs. low liquid) framework, which suggests market offerings generally fall into one of four quadrants. Our perspective proposes that some offerings can be characterized as both high solid and high liquid consumption. For example, Amazon Alexa provides the benefits of both security (e.g., physical device, personalized account; i.e., solid consumption) and flexibility (e.g., a wide variety of features, digital technology that can be updated as consumer preferences change; i.e., liquid consumption).

In addition to offering a more accurate perspective on market offerings, our framework allows for novel predictions about consumer behavior. We hypothesize that market offerings occupying the perceptual space of high solid and high liquid consumption will reap the highest consumer value (H2), a phenomenon which the continuum perspective cannot explain. We refer to this hypothesized phenomenon as the *golden quadrant of solid and liquid consumption*. Our studies examine value at the market offering level (e.g., product attitudes) and the brand level (e.g., brand growth).

Experiment 1. To test the orthogonality of solid and liquid consumption (H1), 300 MTurk participants were presented with a random subset of the top 100 global brands from Interbrand (e.g., Coca-Cola, Uber; Interbrand 2020). To assess participants’ perceptions of solid and liquid consumption, they rated each brand’s security (i.e., solid) and flexibility (i.e., liquid; 1 = *no security* [*flexibility*], 7 = *a lot of security* [*flexibility*]). In line with prior research (Cannon, Rucker, and Galinsky 2021; Fiske et al. 2002; Fiske and Dupree 2014), a hierarchi-

cal cluster analysis determined that four clusters best categorize the data (Ward 1963). Importantly, a subsequent *k*-means cluster analysis with four groups determined these four clusters mapped onto the four quadrants of the 2 (high vs. low solid) \times 2 (high vs. low liquid) framework. For example, one cluster with 8 brands, including Amazon and Google, was characterized as high solid ($M = 5.42$) and high liquid ($M = 5.64$). The two ‘‘high solid’’ clusters were perceived as more solid than the ‘‘low solid’’ clusters (all $t > 5.32$, $p < .001$), and the two ‘‘high liquid’’ clusters were perceived as more liquid perceptions than the two ‘‘low liquid’’ clusters (all $t > 8.89$, $p < .001$).

Experiment 2. To provide causal evidence for H1, 252 undergraduate students were randomly assigned to conditions that varied solid \times liquid consumption: (a) purchasing a digital book, (b) purchasing a physical book, (c) renting a book, and (d) attending a book reading. Participants listed three benefits afforded by their assigned consumption opportunity, then rated the degree to which each benefit offered security (i.e., solid) and flexibility (i.e., liquid; 1 = *very little*, 7 = *a lot*). In line with our hypotheses, a mixed-effects regression with indicators of condition revealed that digital books ($M = 5.58$) and physical books ($M = 5.65$) were perceived as more solid than renting books ($M = 4.86$) and book readings ($M = 4.54$; $z = 8.05$, $p < .001$). Likewise, digital books ($M = 5.62$) and renting books ($M = 5.74$) were perceived as more liquid than physical books ($M = 4.95$) and book readings ($M = 4.49$; $z = 8.45$, $p < .001$). Therefore, even within the same product category (i.e., books), different market offerings can fall within each of the four quadrants.

Experiment 3. To examine our *golden quadrant* hypothesis (H2), we obtained performance metrics (brand value and growth) from the Interbrand website for the 100 brands from experiment 1 (Interbrand 2020). We predicted brand performance using the solid and liquid ratings from experiment 1 and their interaction. A regression model revealed a positive and significant interaction between solid and liquid perceptions for both brand value ($b = 29,977.90$, $t(96) = 2.72$, $p = .008$) and brand growth ($b = 0.09$, $t(91) = 2.07$, $p = .041$). Overall, brands that land in the high-solid/high-liquid ‘golden quadrant’ enjoyed the highest valuation in the marketplace, compared with brands that were only high on one dimension.

Experiment 4. To provide additional evidence for H2, we had 200 MTurk participants rate their perceptions of the 12 technology brands from the Interbrand top 100 list (e.g., Google, LinkedIn). Participants indicated their brand attitude using three items ($\alpha = .98$). Then, participants indicated their solid and liquid perceptions for each brand as in previous studies (1 = *not at all*, 7 = *very much*). A mixed-effects regression revealed a positive and significant interaction ($b = 0.02$, $z = 1.99$, $p = .046$), consistent with a golden quadrant of solid and liquid consumption. This study thus replicates the findings of experiment 3 using a different metric of consumer value (i.e., attitudes).

In conclusion, solid and liquid consumption are better conceptualized as two orthogonal dimensions, and *the golden quadrant of solid and liquid consumption* elicits the highest valuation in the marketplace. Relative to existing theorizing, this framework provides an alternative perspective on how to view and design market offerings.

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Germ and Possessions: Pathogen Concerns Enhance Psychological Ownership

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EXTENDED ABSTRACT

We examine how chronic and situational differences in pathogen concerns affect psychological ownership. Four studies demonstrate that heightened pathogen concerns lead consumers to put a greater importance on the concept of ownership. This subsequently enhances psychological ownership and impacts downstream consumer behaviors (e.g., attitudes, word of mouth).

Consumers often feel as though they own things regardless of whether they are owned in a legal sense. For example, someone who is a die-hard fan of a television series may come to feel that it is *theirs* even though they have no legal claim to it. This is referred to as psychological ownership (Pierce, Kostova and Dirks 2003). While prior research has dominantly focused on the antecedents that lead to the emergence of psychological ownership (Peck and Shu 2009; Stoner, Loken and Stadler Blank 2018), less is known about the factors that enhance consumers' psychological ownership (Thüridl et al. 2020).

Research on the behavioral immune system (BIS) has demonstrated that the perceived threat of pathogens sensitizes people to contamination relevant cues (see Murray and Schaller 2016 for a review). For example, pathogen concerns increase attention to physical abnormalities (Ackerman et al. 2009) and accents (Reid et al. 2012). Presumably, by becoming more aware of and responsive to cues that are heuristically associated with contamination, people minimize the risk of getting and spreading pathogens. The BIS and the concept of ownership are brought together by the premise that ownership can also serve as contamination cue. Indeed, when pathogen concerns are activated, consumers exhibit a reduced preference for second-hand goods (Huang, Ackerman and Sedlovskaya 2017). Furthermore, there is a strong association between physical (and even imagined) touch and feelings of ownership, further highlighting the common belief that ownership and physical contact are intertwined (Peck, Barger and Webb 2013; Peck and Shu 2009). If people believe that ownership implies physical contact, then pathogen concerns should augment the importance of ownership due to the enhanced heuristic value of determining who owns what.

Finally, if pathogen concerns bring ownership to the fore, this concept should then be more likely to be integrated into consumers' subsequent attitudes, feelings, and perceptions (Janiszewski and Wyer Jr. 2014). Unlike legal ownership, which is relatively binary (i.e., you either have legal ownership rights to something or you do not), psychological ownership exists as a matter of degrees; people can vary in the extent to which they feel something is theirs. Indeed, there are numerous ways in which people's feelings of ownership can change from one moment to the next (Peck et al. 2013; Stoner et al. 2018). Given that relevant cognitions and behaviors can enhance psychological ownership, we predict that when consumers feel that it is important to establish who owns what, this will increase their psychological ownership for targets that they have a preexisting affinity for.

In Study 1, we tested the prediction that that pathogen concerns would enhance psychological ownership for liked targets rather than make it emerge for a neutral target. Americans from Mturk (N = 471) were randomly assigned to either enter the name of a clothing brand that they like or a clothing brand that they are familiar with but neither like nor dislike. Participants reported psychological ownership (Peck and Shu 2009), attitude toward the brand (MacKenzie and

Lutz 1989), and germ aversion (Duncan, Schaller and Park 2009). Consistent with our prediction, germ aversion positively predicted psychological ownership for the liked brand, but it did not predict psychological ownership for the neutral brand. Furthermore, the effect of germ aversion on attitudes was mediated by psychological ownership for the liked brand, but not for the neutral brand.

Study 2 was designed to test whether situational (i.e., manipulated) pathogen concerns would similarly enhance psychological ownership. We also wanted to test our proposed mechanism and whether enhanced psychological ownership would positively predict word of mouth as an act of stewardship (Kirk and Rifkin 2021). Americans from Prolific Academic (N = 740) were randomly assigned to either write about the experience of wearing a shirt that was brand new (control) or used (pathogen). Then, we captured the importance of ownership. Lastly, participants typed the name of a TV show that they like, indicated their psychological ownership of it, and whether they would recommend the show (Consiglio, De Angelis and Costabile 2018). As predicted, participants reported greater psychological ownership and importance of ownership in the pathogen condition. Finally, the positive effect of pathogen concerns on word of mouth was serially mediated by importance of ownership and psychological ownership.

Study 3 was designed to test our theorizing that pathogen concerns also enhance inferences of psychological ownership in others. Americans from Prolific Academic (N = 649) were randomly assigned to either write about the experience of wearing a shirt that was used (pathogen) or used but subsequently sterilized (control). Importance of ownership was captured then participants were asked to imagine that a close friend had a new favorite band. We captured inferred psychological ownership (Kirk, Peck and Swain 2018), then participants stated how likely they would be to share an article about the band that their friend had not yet shared. Results revealed that in the pathogen condition, participants inferred marginally greater psychological ownership and significantly greater importance of ownership. Finally, the positive effect of pathogen concerns on word of mouth was serially mediated by the importance of ownership and inferred psychological ownership.

Study 4 was designed to moderate the downstream effect of psychological ownership on attitudes. We recruited Americans from Prolific Academic (N = 549). Germ aversion and the importance of ownership were captured. Participants were asked to type the name of a clothing brand they like and report their psychological ownership of the brand. Then, participants were randomly assigned to imagine that the brand had launched a campaign that asked either existing customers (no infringement) or new customers (infringement) to help name a collection of the brand's clothing. Attitude toward the campaign was then captured. Results revealed that germ aversion positively predicted psychological and importance of ownership. Finally, although there was a positive effect of psychological ownership on attitudes when the promotion targeted existing customers, this relationship was not significant when the campaign invited new customers to name the collection.

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Buying to Impress Others or Buying to Please Yourself? Different Motives Underlying Masstige Consumption

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EXTENDED ABSTRACT

The fast-growing middle class in emerging markets leads luxury brands to adopt a masstige (mass + prestige) approach. Using a multi-method approach, three studies reveal two major motives underlying masstige consumption, showing that socially-oriented (vs. personally-oriented) motives enhance the preference for foreign (vs. domestic) masstige brands.

Masstige luxury (e.g., Coach, Kate Spade) is a type of luxury that the quality, style, and price are higher than everyday products, but are lower than premium luxury goods (Paul 2019). Compared to premium luxury, masstige luxury takes a more inclusive approach by offering premium goods at attainable prices to reach a *mass consumer population* (Kumar and Paul 2018). While this strategy proves to be successful worldwide, especially in emerging markets (e.g., China, India, Brazil), academic research on masstige luxury consumption is behind (Paul 2018). To further complicate the issue, masstige luxury in emerging markets is consisted of not only foreign brands, but also domestic brands for consumers to choose from. While previous research shows that consumers' motives underlying luxury consumption can be broadly categorized into *socially-oriented* motives (e.g., status signaling) and *personally-oriented* motives (e.g., personal enjoyment and gratification) (Patrick and Monga, 2020), little is known about how socially-oriented and personally-oriented motives influence consumer preference of domestic (vs. foreign) masstige brands. The present research aims to fill this gap by examining the interplay of consumption motives and the product's country-of-origin on consumer choice of masstige brands in emerging markets.

We anticipate that when socially-oriented motives are salient, consumers in emerging markets would prefer foreign (vs. domestic) masstige brands, as consumers in emerging markets have a tradition of adopting foreign brands to signal and boost their social status (Batra et al. 2000). Foreign brands can offer symbolic values which may create social distinctions by exhibiting "elite power and privilege" in developing countries (Burke 1996, p. 181). On the contrary, when personally-oriented motives are salient, consumers in emerging markets are anticipated to prefer domestic (vs. foreign) masstige brands. Domestic masstige brands provide superior "value-for-money" and offer more hedonic values (Xu 2019; Zhu 2018), which directly satisfy consumers' needs for personal gratifications and pleasure (Wu and Yang 2018).

Using a multi-method approach, three studies provide consistent evidence to support our hypothesized effects. In Study 1, participants who had purchased masstige luxury in the previous 12 months were recruited in China. They were asked to list the masstige brands they purchased in the previous 12 months (as complete as they could recall). Afterwards, participants were asked to report: "Among your masstige consumptions made in the past year, what's the percentage of your spending made on domestic masstige brands?" (0-100%). We also measured two important masstige consumption motives: personally-oriented motives through three items ($\alpha = .64$) and socially-oriented motives through four items ($\alpha = .93$). A linear regression analysis shows that, as expected, socially-oriented motives lead consumers to consume more foreign brands over domestic brands ($b = -7.512, p < .01$), whereas personally-oriented motives lead

consumers to prefer domestic brands over foreign brands ($b = 3.789, p < .01$).

Study 2 uses a secondary dataset of Chinese consumer jewelry purchase data from six major brands (two foreign brands and four domestic brands). This dataset records consumption related information, including brand choice, price paid, and perceived quality of the six brands, as well as measures of participants' socially-oriented motives ($\alpha = .82$) and personally-oriented motives ($\alpha = .76$), as in Study 1. With a utility maximization modeling framework, we replicated the findings from Study 1.

In Study 3, we sought to establish the causal direction between consumption motives and preference for domestic (vs. foreign) masstige brands. In this experiment study, we randomly assigned participants to either a socially-oriented or personally-oriented purchase condition, and manipulated their purchase goals (i.e., to impress others vs. to please themselves) accordingly. Participants were then asked to make a choice between a foreign masstige brand (originated and made in the USA) and a domestic brand (originated and made in China). Participants also indicated their socially-oriented motives and personally-oriented motives when making the choice. A binary logistic regression showed a significant main effect of purchase condition (Wald $\chi^2(1) = 52.03, \beta = 2.50, SE = .40, \exp(\beta) = 12.22, p < .001$), with more participants in the personally-oriented condition (90.9%) chose the domestic masstige brand, and more participants in the socially-oriented condition (55.0%) chose the foreign masstige brand. Mediation analysis (Hayes model 4) supported the proposed mechanism (3.09; 95% CI = [2.27, 4.55]).

This research extends extant literature on luxury consumption by showing a congruity effect between different types of consumption motives (socially- vs. personally-oriented motives) and the preference of a brand's country-of-origin (domestic vs. foreign). Findings from this research also offer actionable implications. For instance, to promote domestic masstige brands, marketers can use communication appeals or contextual cues to enhance the accessibility of personal motives (e.g., using ad appeals that promote the independence of the self). Conversely, when promoting foreign masstige brands, marketers may find it effective to appeal to the social aspect of the self (e.g., appeals of social harmony).

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The Negative Effect of Name: Mentions of Server Name Reduce Online Review Persuasiveness

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EXTENDED ABSTRACT

Although consumers do not pay attention to server names during consumption, server names frequently appear in online reviews. Secondary data and three studies show that readers may perceive positive reviews mentioning server names as less persuasive, but this negative effect is mitigated in industries where server expertise is important.

Online reviews largely influence consumer decision-making (Zhu and Zhang 2010). Servers are one of the important objects of reviews (Zhu et al. 2017). When mentioning servers, most consumers are accustomed to directly using “the waiter/waitress” or “the service” as the subject. At the same time, we have also observed that server names appear apparently in the online reviews of some businesses. Our pilot study of 343 Chinese consumers revealed that 28.86% have experienced being asked by waiters to give positive online reviews including their names, and 56.85% have seen the name of waiters in online reviews. Kim and Baker (2017) proffered that disclosing server names to consumers in ethnic restaurants can enhance their perceptions of experience authenticity. Does the frequent disclosure of server names in the online reviews of a company also enhance its potential consumers’ authenticity perception of the reviews? As the factors that influence online review persuasiveness are the focus of businesses and scholars (Reich and Maglio 2020; Rosario et al. 2020), it is important to know whether the name of servers is a factor.

Our research examines the influence of server names on online review persuasiveness. When readers read reviews, they tend to infer the motivation of reviewers (Naylor et al. 2011). Reviewers’ language use serves as a clue since it provides insights for readers into the relationship between the reviewer and the object being commented (Berger et al. 2019). Similarly, a reviewer’s reference to server names affects readers’ perceptions of the reviewer’s relationship with this company and the server. When a reviewer evaluates the service and mentioned the server name, readers may think that the reviewer has a closer relationship with the server and infer that instead of helping potential consumers better understand the company to make consumer choices, the reviewer has other review motives. Therefore, we indicate that when readers perceive a review to be more deceptive, the persuasiveness of the review will decrease.

But in hairdressing, manicure, and pedicure shops, servers provide high skilled services such as hairdressing and nail painting. At this time, reviews mentioning server names tell readers which servers offer better services, and help readers choose servers in the consumption to obtain better experiences, hence reducing readers’ consumption risks (Moe and Trusov 2011), producing no negative effects. We believe the importance of server expertise moderates this effect.

In Study 1a, we collected data from the Chinese largest independent third-party online review platform Dianping.com (Zhu et al. 2019). On January 26, 2021, we scraped 16,470 reviews, 2910 reviews without server names, and 1560 reviews with server names were obtained, the number of “likes” of the review was a dependent variable representing its persuasiveness. Negative binomial regression results suggested the persuasion of the reviews with server

names was lower than reviews without server names ($b = -.4748, z = -15.87, p < .001$).

Study 1b opted for online experiments to verify our main effect and the mediation effect of perceived deception. We recruited 132 subjects to a one-factor, two-level (existence of server names: yes vs. no) between-subjects design. Participants browsed the review interface of restaurant A and saw several reviews. Participants in the (no-) server name group saw five reviews (that praised the waiter but did not mention the name) with server names. They then reported their patronage intentions, and perceived deception of those reviews. ANOVA showed that compared with the no-server name group, subjects in the server name group had lower patronage intentions ($M_{\text{no-name}} = 5.09, M_{\text{name}} = 4.55, p = .022$), higher perceptions of review deception ($M_{\text{no-name}} = 3.8, M_{\text{name}} = 4.23, p = .031$), perceived deception served as a mediator ($IE = .33; CI [.0240, .6651]$).

Study 2 re-examined the main effect and the mediating effect in experience-oriented services scenarios such as hotels. 142 subjects were invited into two groups. Subjects first read that they planned to travel to areas without the COVID-19 epidemic with their friends. To book a hotel, they searched for hotels online. The manipulation of server names was similar to study 1b. After reading four manipulative reviews and one service-irrelevant review, participants reported the same measures as in study 1b. The results were consistent with our hypotheses.

Study 3 investigated the boundary of our effect. We invited 239 subjects to a 2 (existence of server names: yes vs. no) * 2 (importance of server expertise: high vs. low) between-subjects design. Participants read that they and their friends planned to find a pedicure shop with experienced pedicure technicians (vs. fully automatic multi-functional massage barrels) to provide massage services. Afterward, subjects were told that they saw reviews when they searched for this type of pedicure shop on Dianping.com and browsed pedicure shop A. The manipulation of server names was similar to study 1b. After reading three manipulative reviews and one service-irrelevant review, participants reported the same measures as in study 1b. ANOVA showed the interaction between name and expertise ($p = .003, \eta^2 = .039$) influenced participants’ patronage intentions. When server expertise importance was high, participants between the server name group and no-server name group had indifferent patronage intentions ($M_{\text{no name}} = 4.81, M_{\text{name}} = 4.80, p = .97$). When server expertise was low, compared with the no-server name group, subjects in the server name group had lower patronage intentions ($M_{\text{no name}} = 5.12, M_{\text{name}} = 4.03, p < .001$).

This research brings the server name into name-related researchers’ vision and enriches the factors that influence the persuasiveness of reviews. For merchants in industries where the server expertise is less important, we remind them that it is inappropriate to use the number of reviews mentioning server names as a measure of server performance. For industries where server expertise is important, we encourage them to promote service quality and increase the number of positive reviews mentioning server names.

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Multi-Product Brand Extensions Evaluations Vary with Consumers' Implicit Theories of Personality

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EXTENDED ABSTRACT

Three studies show that incremental theorists (who believe in malleability of personality traits) prefer extensions that are similar to a specific product exemplar of the parent brand. Entity theorists (who believe that personality traits are mostly fixed) prefer extensions that are similar to the prototype of the parent brand.

Multi-Product Brand Extensions Evaluations Vary with Consumers' Implicit Theories of Personality

We investigate the influence of consumers' implicit theories of change (Mathur, Jain, & Maheswaran, 2012) on evaluations of extensions whose parent brand is broad, i.e., has multiple products under the umbrella brand (e.g., Virgin, General Electric). We invoke the type of fit the extension has with the parent brand and its products (Mao and Krishnan, 2006). Prototype fit considers an extension's similarity to the prototypical representation of the parent brand, while exemplar fit assesses the extension's similarity to a product exemplar under the brand. Three studies find that entity theorists, who believe personality traits are fixed, tend to provide more favorable evaluations to prototype fit extensions, whereas incremental theorists, who believe personality traits are malleable, evaluate exemplar fit extensions more favorably.

STUDY 1

178 US undergraduates (85 females, mean age = 20.77 years, $SD = 2.69$) were introduced to a fictional multi-product beauty brand, Yelian. Participants evaluated two Yelian extensions, one with high exemplar fit/low prototype fit with Yelian (bath sponge), and another with high prototype fit/low exemplar fit (face mask) on six, 10-point relative scales ($\alpha = .92$). Participants then completed the 3-item domain general implicit theory scale (Dweck et al., 1995; $\alpha = .84$). A regression of participants' average relative evaluation on their average implicit theory score showed that a greater entity theory orientation predicted stronger preference for the high-prototype brand extension over the high-exemplar brand extension, $b = .33$, $F(1, 176) = 5.04$, $p < 0.03$.

STUDY 2

113 US students participated in a 2 (implicit theory: incremental vs. entity) x 2 (brand extension fit: exemplar [bath sponge] vs. prototype [face mask]) between-subjects study in which implicit theories were manipulated (Plaks et al., 2001). A 2 x 2 between-subjects ANOVA revealed a two-way interaction between type of fit and implicit theory ($F(1, 109) = 5.06$, $p < .05$). Entity theorists evaluated the high prototype fit extension more favorably ($M_{ET-PF} = 5.27$, $SD = 1.19$ vs. $M_{IT-PF} = 4.39$, $SD = 1.23$, $F(1, 109) = 3.23$, $p < .05$), while incremental theorists evaluated the high exemplar fit higher ($M_{ET-EF} = 4.47$, $SD = 1.03$ vs. $M_{IT-EF} = 5.12$, $F(1, 109) = 4.24$, $p < .05$).

STUDY 3

Study 3 examined how a parent brand is impacted by the success/failure of its extension, referred to as "feedback effect" (Milberg, Park, & McCarthy, 1997). 198 US students participated in a

2 (incremental vs. entity theory) x 2 (exemplar vs. prototype fit) x 2 (extension performance: favorable vs. unfavorable) between-subjects study. Implicit theory was manipulated using proverbs (Poon and Koehler, 2006). Participants read a brief description GE and its products and learnt that GE was launching either Laptops (high prototype fit/low exemplar fit) or Detergents (high exemplar fit/low prototype fit). In the favorable (vs. unfavorable) performance review condition, the extension was reviewed more positively (vs. negatively). Participants evaluated the parent brand pre as well as post-exposure and evaluated the extension on the same scales ($\alpha = .98$). Entity theorists evaluated a successful high prototype fit extension more favorably ($M_{ET-PF} = 5.58$ vs. $M_{IT-PF} = 4.58$; $F(1, 186) = 7.15$, $p < .01$), while incremental theorists judged the successful high exemplar fit extension higher ($M_{ET-EF} = 4.47$ vs. $M_{IT-EF} = 5.25$; $F(1, 186) = 9.10$, $p < .01$). Under extension failure, entity theorists' evaluations of the parent brand declined for both, the high exemplar and high prototype fit extensions, but the decline was greater for the latter (exemplar fit: $M_{ET-EF-Pre} = 5.94$ vs. $M_{ET-EF-Post} = 4.97$; $F(1, 186) = 6.64$, $p < .05$; prototype fit: $M_{ET-PF-Pre} = 5.85$ vs. $M_{ET-PF-Post} = 4.23$; $F(1, 186) = 27.02$, $p < .001$). Also, their evaluations of the parent brand in response to the failed prototype fit extension were significantly lower than those for the failed exemplar fit extension ($M_{ET-EF-Post} = 4.97$ vs. $M_{ET-PF-Post} = 4.23$, $F(1, 186) = 4.94$, $p < .05$). In contrast, incremental theorists did not alter their parent brand evaluations in the face of failure ($M_{IT-Pre} = 5.87$ vs. $M_{IT-Post} = 5.55$; $F < 1$).

GENERAL DISCUSSION

We examine extensions of broad parent brands and show evidence of instances when entity beliefs may be altered, namely, when entity theorists encounter preferred but failed extensions. Similarly, we show instances when incremental theorists are likely to leave their initial assessments unchanged. In particular, we provide the first examination of broad brands and the qualitative type of extension fit (prototype/exemplar) with the parent brand and report that poorly performing extensions may be detrimental for the parent brand, especially with the entity theory segment. Future research should investigate whether the effects observed in our studies may be explained by construal level theory (Trope, Liberman, & Wakslak 2007), since prototypes are abstract representations while exemplars are more concrete instances of a category.

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Feeling Small but Thinking Big: Awe-induced Positive Self-diminishment Motivates Sustainable Consumption

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EXTENDED ABSTRACT

We propose the association of positivity while feeling small, the positive self-diminishment effect can address the significant attitude-behavior gap for sustainable products. The current research examined awe as an antecedent of the positive self-diminishment effect and found that this effect leads to higher willingness to pay (WTP) for sustainable products.

Research on sustainable attitudes and behaviors has documented promoting aspects of self-relevance to drive sustainable behavior. For instance, research suggests that individuals are motivated to preserve or raise self-esteem when making sustainable purchases. This is because individuals' identity or self-image concerns are important triggers of positive consumer behaviors (e.g., White, Simpson, and Argo 2014). However, enhancement of self-image poses an immediate concern of boosting consumers' self-interests rather than a more self-transcendent perception required to motivate consumption for the greater good. In other words, the relatively higher costs associated with sustainable products act as a barrier for consumer adoption of such goods. Although extensive research has examined the influence of psychological antecedents on sustainable actions and behaviors, marketers still struggle to overcome the attitude-behavior gap of consumers in the domain of sustainable products. Thus, a gap remains in understanding potential motivating factors to consume sustainably and especially, boost inclinations to pay for relatively expensive sustainable products.

In this research, we identify a novel aspect of self-relevance – positive self-diminishment – that will help marketers to bridge the gap by increasing willingness to pay (WTP) for sustainable products. We define positive self-diminishment as the perception of feeling psychologically small without adversely affecting associated self-concept perceptions such as self-esteem, status, and sense of power and control. Put differently, positive self-diminishment is devoid of negative self-perceptions even while making the consumer feel psychologically small. Thus, a sense of positive self-diminishment addresses double barreled necessities relevant to motivating sustainable consumption – first, viewing the self as psychologically smaller primes a sensitivity to others' and promotes self-sacrificing behaviors (e.g., Van Vugt, 2009) and second, a positive self-perception enables uptake of opportunities which can affirm self-worth (Baumeister, 1998; Beauregard and Dunning, 1998; Swann, 1997), such as purchase of socio-desirable sustainable products.

Emotional engagement of consumers is a crucial and pervasive component of marketing. For instance, advertisements that use appropriate emotions increase consumer interest and translate to increased sales volumes (Nielsen, 2016). Similarly, in the domain of sustainable consumption, emotions like anticipated guilt encourage sustainable behavior (Peloza et al., 2013) while sadness can increase donations for sustainable causes (Schwartz & Loewenstein, 2017). However, there are significant drawbacks to experiencing negative perceptions since marketers strive to inculcate positive experiences for consumers. Answering recent calls for research to examine positive emotions, we evaluate a range of positive emotions and test the hypothesis that awe-induced positive self-diminishment is a stronger and more efficient motivator of sustainable actions.

Awe is a positive emotion which is primed by elicitors of natural scenic beauty or magnificent artwork or even spiritual episodes (Shiota, Keltner, and Mossman, 2007). In other words, awe incorporates a sense of wonder (Piff et al., 2015) and alters consumers' existing mental structures (Keltner and Haidt 2003). Importantly, awe induces a perception of reduced self-size whereby individuals feel smaller in the presence of awe-inducing stimuli (Piff et al., 2015). A state of self-diminishment however, even when positive, is undesirable and enhances perceptions of social () We argue and demonstrate that the sense of awe-induced self-diminishment enhances motivation to manifest moral identity and spend more on sustainable products. This is an important advantage of positive self-diminishment since prior research outlines that signaling is an integral part of socio-moral behaviors such as sustainable consumption (e.g., Griskevicius, Tybur, & Van den Bergh, 2010). Thi

Among positive emotions, literature has largely emphasized the role of pride in motivating sustainable behaviors (e.g., Antonetti & Maklan, 2014; Bissing-Olson et al., 2016; Onwezen et al., 2013; Onwezen et al., 2014). However, pride is a self-focused emotion (Tracy & Robins, 2004) and may enhance focus on money and status, thus reducing the tendency to pay for sustainable products which are relatively more expensive. Thus, we examined if awe-induced positive diminishment would emerge as a more efficient motivator than self-referential emotions (such as pride) and other-referential emotions (such as gratitude and compassion) in facilitating higher willingness to pay for sustainable products. Using data from an archival dataset of a nationally representative population in the United States ($N = 1519$), a field study ($N = 108$), and three experiments ($N = 641$), our results show that utilizing awe (versus other positive emotions) primes positive self-diminishment and promotes engagement in sustainable goals including greater willingness to pay for sustainable products. Importantly, while prior empirical research has examined only one to two emotions in comparison with each other, we are the first to examine the effects of a range of positive emotions on sustainable consumption.

We employed five studies to examine the concept of positive self-diminishment via awe and how it might be a useful strategy to bridge the attitude-behavior gap in sustainable consumption. Specifically, evoking awe helps individuals feel small without negatively impacting their self-concept and helps to overcome the dilemma of self-other trade-off, thereby increasing spending levels on sustainable products. This research makes several contributions, including exploration of a novel aspect of self-concept, examination of discrete positive emotions from a functional perspective, and contribution to the nascent work on specific aspects of moral identity. Overall, our research adds to our understanding of factors driving sustainable behaviors, while providing a novel perspective to promote sustainable consumption.

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Cui Bono? Exploring Consumers' Responses towards Privacy Notices

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EXTENDED ABSTRACT

Privacy notices make it salient to the consumers that they are being observed. Consumers think that companies benefit more from tracking practices, which decreases customer centricity of the company and consumers' usage intentions. The effect is mitigated when companies signal their willingness to waive the benefits acquired from observing consumers.

In line with GDPR, companies notify consumers regarding their data collection practices. Research showed that consumers are averse to being observed (e.g., Zwebner & Schrift 2020); however, asking for permission to track can have positive outcomes (e.g., Schmidt, Bornschein and Mein 2020). Here we explore how privacy notices influence consumers' inferences about companies.

We propose that privacy notices make consumers aware that they are being observed, which leads people to think about the party that sends this message. Privacy calculus model suggests that while deciding whether to provide information, individuals calculate the costs and benefits of disclosure (Laufer and Wolfe 1977). As being observed makes the observer salient, consumers calculate not only their own benefits, but also companies' benefits. We predict that consumers think of data collection as a zero-sum market exchange and believe that companies benefit more. This, in turn, decreases perceived customer centricity of the companies, although it is one of the primary goals of tracking, which reducing consumers' usage intentions.

A pilot study (N=100) showed consumers' belief that companies benefitted more than consumers ($M_{companies} = 85.52$, $M_{consumers} = 14.48$, $p < .001$) from tracking. To better understand managers' views, we conducted a survey with executives (N=31), asking whether they agreed with the statement suggesting that the main goal of tracking is to put consumers' interest at the center of companies' actions. 84% of them (N= 26/31) agreed with the statement ($\chi^2(2) = 5.135$, $p = .02$). These findings suggest a mismatch between companies' and consumers' understanding of consumer centricity.

In Study 1 (N=177), we randomly selected 40 companies on the Fortune 500 list. Participants read a short description, rated their familiarity, anticipated profitability, expected tracking activities and perceived motive of the company. Controlling for familiarity, anticipated motive, company fixed effects, age, gender and education of the participants, perceived profitability of a company increased participants' anticipation of tracking ($b = .27$, $SE = .03$, $p < .001$).

In Study 2A, we explored the website metrics of the homepage of a European University over a period of 5 years. This university implemented privacy notices on their websites on January 15, 2021 as a part of GDPR regulations. Controlling for the monthly and annual fixed effects, the availability of the privacy notice decreased the number of pageviews ($b = -8540.7$, $SE = 580.5$, $p < .001$). Study 2B (N=191) showed that participants who received a privacy (vs. update) notice were less likely to use a browser ($M_{privacy\ notice} = 3.53$, $M_{control} = 4.94$, $p < .001$).

Study 3A (N=193) tested the underlying mechanism. After receiving a privacy [update] notice, participants reported their willingness to use the application in future and completed the customer centricity scale (Habel et al. 2020). Participants in the Privacy Notice condition were less likely to use the application ($M_{privacy\ notice} = 3.06$, $M_{control} = 4.89$, $p < .001$). Privacy notice reduced the perceived consumer centricity of the company, which decreased con-

sumers' willingness to use the application (Effect = $-.24$, %95 CI: $[-.48, -.05]$). Study 3B clarified the process and ruled out trust as a potential mechanism. Participants received a privacy (vs. welcome) notice and reported their interest in using the platform (adapted from Zwebner and Schrift 2020) and the extent to which they thought that this platform was profit oriented and customer oriented. Finally, they reported how much they trust the platform (adapted from Brough et al 2021). We calculated a difference score using profit and customer orientation questions for identifying the perceived orientation of the platform. Controlling for trust, the perceived company orientation mediated the relationship between the notification type and interest in using the platform (Effect = $-.16$, %95 CI: $[-.30, -.05]$). However, when we controlled for the company orientation, trust did not mediate the effect (Effect = $-.06$, %95 CI: $[-.25, .13]$).

Study 4 (N=671) employed a 2 (Company Type: For-Profit, Non-Profit) x 2 (Privacy Notice: Available, Control) between-subjects design. Participants imagined opening a website of a for-profit (vs. non-profit) organization (adapted from Aaker, Vohs, and Mogilner 2010). Participants in the Privacy Notice condition viewed the privacy notice. All participants reported their purchase intention, completed the perceived customer centricity scale and manipulation check. Participants in the Non-Profit condition who did not receive a privacy notice perceived the organization more non-profit than the ones who received a privacy notice ($M_{non-profit, control} = 5.50$; $M_{non-profit, privacy\ notice} = 5.10$; $p = .02$). When privacy notice was not available, participants reported a higher willingness to purchase from the non-profit company as opposed to a for-profit company ($M_{for-profit, control} = 4.01$; $M_{non-profit, control} = 4.43$; $p = .01$). For the non-profit companies, participants reported a higher willingness to purchase when they did not view a privacy notice compared to when they received a privacy notice ($M_{non-profit, control} = 4.43$; $M_{non-profit, privacy\ notice} = 4.05$; $p = .02$). When privacy notice was available, participants perceived the for-profit company more consumer centric than the non-profit company ($M_{for-profit, privacy\ notice} = 3.98$; $M_{non-profit, privacy\ notice} = 3.65$; $p = .049$). These results indicated that privacy notices changed the perceived profit orientation of the non-profit companies, decreasing consumers' willingness to purchase.

Study 5 explored a boundary condition. We predict that giving an option to decline the cookies could mitigate the negative consequences of privacy notices as it will be considered as a signal sent by the companies that they are willing to waive the benefits they receive. As in Study 1, we collaborated with a European university. Implementing privacy notices on January 15, 2021, the website provided two options to the users, allowing, or changing preferences. On February 24, 2022, privacy notice was changed, and users were provided with an option to decline. We compared the website metrics. Controlling for the month, giving an option to decline increased the number of pageviews ($b = 2380.8$, $SE = 237.23$, $p < .001$).

We demonstrate that consumers calculate the benefits companies will receive when they are observed. The association of tracking with profit is so strong that it can change the perceived profit orientation of non-profits. Giving an option to decline the privacy notice could improve consumers' reactions. Finally, we identify a gap between consumers' and managers' view of customer centricity and show its consumer-related outcomes.

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Could you Please Decide for us? Choice of Algorithm versus Human in Joint Consumption Decision-Making

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EXTENDED ABSTRACT

Our work examines consumers' willingness to use algorithms in the joint consumption context. Across three studies in which we recruit dyads and individuals, we show that consumers are more likely to choose algorithms in the joint consumption context compared with the individual decision-making context.

Rapid technological developments in artificial intelligence (AI) are leading to algorithms that can perform tasks once considered unique to humans (Jago and Laurin 2021). As algorithms proliferate in the marketplace, consumers are increasingly exposed to AI in different contexts and devices. Consequently, a considerable amount of research has examined individuals' responses to algorithms in a variety of contexts (e.g., Dietvorst et al. 2015; Srinivasan and Sarial-Abi 2021). On the one hand, the literature shows that consumers can be averse to relying on algorithms to perform tasks typically performed by humans—a phenomenon called algorithm aversion (Dietvorst et al. 2015). On the other hand, an emerging stream of research shows that “algorithm appreciation” in the individual decision-making context (Logg, Minson, and Moore 2019). Specifically, researchers suggest that individuals can choose algorithms over humans, when the “emotionally neutral” nature of an algorithm can benefit them (Jago and Laurin 2022).

While these studies have examined individuals' receptiveness and reactions to algorithms in the individual decision-making context, prior literature overlooks consumers' use of algorithms in the joint consumption context, which has distinctive features compared with the individual decision-making context (Liu et al. 2019). Our research addresses this gap and examines consumers' willingness to use algorithms in the joint consumption context.

Building on the literature that demonstrates the existence of “algorithm appreciation” in certain contexts, we argue that the joint consumption context also leads individuals to prefer algorithms to individuals. We posit that consumers would be more likely to use algorithms when making consumption choices with another person than when making such choices alone (i.e., without incorporating another person in the decision-making process), since individuals tend to perceive algorithms as “emotionally neutral” (Jago and Laurin 2022). Prior literature on joint consumption suggests that individuals become more relationship-oriented and try to balance their own and their partners' consumption preferences in the joint consumption context (Liu et al. 2019). Therefore, they may prefer options perceived as “neutral” to both parties in the joint consumption context. We tested our hypothesis across three studies.

In Study 1, we recruited 100 couples who were willing to participate in the study together with their partners (i.e., the dyad condition) and 100 individuals who were married or in a committed relationship but participated in the study alone (individual decision-makers). Participants in both conditions were informed that they would watch and evaluate a trailer for an upcoming movie. They were asked to choose between two movie trailers: one movie trailer was recommended by a human, and the other was chosen by an algorithm designed to recommend romantic comedy movies. In the dyad condition, participants read that they had to make a joint decision. Individual decision-makers received the same instructions regarding the movie and learned that they needed to choose a movie trailer to watch alone. Results show that participants in the dyad condition were more likely to choose the trailer recommended by AI than those who made the decision alone ($p=.024$).

Study 2 ($n=300$) replicated the results by randomly assigning individuals on Amazon Mechanical Turk to either the dyad or an indi-

vidual decision-maker conditions. Similar to Study 1, participants read that they would choose a movie trailer from two different options: one recommended by a human expert and the other chosen by an algorithm. Participants in the dyad condition connected with another MTurk participant using ChatPlat, an application that allows participants to chat online, and decided together which movie trailer to watch. Participants in the individual decision-maker condition made the decision alone. The results show that participants in the dyad condition were more likely to choose the trailer recommended by AI than those in the individual decision-maker condition ($p=.049$).

Study 3 ($n=556$) replicated our findings by providing preliminary evidence of our mechanism. Given that we argue that consumers are more likely to prefer AI in the joint consumption context because algorithms are perceived as an emotionally neutral agent, our effect should be stronger when consumers decide with a partner who has conflicting views to themselves in the joint consumption context. Consistent with prior literature, we manipulated consumers' perceptions of whether their partner had conflicting views (vs. similar views) to themselves by recruiting Republicans and Democrats to examine this. Prior literature demonstrates that Republicans and Democrats have conflicting views regarding climate change (Campbell and Kay 2014). Participants were randomly assigned to one of the three conditions: dyads with conflicting views, dyads with similar views, and individual decision-makers. In two dyad conditions, participants were told either that they would communicate with a participant who supports a different political party than themselves or that they would communicate with someone who supports the same political party as themselves. Thereafter, participants were asked to choose a news article about climate change solutions to read: a news article written by a human reporter, or a news article written by an AI reporter. Participants in the dyad conditions made the decision with their partner and those in the individual decision-maker condition made the decision alone. Dyads who had similar views to each other were more likely to choose an AI-generated news article (47%) relative to individual decision-makers (31%; $\text{Wald}\chi^2=5.137, p=.02$). The effect (dyad vs. individual decision-maker) was strengthened for dyads with conflicting views (52%; $\text{Wald}\chi^2=8.408, p<.01$).

Our results reveal that consumers' willingness to use algorithms can vary depending on the decision-making context.

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I am a Fan of my Team, but I am not a Fan of this Sponsor: Sport, Sponsorship, and Split Identification

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EXTENDED ABSTRACT

Identification, the oneness an individual holds with brands and organizations, has been a construct of interest for decades. We examine split identification, where an individual separates worthy from unworthy elements of a target of identification. Across six studies in sport, we consider how corporate sponsors influence team identification and outcomes.

Understanding how individuals identify with brands has become central to constructs such as customer-company identification (Bhattacharya and Sen 2003). Management has introduced the construct of split identification, “a way of relating to an entity that involves cognitively separating elements of a target of identification that are worthy of continued identification, from other elements that demand ‘disidentification’ (defining oneself in opposition to a target)” (Gutierrez, Howard-Grenville, and Scully 2010). Parallel to the interest in organizational identification, researchers in marketing have investigated the role of identity congruence and the ways in which identity motives influence consumer choice (Reed, Forehand, Puntoni, and Warlop 2012).

In terms of theory, we introduce split identification as an identification form and demonstrate empirically its implications for consumer behavior, brand strategy, and strategic relationship development. We develop new scales to measure identification change and show how consumer behavior outcomes important to both the sport property and the brand sponsor are influenced by split identification. Across six studies, we consider how a sport consumer’s identification with a team is changed based on a sponsor partnership decision, one that may be received as favorable or unfavorable. After the first broad study, the remaining studies capitalize on realism by focusing on ongoing National Basketball Association (NBA) jersey patch partnerships.

Study 1A (N=590) was exploratory. US participants interested in sports chose their favorite team (NBA or MLS). After team selection, participants were asked about their team identification, their favorite team’s current jersey patch sponsor, and randomly assigned to a sponsor change condition (favorable vs. unfavorable) involving a betting firm (FanDuel vs. bet365). Questions about the partnership covered familiarity with the sponsoring partner, as well as the favorability of the partner and the partnership. We developed a single-item identification change question to observe increased, decreased, no change in, or split identification. Participants were asked about behavioral intentions: buying a team jersey that includes the partner logo, downloading the app for the partner, and following the team on social media. In identification change, responses differed across the two conditions with participants more likely to report “split” in the bet365 (unfavorable) than the FanDuel (favorable) condition. Across conditions, there were significant differences in willingness to buy a jersey and follow the team because of the partnership. Linear regressions for both buying the jersey with the sponsor logo and likelihood of following the team show differences in the coefficients for those reporting a “decreased” identification from a “split” identification. Individuals experiencing split identification were more likely than those experiencing decreased identification to continue to support the team.

Study 1B (N=228) considered sponsorship for the Portland Trail Blazers. Participants were randomly assigned to a condition with either similar (Patagonia) or dissimilar (ExxonMobil) brand values. A scale on congruence between the sponsor and the team was also collected. As in study 1A, participants reported different answers to the single-item change in identification question. Perceived congruence was significantly different across conditions and there was a negative relationship between perceived congruence and reporting of split identification. There were significant differences in willingness to buy a team jersey with sponsor logo related to identification change.

Study 1C (N=236) utilized an announced patch sponsor for the Milwaukee Bucks, Motorola, which already sponsored two other NBA teams, throwing their loyalty to any one team into question. Participants responded to the same previously used measures, but were presented with the true team jersey sponsor (Motorola’s three team sponsorships) instead of a manipulation between two hypothetical sponsors. We created a new summary variable from the three sponsor preference questions. We constructed regressions as in studies 1A and 1B. Split identification was again associated with changes in behavioral intentions: a disinclination to buy a jersey with the sponsor logo on it and a negative view toward the sponsor’s products.

Study 2 (N=443) considers the Los Angeles Lakers, with Patagonia and ExxonMobil utilized as hypothetical sponsors, using a study design parallel to study 1B. This study develops (and validates) measures for four distinct forms of identification change: increasing, decreasing, neutral, and split. We examine the extent to which both congruence and split identification serve as underlying mediators for the effect of favorability on purchase behavior, as well as moderation of this effect by team identification (moderated serial mediation). There are two moderated indirect paths: one through both congruence and split identification and one through only split identification. The indices of moderated mediation were both negative and significant.

Study 3 (N=265) was designed for the Minnesota Timberwolves with locally headquartered 3M as our favorable brand and Massachusetts-based Raytheon as our unfavorable brand. It serves as a replication of study 2. All other design choices follow study 2. The results, including moderated serial mediation, closely replicate study 2.

Study 4 (N=369) investigates possible mitigation of the negative consequences of an unfavorable sponsor by reassigning the value of the patch sponsorship to a non-profit using a corporate social responsibility (CSR) strategy. Tyson Foods and World Central Kitchen (WCK) were selected as hypothetical partners for the study. In this situation, WCK is presented by Tyson Foods. We tested and replicated our full mechanism as in studies 2 and 3. These findings suggest that a CSR strategy reassigning value to a charity can mitigate split identification and consumer behaviors associated with it.

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Sailing close to the edge: figuring resistant ideational edgework through consumption in cruise ship hospitality workers

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EXTENDED ABSTRACT

In consumer marginalisation, little research considers those so contained by their working life that any consumption-related activities are highly pathologized. This paper examines the enclave lives of luxury cruise liner hospitality employees, exploring their attempts via resistant ideational edgework to enact consumption within the omnitopia of the luxury cruise liner.

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Complimentary Competition: The Impact of Positive Competitor Reviews on Review Credibility and Consumer Purchasing Intentions

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EXTENDED ABSTRACT

In three studies, we show that consumers perceive positive reviews written by competitors as more credible than similar consumer-generated reviews. Which in turn, elicits greater purchase intentions. These relationships are attributable to consumers' perception that competitors are less likely than consumers to have received compensation for their reviews.

Online reviews have a significant impact on purchasing decisions across a broad range of fields (Chen & Xie, 2008). This, in turn, leads to an extremely large amount of diverse reviews available to consumers (Gottschalk & Mafael, 2017), generating a fertile ground for unethical behavior. Consequently, the consumer faces a large number of online reviews written by genuine or paid reviewers with significant variance in their quality and relevance (Kowatsch et al., 2009). This makes it challenging for consumers to gain an accurate appraisal of the product and judge the credibility of the online content (Robson et al., 2013). Therefore, marketers strive to enhance the perceived credibility of reviews (Jabr, 2021).

This research offers a less intuitive option to enhance credibility perceptions, by relying on identified expert reviewers that are less likely to be suspected of being incentivized by the marketer, namely, competitor reviews. We argue and demonstrate that a competitor might be perceived as an expert in terms of knowledge, expertise, and experience while being less likely to be suspected of getting paid or compensated by the business for writing the review and showing a positive impact on purchase intentions.

In a pre-test, 239 participants were randomly assigned into one of three reviewer-type conditions (consumer vs. expert vs. competitor) in a between-subjects design, read a review about a product and were asked to evaluate the reviewer expertise (Ohanian 1990). Results showed a significant effect of reviewer type on perceived expertise ($F_{(2,236)} = 18.932, p < .001, \eta^2 = .138$). Reviewer's expertise in the competitor condition ($M = 6.03, SD = 1.08$) was significantly higher than in the consumer review condition ($M = 5.10, SD = 1.09; p < .001$) and similar to the expert's review ($M = 5.91, SD = .95; p = .507$).

In Study 1, 157 participants were randomly assigned to one of two reviewer conditions (Consumer vs. Competitor) and read a review about a restaurant. Next, they indicated their purchase intentions, their perception of the reviewer, and demographics.

Results showed that the purchase intention of participants exposed to the competitor review ($M = 5.97, SD = 0.847$) was significantly higher than the purchase intention of participants exposed to the consumer review ($M = 5.67, SD = 1.04; t_{(155)} = 2.036, p = .04$) and also perceived as more credible ($M = 5.80, SD = 0.83$) compared to the consumer review ($M = 5.50, SD = 0.89; t_{(155)} = 2.152, p = .03$). Mediation analysis (Process, Model 4; Hayes, 2017) showed a significant indirect effect of reviewer type on purchase intentions through reviewer credibility ($b = .12, SE = .05, 95\% CI: .0336$ to $.6666$).

In Study 2 we replicated the effect while using a book as the reviewed product.

In Study 3, 139 participants were presented with the same scenario employed in Study 1 while using a book as the reviewed product. Participants were asked to indicate their purchase intention as

well as the likelihood that the writer of the review received any type of compensation for their review and reviewer credibility.

A multiple mediation analysis (Process, Model 6; Hayes, 2017) showed a significant indirect effect of reviewer type on purchase intentions through perceived likelihood of compensation and reviewer credibility ($b = .09, SE = .05, 95\% CI = .0115$ to $.2084$). Moreover, the direct effect of reviewer type on purchase intention was not significant ($b = .44, SE = .24, 95\% CI = -.0488$ to $.9349$), indicating full mediation.

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Subtractive Risk Judgments in Health and Medical Care Decisions

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EXTENDED ABSTRACT

Adding a low-risk item to a high-risk item reduces overall risk perception. People impose categorical distinctions on quantitative risk, and when forming overall assessments, tend to average across categories. This effect disappears when one risk is exceedingly high and when risk is presented graphically, emphasizing the additivity of multiple risks.

To make informed medical decisions, consumers must understand the risks and benefits associated with different options. However, little is known about how they combine multiple risk items when forming overall risk impressions. Consider a medication with one side effect occurring in 30% of the people who take it and a second side effect affecting 1% of the people who take it. It is objectively riskier than a medication with only the first side effect. Nevertheless, we show that consumers consistently perceive the medication with two side effects to be less risky than the medication with only one side effect. Building on fuzzy trace theory (Reyna and Brainerd 1991) and categorical averaging, we posit that adding a low-risk side effect reduces overall risk perception because people tend to impose categorical distinctions on quantitative risk information, and when combining categorical information, they average across categories instead of adding (Brough and Chernev 2011).

We further expect such subtractive risk judgments to be less common when the averaging rule is not used to integrate information about multiple risks. This may happen when one side effect is perceived to be too risky. The presence of an exceedingly risky side effect offers a salient cue for judging an option's overall riskiness. As a result, consumers may not bother integrating risk information about the second side effect. Categorical averaging is also less likely when consumers are encouraged to use an additive integration rule instead. We propose that graphical presentations that visually highlight the additive property of multiple risks will evoke an additive integration rule and reduce the distortion in the perception of multiple risks.

Study 1 (N = 295) tested the prediction that consumers would perceive lower overall risk in the combined (high-low) risk condition than in the single high-risk condition. Participants were randomly assigned to one of three conditions. Those in the single condition learned that a new medication comes with a 30% chance of abdominal cramps. Those in the combined high-low condition learned that in addition to the chance of abdominal cramps, there was a 1% chance of blurry vision. Finally, those in the combined high-high condition read that in addition to the chance of abdominal cramps, there was a 35% chance of blurry vision.

Consumers who read about the combination of one high-risk and one low-risk side effect reported lower overall risk than those who read about a single high-risk side effect. In contrast, consumers who read about the combination of two high-risk side effects perceived greater overall risk than those who read about the single high-risk side effect.

Study 2 (N = 1551) tested the notion that categorical averaging is less likely when the risk of the first side effect is too high. It also explored the robustness and boundaries of categorical averaging across a range of probabilities for the second side effect. Participants were randomly assigned to one of 14 conditions in a 2 (first side effect) × 7 (second side effect) between-subjects design. Those in the single side effect conditions read that a new medication can cause headaches for either 45% (high) or 75% (too high) of the people who

take it. Those in the combined conditions learned that in addition to the chance of headaches, there was either a 1%, 6%, 17%, 22%, 30% or 35% chance of experiencing heartburn.

As expected, when the probability of headaches was set to 75%, overall risk perceptions of consumers who saw a single side effect were high and did not differ from those who saw two side effects, regardless of the second side effect's probability of occurrence. In contrast, when the probability of headaches was set at 45%, those who read about the possibility of experiencing both headaches and heartburn reported lower overall risk than those who read about only the possibility of headaches when the probability of heartburn was either 1%, 6%, or 17%. Overall perceived risk was also lower when the probability of heartburn was 22%, though the difference was not statistically significant. However, when the probability of heartburn was either 30% or 35%, those who read about both side effects reported greater overall risk than those who read about only headaches.

Study 3 (N = 664) tested the effectiveness of presenting risk information in a graphical format. Participants were randomly assigned to one of five conditions (single/numeric vs. single/graph vs. combined/numeric vs. combined/additive-graph vs. combined/non-additive-graph). Those in the numeric conditions responded to the scenario from study 1 with modified risk values (35% for abdominal cramps, and 3% for blurry vision). Those in the graph conditions responded to the same scenario augmented by bar graphs. Stacked bars were used in the additive-graph format, and side-by-side bars were used in the non-additive-graph format.

Consistent with the previous studies, when the risk information was presented numerically, consumers who were exposed to the combination of one high-risk and one low-risk side effect reported lower overall risk than those who were exposed to only the high-risk side. Moreover, visualizing the combined risks using side-by-side bars did not decrease categorical averaging. In contrast, presenting the combined risks using stacked bars resulted in less categorical averaging. Not only did participants in the combined/additive-graph condition not perceive lower overall risk than those in the single/numeric condition, they also reported higher overall risk than those in the combined/numeric condition, and those in the combined/non-additive-graph condition.

Our research identifies categorical averaging of numerical risk as a key mechanism through which consumers assess multiple risks. This research offers practical implications on how to improve consumers' understanding of the risks involved in their health and medical care decisions. Policymakers could require marketers to present multiple risks in an additive format to help consumers make informed decisions.

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Show Me Some Effort! The Effect of Likes versus Comments and Their Presentation Format on User-Generated Content

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EXTENDED ABSTRACT

Field data from NetEase Cloud Music (NCM) demonstrate that comments are more effective at eliciting subsequent content generation compared with likes on social media. Two experiments further showed that presenting likes in an unpacked (versus packed) format overcomes the disadvantage of likes. Perceived effort is identified as the underlying process.

Previous work on user-generated content (UGC) has demonstrated a positive correlation between number of likes or comments and their respective effect in eliciting subsequent content generation (Burke et al. 2009; Chen et al. 2019; McIntyre et al. 2016). Given that most posts receive more likes than comments, yet comments contain more information than likes, which type of feedback is relatively more impactful? Further, is there a way to present the feedback differently to elicit greater effectiveness, and what could be the underlying mechanism?

Extant work on reciprocity (Cialdini 1993) has highlighted the importance of effort behind reciprocity (e.g., consumers reward firms exerting extra effort; Morales 2005). Because a natural difference between likes and comments is that writing a comment takes more effort than pressing the like button, we predict that comments elicit greater subsequent content generation than likes (H1). More importantly, while the number of likes/comments received is beyond direct control of the UGC platforms, managers can design their platforms to present the submitted likes/comments effectively for optimized effect. Research on unpacking has shown that presenting a task as several sub-tasks increases numerical judgment (e.g., probability; Thaler 1985; Tversky and Koehler 1994) or predicted enjoyment (Tsai and Zhao 2011). Accordingly, we believe that presenting aggregated feedback in an unpacked format as individual feedback would increase the perceived magnitude of the same feedback, evoking more positive responses and greater subsequent content generation (H2). Drawing on the important role of effort behind reciprocity (Cialdini 1993; Morales 2005), we also hypothesize that perceived effort behind the feedback is the underlying mechanism (H3).

We test our predictions with one field dataset and two experiments.

The field data were collected on NetEase Cloud Village (NCV), a major music streaming platform in China. It contains a total of 68,698,187 impression records from the Discovery tab for 2,085,533 viewers that are randomly drawn from the entire viewer pool of NCV for the period of November 1 to 30 in 2019, involving 89,557 creators. A Probit model was used to capture each creator's daily content creation decision based on the number of likes, comments, and shares the creator received respectively in the past three days while controlling for observed creator heterogeneity. The results showed that while all types of feedback have significant and positive impacts on creators' subsequent posting, comments have a greater impact compared with likes and shares ($M_{\text{comments}} = 0.043$, $SD = 0.009$ vs. $M_{\text{likes}} = 0.002$, $SD = 0.0006$ and $M_{\text{shares}} = 0.014$, $SD = 0.004$), despite the fact that creators received more likes than comments (H1). Potential endogeneity problem was addressed and ruled out using the instrumental variables approach.

Experiment 1 used a 2 (feedback type: likes versus comments) \times 2 (presentation format: packed versus unpacked) between-subjects design to further test H1-H3. Participants were asked to imagine posting a picture and receiving different feedback. In the packed conditions, they saw the total number of feedback as 32 likes or 14 comments. In the unpacked conditions, the same feedback was unpacked into 32 individual likes or 14 individual comments. The results showed a significant main effect of feedback type on attitude ($F(1, 270) = 88.81$, $p < .001$), and this positive effect of comments over likes held under both packed and unpacked format (H1). More importantly, we observed a main effect of presentation format ($F(1, 270) = 61.20$, $p < .001$), and the advantage of unpacked over packed presentation also held for both likes and comments (H2). A direct comparison between unpacked likes and packed comments ($M_{\text{likes/unpacked}} = 3.92$, $SD = 1.18$ vs. $M_{\text{comments/packed}} = 4.13$, $SD = 1.14$; ns) showed that once likes are presented in an unpacked format, it is as effective as comments that are packed. Same results were observed for future posting intention and perceived effort, and mediation analyses confirmed the mediating role of perceived effort in the effects above.

Experiment 2 test H2 and H3 with actual content generation in 6 conditions (packed vs. unpacked likes, packed vs. unpacked comments with no content, unpacked comments with high-effort vs. low-effort content). Participants were asked to submit a real piece of advice for their fellow students to enrich after-school life, and were then shown different fictitious responses from 20 students. The responses were either 12 packed or unpacked likes, 9 packed or unpacked comments into IDs only without content, or 9 unpacked comments with content involving higher effort (e.g., "I am a first-year student. This is such a great tip.") or lower effort (e.g., "Great"). Participants reported their overall attitude and were then asked to submit more new advice to their fellow students. Number of sentences participants wrote for new advice is used to capture subsequent content generation, and number of sentences in initial advice was controlled for in all ANCOVAs.

In the two like-conditions, we replicated the effect of unpacked over packed presentation (H2). In the four comment-conditions, which was our key focus, we observed a significant main effect of presentation format on overall attitude ($F(3, 259) = 12.03$, $p < .001$) and subsequent content generation (H2; $F(3, 259) = 2.90$, $p < .05$). Specifically, compared with packed comment, unpacking comment into either high- or low-effort content increased positive attitude (both $ps < .005$). Further, unpacking comments into high-effort (but not low-effort) content increased actual content generation compared with packed comment ($p < .05$). Lastly, compared with unpacking the comments into IDs with no content, providing any content led to greater subsequent content generation ($p < .01$ for higher-effort comments, and $p = .084$ for lower-effort comments). These results provide further support to the critical role of effort (H3).

Our findings contribute to literature on UGC (e.g., Burtch et al. 2018; Huang et al. 2019), reciprocity (Cialdini 1993) along with the important role of effort behind it (Morales 2005), and unpacking (Thaler 1985; Tversky and Koehler 1994). They offer relevant managerial implications to motivate user-generated content by unpacking likes and facilitating submission of comments, while providing precaution against feedback involving low effort (e.g., AI-automated feedback).

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What do I think about this sustainable Gucci?

Product- or company-focused sustainability association, impact on environment, and attractiveness of luxury products

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EXTENDED ABSTRACT

Four experiments show that, when faced with a marketing communication regarding a sustainable luxury product, consumers respond more favorably in the presence of a company-focused (as opposed to product-focused) sustainability association. The perceived (positive) environmental impact of consumers, serves as the underlying mechanism for this effect.

In recent years, the seemingly disparate domains of sustainability and luxury have increasingly begun to overlap, with luxury brands integrating sustainability principles and features into their manufacturing processes and products. Still, there is considerable uncertainty about how consumers may respond to these efforts. Very few studies have examined sustainability and luxury consumption together, and the few that have done so have produced mixed results regarding consumer evaluations of sustainable luxury products (Achabou & Dekhili, 2013; Perez, Stockheim, Tevet, & Rubin, 2020). These findings point to a need to better understand the factors that shape consumers' evaluations of sustainable luxury products, towards identifying conditions under which consumers might find such products attractive.

We suggest that consumer evaluations of sustainable luxury products may be influenced by the so-called *sustainability association* embedded in the brand's marketing content—defined as an indicator of whether the content refers to sustainable features associated with the product itself (a “product-focused sustainability association”) or to sustainable features associated with the company behind the product (a “company-focused sustainability association”).

We predict and show in four experiments that a company-focused sustainability association (as opposed to a product-focused sustainability association) is likely to trigger a stronger perception of *environmental impact*, as reflected in the consumer's perception that his or her purchase decisions contribute meaningfully to the environment. This perception is likely to enhance the consumer's evaluations of the luxury product attached to the sustainability association.

In study 1, 113 participants were randomly assigned to one of two sustainability association conditions (company vs. product) in a between-subjects design and were with a picture of an omega watch. In the company condition, the product description was “*Omega Corp. is a leading Swiss design house of luxury watches that follows strict sustainability standards, including the use of recycled material in its production processes.*” “While in the product condition, the product description was “*the watch was manufactured by Omega Corp, a leading Swiss design house of luxury watches*”, and that “*the watch was manufactured under strict sustainability standards, including the use of recycled material in its production process.*” (This between-subject two-condition design and manipulation were used throughout the following studies, with the description adapting the company and product names.)

Next, participants were asked whether they would like to receive additional information on the Omega watch (“yes please” or “no thanks”), and to provide demographic details.

In line with our hypotheses, a crosstabs analysis revealed that more participants were interested in receiving additional information in the company condition (20%) than the product condition (7.5%), ($X^2_{(111,1)}=3.590, p=0.058$).

Following the same design as in study 1, in study 2, 130 participants presented a luxury Couch bag. Participants then indicated the likelihood that they will recommend this product to a friend (0-10 scale). A t-test revealed that participants indicated significantly higher willingness to generate WOM in the company condition ($M = 3.92, SD = 3.02$) than the product condition ($M = 2.84, SD = 3.09, t_{(128)} = 2.02, p = .045$).

Following the same design as in study 1, in study 3, 126 participants were presented with a luxury facial cream. Then, participants indicated on a 7-point scale their overall evaluation of the product and the extent to which they found it attractive, ($r_p = .792$), and their perception of environmental impact.

A t-test revealed that participants evaluated the product significantly higher in the company condition ($M = 4.25, SD = 1.69$) than in the product condition ($M = 3.63, SD = 1.65, t_{(124)} = 2.09, p = .039$), and a mediation analysis (PROCSS, Model 4; Hayes 2013) confirmed the significant mediating role of perceived environmental impact ($b = .511, SE = .19; 95\% CI: .1538 \text{ to } .9167$).

Following the same design as in study 1 and with an additional control condition, in study 3, 229 participants were presented with an Omega watch. Participants in the control condition were informed that *this watch was manufactured by Omega Corp, a leading Swiss design house of luxury watches*. Then, participants indicated, on a 7-point scale, their overall evaluations of the product, the extent to which they find the product attractive ($r_p = .769$), and were asked to estimate how much the watch should cost.

A one-way ANOVA showed a significant effect of experimental condition on participants' ratings of luxury product attractiveness ($F(2,227) = 9.165, p < .001$). An LSD post-hoc analysis confirmed that participants in the company-association condition rated the product as significantly more attractive ($M = 5.66, SD = 1.08$) than did participants in either the product-association condition ($M = 5.14, SD = 1.25, p = .009$) or the control condition ($M = 4.83, SD = 1.30, p < .001$). The latter two conditions did not differ significantly in terms of participants' ratings of product attractiveness.

Another one-way ANOVA showed a significant effect of experimental condition on participants' perceptions of the appropriate price for the product ($F(2,227) = 5.578, p = .004$). An LSD post-hoc analysis confirmed that participants in the company-association condition perceived the price of the luxury product as significantly higher ($M = 982.35, SD = 1058.2$) than did participants in the product-association condition ($M = 550.21, SD = 551.64, p = .001$, in line with H1) or in the control condition ($M = 673.36, SD = 774.60, p = .021$). Price perceptions did not differ significantly between the latter two conditions ($p = .358$).

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Posting vs. Refraining: Differences in consumers' beliefs about their and others' achievement sharing behavior on social media

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EXTENDED ABSTRACT

Consumers often share positive self-related information on social media, yet they criticize the wide prevalence of such posts. Six studies show that consumers believe others will engage in social media boasting more frequently than they do. A belief that others are less moral than them underlies this biased consumer judgment.

Consumers often share their accomplishments on social media. They post about getting a promotion, completing an online course, finishing a marathon, or donating to charity. Companies also nudge consumers to make such posts. For instance, Snapchat uses 'streaks,' a form of gamification, to encourage consumers to post multiple days in a row (Hristova et al. 2020). Consumers believe self-promotion can help them gain status or respect (Sezer 2022). Therefore, most consumers selectively share positive information more frequently (Gonzales and Hancock 2011).

Consumers who brag underestimate how annoyed (Scopelliti, Loewenstein, and Vosgerau 2015) or irritated (Radovic et al. 2017) observers feel. Further, research in moral psychology suggests that humility is considered more moral than bragging (Wright et al. 2017). In many cultures bragging is disapproved or condemned (Watling and Banerjee 2007), while modesty is highly valued (Srna, Barasch, and Small 2022). Thus, consumers might believe that sharing achievements on social media frequently would violate this prized moral norm.

Consumers also tend to hold flattering beliefs about themselves (Dunning 2007). Consumers believe they have better qualities in various domains (e.g., intelligence or creativity) than others (Alicke 1985). More importantly, they believe they are more ethical than others (Epley and Dunning 2000). As frequent achievement sharing might be viewed as immoral behavior, we argue that consumers would believe that others prefer to share their achievements more often on social media than they do because they think that others are less moral than they are. We tested these predictions across five studies.

Studies 1a-1b tested our basic proposition using different designs.

In Study 1a (N= 202, Mturkers USA), we asked participants whether they would like to make three separate posts (vs. one post) about three awards that they would be receiving. 27% participants indicated that they would do so while they predicted that $M=45.26\%$ (SD=22.51) of others would do so (one-sample t-test: $t(99)=8.11, p < .001$).

In Study 1b (N= 300, Mturkers USA), in a scenario involving a language app, we asked participants how 'they,' or 'Sam,' or '100 other students' would share their language learning achievements on social media. 40.4% participants indicated that they would post their achievements at the end of each week (vs. at the end of the course). However, 62.38% participants predicted that Sam would do so ($\beta=-.92$, Wald $\chi^2=9.99, p=.002$). For '100 students' condition, participants predicted $M=51.7\%$ (SD=22.39) students would do so (One sample t-test against 40.4%: $t(99)=5.06, p < .001$).

Study 2 used the causal-chain method (Spencer, Zanna, and Fong 2005) to test if the perceived morality underlies the effect observed in Study 1.

In study 2a (N=200, Mturker USA), we found that participants perceived another Mturker (Mturker #156) as less moral ($M=5.72$, SD=1.11) than they were ($M=7.45$, SD=1.05, $t(198)=11.36, p < .001$).

In Study 2b (N=301, Mturker USA), using the same language app scenario, we asked participants how likely they or 'Sam' were to post their achievements. Crucially, we described Sam as either a highly moral person (vs. not). Participants indicated they were less likely to

post at the end of every week ($M=2.86$, SD=2.09) but predicted that Sam was more likely to do so in the 'Sam' conditions ($M_{\text{Sam}}=4.52$, SD=1.72, $t(191)=-6.16, p < .001$). Moreover, participants predicted that Sam would be less likely to post at the end of every week when we described Sam as moral than when we did not ($M_{\text{HighMoralSam}}=3.84$, SD=1.97; $t(195)=2.62, p=.01$).

In Study 3 (Prolific UK), we tested a managerial consequence of our findings. We recruited 99 full-time US employees with managerial experience and asked them to imagine they were the product manager of a camera app and running a social media campaign. App users can donate meals (\$0.8 for each) to people needing food assistance. Managers can program the app to automatically post users' donations on their social media profiles. We asked managers how likely they thought users prefer that (a) the app posts about each donation instead of (b) a single post at the end of the campaign. We also recruited another 100 participants and asked them to imagine they were the app users. We showed them the same donation campaign and asked them how likely they were to prefer option (a) instead of option (b). An independent samples t-test revealed that managers over-predicted consumers' preference for posting about each donation instead of only once at the end of the campaign ($M_{\text{manager}}=4.51$, SD=1.88, $M_{\text{consumer}}=2.94$, SD=2.03, $t(197)=-5.63, p < .001$).

Across five studies, we consistently found that consumers believe that others prefer sharing their achievements on social media more frequently than they do. We further showed that the perceived morality of others underlies this effect. Our research broadens the literature on self-other differences in bragging beliefs. Moreover, our research found that apart from the impression management goals (Back et al. 2010), consumers' moral belief also explains the incorrect belief about others' bragging behavior. Empirically, our research found that marketers often risk overestimating the frequency with which consumers would like to engage with the campaign on social media. Such overprediction may cause managers to frequently nudge consumers to post on social media leading to consumer irritation. Future research can test this finding with a field study involving actual behavior.

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Watch Out! How Strikethrough Price Crosses Out Purchase Intention

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EXTENDED ABSTRACT

In this research, we examine the novel factor of discount price presentation format, strikethrough, on consumers' deal evaluation. We find that a strikethrough on the original price increases consumers' difficulty to calculate discount, resulting in lower deal evaluations and intentions to purchase the discounted product.

Retailers have frequently used price discounting to stimulate sales and attract customers, and there are different types of presenting price promotions, such as presenting the absolute discount or relative discount to the original price in the form of dollar-off or percentage-off promotions. The current research proposes a novel factor of discount presentation, strikethrough, to explore its impact on consumers' deal evaluation and consequential purchase intentions.

Holding other factors constant, we predict that strikethrough price presentation leads to a less favorable deal evaluation than regular price presentation. Reference price literature suggests that whenever evaluating the sale price of the products, consumers would seek either external reference (Adaval and Monroe 2002; Kopalle and Lindsey-Mullikin 2003; Lichtenstein, Burton, and Karson 1991) or internal reference (Janiszewski and Lichtenstein 1999; Rao and Sieben 1992). When reference price and sale price are both available, consumers would automatically calculate the discount they will get from the purchase (Biswas et al. 2013). Extending this line of work, we propose that putting a strikethrough on the original price creates greater difficulty in calculating discount as consumers find it uneasy to read the original price. As calculating the discount becomes more difficult, consumers will be less favorable toward the discounted products.

Moreover, some retailers prefer to put the original price below the sale price, and past literature suggests that consumers' perceptions of prices would be influenced by price locations, such that consumers would feel more difficulty calculating the discount when the sale price is presented above the original price than when the sale price is presented below the sale price (Feng et al. 2017). Therefore, we propose that presenting the sale price above the original price should further increase the difficulty of discount calculation and decrease consumers' deal evaluations.

For our initial exploration, we conducted study 1; participants ($N = 409$, 43.8% female, $M_{\text{age}} = 39.02$) were randomly assigned in one of 2 (price presentation: strikethrough vs. normal) conditions. To manipulate price presentation, participants in the strikethrough (vs. normal) price condition saw a promotion flyer of an electronic toothbrush, and on the flyer, the original price (\$80) was crossed out (vs. not crossed out), and the sale price (\$29.99) was presented underneath. After reviewing the flyer, participants reported their purchase intentions using three items ($\alpha = .95$, (Grewal et al. 1998)). As expected, participants who were presented with the strikethrough price format indicated lower purchase intentions ($M_{\text{strikethrough}} = 5.18$, $SD = 1.66$) than those with the regular price format ($M_{\text{regular}} = 5.52$, $SD = 1.49$; $F(1,408) = 4.69$, $p = .031$).

Based on the main effect of strikethrough price on purchase intentions, study 2 was designed to explore the process that explains the effect. Participants ($N = 301$, 45.0% female, $M_{\text{age}} = 37.91$) were randomly assigned in one of 2 (price presentation: strikethrough vs. regular) conditions. Similar to study 1, participants in the strikethrough (vs. regular) pricing condition viewed a promotion flyer of

electronic toothbrush bundle, and on the flyer, the original price (\$80.00) was crossed-out (vs. not crossed-out), and the sale price (\$59.99) was listed underneath. Participants again reported their purchase intentions using the same three items in study 1 ($\alpha = .94$) and on the following page, participants indicated their perceived difficulty of calculating discount using two items (looking at the promotion above, how difficult is it for you to calculate the difference between the original price and sale price; looking at the promotion above, how difficult is it for you to calculate how much discount you will get, 1 = "Not at all difficult", 7 = "Extremely difficult", $r = .91$).

A one-way ANOVA revealed a significant effect of strikethrough price format on purchase intentions ($F(1,300) = 4.27$, $p = .04$) and perceived difficulty of calculating discount ($F(1,300) = 92.38$, $p < .000$). Participants reported lower purchase intentions ($M_{\text{strikethrough}} = 4.44$, $SD = 1.80$ vs. $M_{\text{regular}} = 4.85$, $SD = 1.63$) and higher perceived difficulty of calculating discount ($M_{\text{strikethrough}} = 3.40$, $SD = 2.00$ vs. $M_{\text{regular}} = 1.65$, $SD = .97$) when seeing strikethrough price format. The mediation analysis (Hayes 2017; PROCESS model 4 with 5,000 bootstrapped samples) showed that perceived difficulty of calculation mediated the effect of strikethrough price format on purchase intentions ($b = -.14$, $SE = .06$, 95% CI $[-.26, -.03]$). This result shows that putting strikethrough on the original price leads to less favorable deal evaluation due to higher difficulty of calculating discount.

In Study 3, we tested the moderating role of original price location on consumers' deal evaluation. Participants ($N=301$, 48.5% female, $M_{\text{age}} = 38.81$) were randomly assigned to one of four (2: strikethrough vs. normal pricing × 2: original price above, sale price below as control vs. sale price above, original price below) conditions. Participants then reported deal evaluations using three items ($\alpha = .94$). A two-way ANOVA on deal evaluations of the toothbrush revealed a marginal interaction ($F(1,297) = 3.34$, $p = .07$). Specifically, under original price above conditions, participants indicated lower deal evaluations when presented with strikethrough price format ($M_{\text{up*strikethrough}} = 4.53$, $SD = 1.59$ vs. $M_{\text{up*regular}} = 5.14$, $SD = 1.30$; $p = .013$). On the other hand, under original price below conditions, deal evaluations were not statistically different ($M_{\text{down*strikethrough}} = 4.82$, $SD = 1.59$ vs. $M_{\text{down*regular}} = 4.80$, $SD = 1.45$; $p = .94$).

In sum, this research explores one of the prevalent discount price presentation tactics, strikethrough price, on deal evaluation and purchase intentions. While many retailers may overestimate the effect of strikethrough price, our findings show that, counterintuitively, it may backfire as putting strikethrough on the original price hinders consumers from accurately calculating the discount between original price and sale price. Findings in this research contribute to the pricing literature by examining the novel factor, strikethrough price presentation, that influences consumers' deal evaluation, extending the existing research that explores divergent effects of price promotions. Our findings also provide actionable guidelines to marketers and retailers for their pricing strategy, suggesting which discount price presentation to use for effective promotions.

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Thinking of Food: The Mental Representation of Healthy Foods as Unprepared Undermines Healthy Choices

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EXTENDED ABSTRACT

Six preregistered studies find that consumers mentally represent healthy foods in their purest, least prepared forms but unhealthy foods in their most prepared forms (cooked, mixed, adding toppings). The effect results from the belief that health and taste are conflicting goals and impacts food choice because preparation increases perceived tastiness.

What comes to mind when consumers think of healthy foods? Perhaps colorful produce at the farmer's market or in the grocery aisle. Compare that with what comes to mind for unhealthy foods – perhaps takeout, fried foods, and party appetizers. There is nothing inaccurate about these exemplars. Colorful produce is certainly healthier than fried foods. Yet there is another key variable besides healthiness that differs in these canonical images: preparation. In the first example, healthy foods are in their purest, unprepared forms. Some of these foods are edible in their raw, whole form (e.g., apples, carrots) but many, such as beans or Brussels sprouts, are not palatable to eat in their raw form. In the second example, representations of unhealthy foods tend to be in their final, fully prepared and ready-to-eat form.

In 6 preregistered studies, this research documents systematic differences in how consumers mentally represent healthy and unhealthy foods. Consumers implicitly and explicitly think of healthy food in their less appealing, healthiest form and think of unhealthy foods in their most appealing, tastiest form. This bias results from the lay perception (supported by modern culture) that health and taste are conflicting goals (Dhar and Simonson 1999; Fishbach and Zhang 2008; Mai and Hofmann 2015; Raghunathan, Naylor and Hoyer 2006). In turn, altering these representations of foods, specifically, reminding consumers that healthy foods are prepared too, promotes healthy food choices.

Our main prediction was that participants mentally represent healthy foods (e.g., vegetables, plant-based dishes, lean meats) as less prepared than unhealthy foods. We found support for this prediction in Studies 1A and 1B using explicit measures and photos, and Study 2 using implicit measures and words. Study 1A (N = 217) demonstrated that participants think of healthier versions of foods as less prepared (i.e., chose a photo of food in less prepared vs. more prepared form) when compared with photo choices of unhealthy versions of similarly matched foods (e.g., whole-wheat pasta vs. pasta, cauliflower crust pizza vs. pizza; odds ratio across 9 stimuli = 0.41, 95% CI:[0.33-0.52], $p < .001$). Study 1B (N = 109) generalized these findings to 12 canonical healthy foods (e.g., vegetables) and 12 canonical unhealthy foods (e.g., desserts, processed meats). Participants' odds of choosing the more prepared version of foods was significantly lower for healthy foods than for unhealthy foods ($M_{healthy} = 29.5\%$ of participants choosing more prepared version vs. $M_{unhealthy} = 75.3\%$; OR = 0.08, 95% CI: [0.04, 0.16], $p < .001$). Study 2 found implicit evidence that participants (N = 89) mentally represent healthy and unhealthy foods with different levels of preparation, using words in an Implicit Association Test (Carpenter et al. 2019; Greenwald, Nosek, and Banaji 2003; D-score = 0.40, 95% CI: [0.27, 0.52], $p < .001$). Participants were faster to associate the names of healthy foods with raw words and the names of unhealthy foods with prepared words than vice versa.

Study 3 demonstrated the process for differing mental representations by showing that perceived goal conflict between healthiness and tastiness moderated the effect of food healthiness on preparation level (interaction: $b = 0.29$, $p = .015$). Participants (N = 115) who perceived less taste-health conflict showed a smaller bias in thinking of healthy foods as less prepared than unhealthy foods compared with participants who perceive greater taste-health conflict. What are the consequences of thinking of healthy foods as less prepared? Study 4 showed that foods in more prepared states, controlling for all ingredients, are perceived as tastier. Participants (N = 94) rated photos of both healthy and unhealthy Blue Apron recipes as tastier in the fully prepared form than the fully separated and raw form ($b = 0.91$, 95% CI: [0.80, 1.02], $p < .001$), using 6 different real recipe photos from Blue Apron meal service delivery kits.

This offers a solution for motivating healthy choices in environments in which healthy and unhealthy choices compete: remind people that healthy foods are prepared, mixed, and topped in ways that make them flavorful. In Study 5, we tested whether consumers are more likely to choose healthier foods when additional language is added describing the ways in which they are prepared. We found support for this hypothesis using restaurant menu descriptions from a popular U.S. chain restaurant. Participants (N = 383) who viewed healthy items with a prepared description were more likely to order them ($b = 0.61$, 95% CI:[0.39, 0.83], $p < .001$) than participants who viewed the same healthy items with no description. There was no boost when adding descriptions for unhealthy menu items because participants already thought of them as more prepared, even absent a description.

Together, these findings add to the rich consumer behavior literature on how lay theories between food healthiness and being less tasty (Raghunathan et al. 2006), less filling (Finkelstein and Fishbach 2010; Suher et al. 2016), more expensive (Haws et al. 2017), colder (Yamim, Mai, and Werle 2020) or more aesthetically pleasing (Hagen 2021) impact decisionmaking. This work also builds on the goal conflict literature, specifically the competing goals of health and taste (Dhar and Simonson 1999; Fishbach and Zhang 2008). Our findings show that the very act of preparing healthy foods in ways that make them tastier also makes them less healthy. These findings also have implications for marketing and public policy. Photos of foods in varying degrees of preparation are ubiquitous in consumers' everyday lives, spanning physical spaces, online platforms, advertisements, and media. Our findings suggest that firms can cater to consumers' with health or taste goals by showing foods as more or less prepared, regardless of how prepared the foods actually are. To help make healthy foods more appealing for those who perceive greater taste-health conflict, firms could depict photos of healthy foods as more prepared and describe the ways in which healthy foods are prepared in decision contexts.

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When does scarcity decrease (vs. increase) demand?

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EXTENDED ABSTRACT

Does product scarcity always increase demand? Extant literature suggests yes; however, boundary conditions and new variables could qualify the relationship, prompting a decrease in demand under scarcity. Developing a more nuanced understanding of the impact of scarcity on demand has important policy and practical implications and warrants deeper inquiry.

Since the start of the COVID-19 pandemic, scarcity has taken center stage in day-to-day life and policy matters. Empty shelves, unattainable services, hoarding behaviors signal that many goods are scarce, and demand exceeds supply. Understanding the antecedents and consequences of (perceived) scarcity seems even more urgent with the increasing prevalence of isolationist economic policies and Russia's invasion of the Ukraine. Although literature extensively documents how scarcity can increase product demand (see Hamilton et al., 2019), we propose that the dynamic between the two is more complex than currently acknowledged.

Relationship between Scarcity and Demand

Consumers may find marketplace limitations of both product and resource scarcity. Resource scarcity occurs when consumers do not have the means to acquire desired goods or services, while product scarcity refers to "real or perceived lack of goods and services available to the consumer" from increased demand, decreased supply, or both (Hamilton et al. 2019). Hence, when a good is scarce, this affects consumers in general, although some consumers can still acquire the good. Here, we aim to describe (i) how access and beneficiaries of a good and (ii) how individual differences can moderate the impact of scarcity on demand.

Access and Beneficiary

Under many conditions, product scarcity increases demand as predicted by commodity theory. Companies often purposefully use perceived scarcity as a marketing tactic. For example, firms may offer limited edition collections or limit distribution to certain retailers (Roy & Sharma 2015). In this case, the driver of the perceived product scarcity is the company's deliberate distribution strategy. In other cases, product scarcity may be primarily driven by a significant increase in demand, supply constraints, or both.

However, when the beneficiary of the product is the public rather than the individual, perceived scarcity may reduce demand or drive consumers towards substitute products, altering the typical scarcity-drives-higher demand dynamic. We might see this type of scarcity effect for COVID-19 testing or for voting locations, where the individual benefit is minimal. For example, when long lines at local polling places are reported in the news, some individuals may be deterred from voting.

Furthermore, the presence of a gatekeeper versus direct access to the scarce product can alter the relationship between scarcity and demand. In some cases, the existence of a gatekeeper will increase demand in the face of scarcity, because the product appears to be more exclusive. Conversely, the existence of a gatekeeper may reduce demand, such as needing a doctor's prescription for medicine.

We thus must consider the interplay between beneficiary and access, described below.

Private beneficiary, direct access. According to commodity theory, scarce resources are more valued. Therefore, scarcity enhances the desirability of products by increasing our motivation to find positive attributes, a higher quality perception from heuristic cues, or physiological reactance. Perceived scarcity arises from fewer sources for manufacturing and distribution, fewer possessors, greater effort to obtain the product, greater delay in obtaining the object, etc.

Private beneficiary, access via gatekeeper. Under these conditions, scarcity can also increase demand. Facing gatekeepers of private benefits, individuals can perceive scarcity as a signal of quality, as illustrated by the use of low acceptance rates as a key criterion for the rankings of institutions of higher education.

Public beneficiary, direct access. The tragedy of the commons depicts a dilemma: when resources are widely accessible but scarce, they can be depleted by overuse. Even when individuals are objectively worse off by depleting the common resource, scarcity results in overuse if access is not regulated. Therefore, scarcity of commonly available resources increases demand.

Public beneficiary, access via gatekeeper. Scarcity's impact on demand can be attenuated by creating informal or institutionalized access rules or by having gatekeepers regulate consumption (Ostrom, 1990). A system perceived as fair can lead individuals to wait their turn for accessing a scarce resource, limiting demand. The presence of gatekeepers may also reduce demand by decreasing an individual's sense of personal responsibility for getting the scarce product.

Individual Factors

Individual differences may furthermore moderate the relationship between perceived scarcity and demand. Being altruistic or prosocial can change the relationship between perceived product scarcity and demand, especially when the product provides benefits beyond the individual. For example, when COVID-19 vaccines were presented as scarce (vs. not), highly compassionate individuals were more likely to forgo them (Pereira et al., 2021). Further, a collectivist orientation may serve as a bulwark against increased self-interested demand in the face of scarcity, protecting the public and vulnerable segments. In an individualist culture, the perception of scarcity can lead to extreme behavior, as Black Friday sales demonstrate.

Individual preference for risk may influence how people respond to perceived scarcity: the less tolerant are quick to buy unnecessary stocks of toilet paper, while the more risk-tolerant (Thompson et al., 2020) may not be alarmed by images of empty toilet paper shelves.

CONCLUSION

This manuscript is not an exhaustive description of the factors influencing the relationship between scarcity and demand but exposes the relationship between scarcity and demand as more complex than usually assumed in the literature. Future research should further investigate this multifaceted phenomenon to understand how public

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policies can support demand in situations of scarcity where strong demand improves societal outcomes.

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When The Unexpected Happens: How People Respond to Unbudgeted Time Savings

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EXTENDED ABSTRACT

How happy do people feel when gaining time unexpectedly? Five pre-registered studies show that whereas finishing a task later than planned strongly decreases people's happiness, finishing it earlier does not substantially increase happiness. This numbness to windfalls is specific to time and due to people failing to reinvest it.

Planning is ubiquitous in people's life. People schedule their work tasks, errands, or even social events (Lynch et al. 2010). However, planning is not an easy task. People may *over-* or *underestimate* the time it takes to finish a task, resulting in unexpected time savings or losses. While losing time will likely reduce people's happiness, how do people react to unexpected time savings?

The literature on "planning fallacy" (Buehler, Griffin, and Ross 1994) suggests that time windfalls may make people substantially happy because they tend to underestimate completion times and thus are typically late. The body of literature on "loss aversion" (Tversky and Kahneman 1991) would also predict that gains substantially increase people's happiness, yet to a smaller extent than equivalent losses. While these two bodies of literatures may disagree in the extent of happiness created from time windfalls versus time losses, they both suggest that finishing a task earlier than planned should lead to a substantial increase in happiness.

However, we find that this is not always the case. Five pre-registered studies demonstrate that, while finishing a task later than planned substantially reduces people's happiness ($d=-2.26$ to -1.15), finishing it earlier by the same amount hardly increases people's happiness, if at all ($d=-0.04$ to 0.29). In other words, we find an extreme losses-loom-larger effect for time-driven by people's numbness to time windfalls. This numbness to time windfalls is robust across different samples (Studies 1A and 1B), specific to time (equivalent money windfalls *do* increase happiness, Study 2), replicates when controlling for outcome quality (Study 3) and happens because people fail to make use of time windfalls (Study 4). Critically, people mispredict that time windfalls will significantly improve their happiness (Study 5), which may add to them being unprepared to use them.

Studies 1A ($N=321$ Europe) and 1B ($N=305$ US MTurk) followed a three between-subjects design (as planned vs. less vs. more). Participants read, "Imagine that today you plan to do an activity from 2 p.m. to 4 p.m.". Depending on the condition, participants were informed that they finished this activity either at the time planned, one hour earlier, or one hour later. In all studies we measured happiness using a slider scale anchored with a sad (=0) and a happy smile (=100) and self-efficacy via 3 items ("competent", "capable", "useful"; 1=not at all; 7=very much; Mogilner et al. 2012).

In Study 1A, a one-factorial ANOVA on happiness revealed that compared to finishing on time ($M=87.59$), finishing the activity one hour later strongly decreased people's happiness ($M=48.28$, $p<.001$, $d=-2.26$), whereas finishing the activity one hour earlier did not significantly increase people's happiness ($M=87.00$, $p=.756$, $d=-0.04$). As predicted, the decrease in happiness when finishing later was 67 times larger than the (non-significant) variation in happiness when finishing earlier ($p<.001$, $d=2.13$). These findings replicated in the US sample. In this and all studies the findings replicated on self-efficacy.

Study 2 ($N=602$) was a 2(domain: time vs. money) x 3(spending: as planned vs. less vs. more) between-subjects design. Partic-

ipants were informed that they plan to spend 50 minutes on [\$50 for] some errands. Depending on the condition, participants were informed that they finished these errands using the time [money] planned, 20 minutes [for \$20] less or more than planned.

As predicted, the increase in happiness due to spending less than planned was significant and substantial for money ($M=11.55$, $p<.001$, $d=0.67$) but not for time ($M=2.91$, $p=.271$, $d=0.16$, difference: $p<.001$, $d=.55$). The decrease in happiness due to spending more than planned was not significantly different between money and time ($p=.412$, $d=.12$; $p_{interaction}=.086$); neither was the hedonic reaction to spending as planned ($p=.209$, $d=0.17$).

Study 3 ($N=304$) replicated Study 1's design, controlling for outcome quality. Participants were asked to imagine that they are writing product reviews that will get a score and informed that their review took them exactly the time planned, one hour less, or one hour more. Then, all participants were informed that they received the maximum possible score.

Compared to finishing the review on time ($M=86.37$), finishing the review one hour later significantly decreased happiness ($M=60.59$, $p<.001$, $d=-1.15$), whereas finishing it one hour earlier again did not significantly increase happiness ($M=89.19$, $p=.183$, $d=0.19$)—despite the fact that they received the maximum possible grade for one hour less of work. Again, the decrease in happiness due to unexpected time losses was 9 times larger than the (non-significant) increase in happiness due to unexpected time gains ($p<.001$, $d=1.04$).

Study 4 ($N=402$) aimed to examine the reason behind the numbness-to-time-windfalls effect. Depending on the condition, participants recalled a time in which the task took them less, more, or exactly the time they had planned. Participants in the spending less condition were also asked what they did with their saved time.

Compared to finishing the task on time, finishing it later significantly decreased happiness ($p<.001$, $d=-2.05$), whereas finishing it earlier led to a comparatively small increase in happiness ($p=.027$, $d=0.29$). Again, finishing the task earlier than planned increased happiness to a substantially smaller extent than finishing it later decreased it ($p<.001$, $d=1.76$). Crucially, the 51% of people who report that they reinvested the time they saved in something else were significantly happier than those 36% who let the time windfall pass unused ($p=.008$, $d=.54$)—leading to an extreme asymmetry for "non-reallocators" (losses loomed 127 times larger) but substantially attenuated for "reallocators" (losses loomed 4 times larger).

Finally, Study 5 ($N=406$) shows that "predictors" predicted that they would feel significantly happier when finishing the activity one hour earlier compared to finishing it at the time planned ($p<.001$, $d=.31$), whereas "experiencers" did not feel significantly happier when finishing the activity earlier than planned ($p=.768$, $d=.04$). Importantly, people overestimate how happy they feel when gaining time ($p=.016$, $d=.36$).

In sum, this work uncovers a systematic tendency to underappreciate unexpected time savings. Our findings contribute to the literature on time famine (Whillans et al. 2017) and prospect theory (Tversky and Kahneman 1991) by demonstrating an extreme "loss looms larger" effect for time. We hope that our findings encourage people to make better use of time windfalls to maximize happiness.

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Self-Esteem Influences Covid-19 Prevention Behavior and Messaging Efficacy

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EXTENDED ABSTRACT

We show that low self-esteem decreases people's engagement in COVID-19 prevention behaviors. This occurs because low self-esteem is associated with a reduced motivation to protect one's health. However, low self-esteem people can be persuaded to engage in prevention behavior (e.g., vaccination) if those behaviors are framed around protecting other people.

The coronavirus pandemic has had devastating consequences worldwide. Although laws and recommendations are in place to slow the spread of the virus, there is large heterogeneity in people's willingness to engage in preventive behaviors such as washing one's hands and practicing social distancing. Society clearly needs a better understanding of why some people are reluctant to protect their health during the on-going pandemic. The present investigation sheds light on this issue by examining the possibility that people's willingness to protect themselves from contracting Sars-CoV-2 depends on self-views – their trait self-esteem.

We hypothesize that low self-esteem people are less willing to engage in COVID-19 prevention behaviors such as hand-washing and mask-wearing. This prediction is based on existing research which suggests that people with lower self-esteem are motivated to verify their negative self-views (Swann & Buhrmester, 2012). Because experiences that are harmonious with one's self-views provide important psychological benefits (e.g., a sense of consistency), low self-esteem people tend to welcome negative feedback (Swann & Read, 1981). Based on these findings, we suggest that people with lower self-esteem are less motivated to protect their health and less willing to engage in self-protective behavior because negative health experiences, such as contracting the coronavirus, are aligned with how low self-esteem people see themselves.

In Study 1a, participants first completed the Rosenberg self-esteem scale and then indicated their willingness to engage in nine COVID-19 prevention behaviors (e.g., I avoid physical contact when greeting). Low self-esteem people were less willing to self-protect ($r = .32, p < .001$). Study 1b replicates this finding using a more objective measure of self-protection (e.g., Compared to before the pandemic, do you wash your hands more frequently? 1 = Strongly disagree to 7 = Strongly agree). We again detect a positive association with self-esteem ($r = .14, p = .018$).

Study 2 manipulates state self-esteem. Participants were randomly assigned to list three good breaks or three bad breaks (between-subjects; Callan et al., 2014) and then indicated how likely they were to disinfect their hands, wear a face mask, etc. in specific scenarios. Lowering self-esteem reduced participants' willingness to self-protect ($p = .040, d = .23$).

Study 3 measured participants self-esteem and their willingness to engage in self-focused (e.g., cleaning hands after leaving a public space) and other-focused prevention behavior (e.g., cleaning hands before entering a public space). We find that self-esteem interacts with message framing (manipulated within-subjects; $p = .001$). Self-esteem was correlated with behaviors to protect one's own health ($r = .30, p = .001$) but not with behaviors to protect the health of other people ($r = .11, p = .248$).

Study 4 examined the effect of self-esteem and message framing on consequential choices. After completing the self-esteem scale, unvaccinated participants were randomly assigned to a health message that framed vaccination as way to protect one's own health or

the health of other people. Participants then indicated whether they wanted to watch an informative video about COVID-19 vaccines. Self-esteem interacted with message framing ($p < .002$). People with self-esteem scores lower than 2.96 watched the video more often when exposed to the other-focused (vs. self-focused) message.

Our empirical package consistently finds that the association between self-esteem and COVID-19 prevention behaviors is driven by people with lower self-esteem being less motivated to protect their health. Studies 1b and 2 measure health motivation (e.g., "My health is an absolute priority for me; Champion & Skinner, 2008). We detect an indirect effect of self-esteem on COVID-19 prevention behaviors via health motivation in Study 1b ($b = .15, 95\%CI [.05-.35]$). In Study 2, a serial mediation suggests that the effect of the recall task on prevention behaviors operates through state self-esteem and health motivation ($b = .14, 95\%CI [.06, .25]$). We also measure health motivation in Study 3, both for oneself (e.g., "My health is an absolute priority for me.") and for other people (e.g., "Other people's health is an absolute priority for me."). A moderated mediation model suggests that self- vs. other related health-motivation explains the combined effect of self-esteem and protection target (self- vs. other) on willingness to engage in protection behaviors. We find much less support for alternative processes.

Individual behaviors such as washing one's hands, practicing social distancing and getting vaccinated, have a large impact on controlling pandemics. This research presents three main contributions to our understanding of people's motivation and likelihood to engage in health-protection behavior during the COVID-19 pandemic; (i) low self-esteem decreases people's engagement in behaviors to protect themselves, (ii) this occurs because low self-esteem is associated with less motivation to protect one's own health, and (iii), because low self-esteem is not associated with less motivation to protect other people's health, people with low self-esteem are actually persuaded best by messages that frame prevention behavior, such as vaccination, as a way to protect other people. This research helps to answer the call for more studies on people's compliance with suggested COVID-19 prevention behaviors.

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Functional Similarity: How Consumption Goals Improve Brand Imitation Evaluation

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EXTENDED ABSTRACT

Four studies demonstrate that seemingly counterproductive brand imitation strategies can become effective when specific consumption goals are activated. When activated goals bring a distant (close) copycat cognitively closer to (further away from) the imitated brand, evaluations and purchase intention of the copycat increase.

Copycats imitate brand features (e.g., name, logo, shape) of a successful original brand to freeride on its equity (Zaichkowsky 2006). Previous research revealed that brand imitation is ineffective when the imitation is too close to the imitated brand (e.g., blatant similarity or positioned too close to the original) or too distant from the imitated brand (e.g., low similarity or positioned too far away from the original; Van Horen and Pieters 2012; 2017). The current set of experiments demonstrate however how specific consumption goals can increase purchase intentions of these seemingly ineffective brand imitations, while keeping product similarity constant.

Based on the accessibility-diagnostics theory (Feldman and Lynch 1988) we propose that consumers will use input information from copycat-original similarity differently depending on 1) accessibility of the input in memory and 2) perceived diagnosticity of that input. First, we propose that, when the copycat is “positioned” far away without direct references to the original, the similarity information is less likely used as input for evaluation, even under high similarity. However, when a goal is activated that brings copycat and original closer together, similarity information will become more accessible and infuse into copycat evaluation, resulting in an evaluative assimilation effect (Warlop and Alba 2004). Second, as diagnosticity refers to the importance and relevance of the information, goals may make the same similarity information more or less diagnostic for subsequent copycat evaluation, even when accessibility of information is high. When goals make similarity more (less) diagnostic, narrower (broader) category processing is activated, due to which a clear (less clear) representation of the original brand is activated, resulting in evaluative contrast (vs. assimilation; Van Horen and Pieters 2017). Four studies test these propositions.

Studies 1 and 2 test whether goals can make similarity information more accessible, increasing copycat evaluation even when positioned far away from the original. Participants ($N = 100$) were randomly assigned to a 2 (goal: no vs. yes) \times 2 (positioning: far away vs. close to original) between-participants design. Participants read in the goal condition that they would have a relaxing evening at home watching a movie for which they wanted to buy ice-cream and beer. In the no-goal condition they just read they needed to buy ice cream and beer. They then indicated their attitude and purchase intention (7-point scales, averaged scale $\alpha = .88$) of “Vecks” (as imitation of the beer brand “Becks”), in either the category beer (close to the original) or the ice-cream category (far away from the original). Results showed a significant interaction between goal and positioning, $F(1, 96) = 8.03, p = .006, \eta_p^2 = .08$; when the copycat was positioned far away, the brand name “Vecks” was evaluated more positively when the goal “watching a movie at home” was activated ($M = 4.28, SD = 1.43$) than when no goal was activated ($M = 3.27, SD = 1.28$), $F(1, 96) = 8.28, p = .005, \eta_p^2 = .08$. When positioned close to the original, copycat evaluation was negative independent of goal activation ($M_{Goal} = 2.58, SD = 1.06; M_{NoGoal} = 2.96, SD = 1.10$), $F(1, 96) = 1.24, p = .27, \eta_p^2 = .01$. Study 2 ($N = 264$) conceptually replicated Study 1, revealing a significant interaction between goal and positioning,

$F(1, 207) = 4.11, p = .04, \eta_p^2 = .02$. When the copycat brand name “Ray Boz” (as an imitation of “Ray Ban”) was positioned far away from the original (in the category flip-flops) it was evaluated more positively when the goal “going to the beach” was activated ($M = 4.90, SD = 1.29$) than when no goal was activated ($M = 4.08, SD = 1.49$), $F(1, 207) = 7.46, p = .007, \eta_p^2 = .04$. When the copycat was positioned close to the original (in the category sunglasses), goal activation did not influence copycat evaluation, ($M_{Goal} = 4.33, SD = 1.85; M_{NoGoal} = 4.39, SD = 1.70$), $F(1, 207) = .42, p = .84, \eta_p^2 = .00$.

Studies 3 and 4 test how goal activation, even when similarity information is already highly accessible, determines the diagnosticity of such information. Participants ($N = 104$) responded to a primary-goal and secondary-goal condition (within subjects, order counterbalanced). In the primary (secondary) goal condition, participants read that after eating a spicy Thai curry they bought an energy drink because they wanted “an energizing drink to help them studying” (“a sweet drink to neutralize the spicy taste”). Participants then indicated their attitude and purchase intention (7-point scales, collapsed, $\alpha = .88$) of the copycat brand name “Red Mull” (as imitation of “Red Bull”). The results showed that the brand name “Red Mull” was evaluated more positively when the secondary goal was activated ($M = 3.19, SD = 1.26$) than when the primary goal was activated ($M = 2.92, SD = 1.23$), $F(1, 102) = 5.39, p = .02, \eta_p^2 = .05$. Study 4 ($N = 171$) conceptually replicated Study 3, using product packages instead of brand names. The results showed that the copycat product “Lecha” (as imitation of “Milka” chocolate) was evaluated more positively after imagining they wanted to use it to bake a cake for a friend (secondary goal; $M = 4.14, SD = 1.41$) than when to have it as a chocolate snack (primary goal; $M = 3.89, SD = 1.40$), $F(1, 167) = 4.22, p = .04, \eta_p^2 = .03$. In addition, in the secondary goal condition, the copycat “Lecha” made participants think more about the category in general ($M = 25.35, SD = 28.23$) than in the primary goal condition ($M = 21.97, SD = 25.54$), $F(1, 167) = 5.62, p = .02, \eta_p^2 = .03$.

These results show that when a goal brings a seemingly distant (close) copycat cognitively closer to (further away from) the imitated brand, evaluations and purchase intention of the copycat improve. Then, goal activation can mitigate or even reverse boomerang effects of high original-imitator similarity, independent of degree of similarity.

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Consumers Prefer to Donate Possessions Close to their Heart to Distant Others

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EXTENDED ABSTRACT

Consumers are reluctant to part with high-attachment possessions they no longer use. We show that consumers—particularly those high in need-for-uniqueness—are more likely to give such items to others at distant (vs. nearby) locations, as distance diminishes the discomfort associated with the potential of encountering strangers using those items.

People find it difficult to dispose of high-attachment possessions, even when those are no longer in use (Dommer and Winterich 2021; Ferraro, Escalas and Bettman 2011; Trudel, Argo and Meng 2016). Holding on to items that no longer serve us clutters homes, denies others the opportunity to benefit from them and hampers the circular economy. In spite of its obvious importance, the question of how to assist consumers in disposing of their possessions is understudied (Winterich, Reczek and Irwin 2017). Our research explores this question in the context of clothing, a product category whose production is particularly harmful to the environment (Mizrachi and Tal 2021).

This research proposes a counterintuitive approach to encouraging consumers to pass on unneeded possessions: High-attachment possessions will more likely be donated if donors can donate them to distant locations. Specifically, we consider Consumers' Need for Uniqueness (CNFU), the desire to establish a distinct identity from others using material possessions (Chan, Berger and van Boven, 2012; Tian, Bearden and Hunter 2001; White and Argo 2011). One manifestation of Need for Uniqueness is avoidance of similarity—a loss of interest in possessions that no longer provide an advantage of distinctiveness. Hence, we hypothesize that when consumers consider giving up a high-attachment possession, they will prefer to reduce the likelihood of encountering it in the hands of someone else.

Results of six studies ($n=1,341$) consistently support our theoretical predictions: Participants prefer to donate high-attachment clothing items to a distant vs. proximal location, for high-but not for low-attachment items. We present an account of this phenomenon that we name the *Other-Me Effect*, the discomfort associated with a potential encounter with another person using the donated high-attachment possession, which mediates the effect. Moreover, we hypothesize that this effect will be stronger among consumers higher (versus lower) in Need for Uniqueness, who may experience a particularly strong preference to avoid seeing others using their former possessions.

STUDIES

Participants in all studies were asked to describe a clothing item in good condition but no longer worn that is highly meaningful to them (high-attachment task) and then read a brief text about the purging of clothing and its benefits.

Study 1a: After completing the high-attachment task, participants ($N=100$) were asked to consider a scenario whereby they needed to clear up space in their closet and sort unused clothing items, including the one they described. They then rated their willingness to donate the meaningful clothing item they had described (1=keep item, to 7=give away the item) in one of two different scenarios: in the event that the item will be given to (1) people living in the same town (proximal destination), or (2) people living in a different town from where they live (remote destination). We found that participants were more willing to give the item away when the item would be given to people living in a different town ($M=2.77$, $SD=2.12$) rather than to people in the same town ($M=2.46$, $SD=1.92$; $t(99)=2.83$, $p=.006$, $d=1.09$).

Study 1b: This study replicated Study 1a, using a different scenario and presenting a direct choice between proximal and remote donation destinations. Participants ($N=302$) were told about an opportunity to collaborate with an NGO that collects clothes for redistribution, whereby donors could decide whether to donate their items to people living (1) in the same town or (2) in a different town. We found that participants preferred giving away the high-attachment clothing item when it would be distributed to people living in a different town (71.85%) than to people living in the same town ($\chi^2=57.69$, $p<.001$, $w=.43$).

Study 2: In this study, we used both high- and low-attachment conditions and tested for mediation by the *Other-Me Effect*. After completing the high (vs. low) attachment task, participants ($N=200$) read the backstory used in Study 1a. Distance was operationalized differently: participants rated their preference regarding the probability of encountering someone else wearing the item. Finally, they completed two items measuring the *Other-Me Effect*. Results showed that participants' preference for encountering someone else wearing the donated item was lower in the high-attachment condition ($M=3.07$, $SD=1.97$) than in the low-attachment condition ($M=3.91$, $SD=1.62$; $t(198)=3.27$, $p<.001$, $d=.8$). A mediation analysis confirmed that the *Other-Me Effect* mediated these preferences ($b=.64$, $SE=.15$, 95%CI: .97 to .35).

Study 3a: Before being assigned to either high- or low-attachment conditions, participants ($N=241$) completed the CNFU scale (Tian et al. 2001). Next, they read the same scenario used in Study 1 and chose their preferred donation destination. Again, more participants in the high-attachment condition preferred to give the clothing item to people in a different town (57.4%) than participants in the low-attachment condition (41.2%; $\chi^2=6.32$, $p=.012$, *Cramer's V*=.16). A moderation analysis revealed that CNFU moderated this effect: Participants high in CNFU ($M>3.03$, $b=.53$, $SE=.27$, $p=.050$) showed a stronger preference to donate high-attachment items to people in the distant location.

Study 3b: In this study, before completing the high-attachment task, participants ($N=200$) were randomly assigned to either high- or low-CNFU conditions (Moldovan et al. 2014). Next, they chose their preferred donation destination. Results showed that participants in the high-CNFU condition showed a stronger preference for donating the clothing item to people in a different town (74.7%) than did participants in the low-CNFU condition (59.8%; $\chi^2=5.08$, $p=.024$, *Cramer's V*=.15).

Study 4: This study replicated Study 1b with an incentive-compatible design. After completing the high-attachment task, participants ($N=298$) were informed about an opportunity to collaborate with an NGO and were asked whether they were willing to donate the high-attachment clothing item they described. Results showed that among the participants who made a commitment to donate that item, a different town was twice as likely to be chosen as the donation destination (66%) than the same town ($\chi^2(1)=10.66$, $p=.001$, *Cramer's V*=.33).

These findings complement the literature on psychological attachment to possessions and expand the research on helping people part with possessions. Our research identifies an easy-to-apply nudge to help people reintroduce their possessions into the circular economy.

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Domestic Brand Transgressions: How, When, and Why Home Country Bias Backfires

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EXTENDED ABSTRACT

Drawing from social identity threat theory and across a correlational study with real word data and three experimental studies, we find that domestic brand transgressions are perceived as stronger threats to home country consumers' social identity than transgressions originated by foreign brands and are thus less likely to be forgiven.

Brand transgressions describe brand-originated actions that violate consumer expectations of appropriate brand behavior that harm consumers' relationship with the brand (Aaker, Fournier and Brasel 2004). Research shows that negative beliefs about transgressing brands spillover to the image of the brand's country of origin and ultimately harm consumer attitudes toward other brands originating in the same country (Magnusson, Krishnan, Westjohn and Zdravkovic 2014). The spillover effects of prototype brand transgressions on country image and related brands. However, opposing theoretical predictions exist about how the domestic or foreign origin of the transgressing brand affects consumer responses to brand violations.

One line of reasoning draws from literature on the beneficial effects of individuals' in-group biases and predicts that consumers should forgive more easily transgressions originated by domestic (compared to foreign) brands because such brands represent members of their in- group and are thus treated more leniently (Brewer 1979). The counter argument views domestic brand transgressions as actions of in-group betrayal and predicts that they should be forgiven less than foreign country ones, not in spite of the transgressing brand's domestic origin, but precisely because of it. In line with the second prediction, we argue that, compared to foreign brands, domestic brands are forgiven less by home country consumers when they engage in transgressions. We base this prediction on social identity threat theory (Wann and Grieve 2005) and propose that consumers forgive domestic brand transgressions with more difficulty because they represent stronger threats to their social (i.e. national) identity. We propose two consumer-related variables – consumer ethnocentrism and self-construal – as well as two transgression-related variables – the type of transgression and transgression attribution.

Forgiving transgressions by domestic versus foreign brands

When brands engage in transgressions, this may damage brand equity (Dawar and Pillutla 2000), result in major losses in terms of revenue and market share (Ahluwalia, Burnkrant and Unnava 2000), lead to negative corporate associations and affect the relationship between brands and consumers, resulting in more negative emotions, attitudes, and purchase intentions toward the brand (Ahluwalia et al. 2000; Dawar and Pillutla 2000). Previous research suggests that victims and observers are more punitive toward in-group members (Shinada, Yamagishi and Ohmura 2004), as a means to protect the in-group from the transgressions of offenders that belong to the same "identity group" (Kerr et al. 1995). In essence, punishing wrongdoers is a way to alleviate and dissociate one's self from the transgression (Kerr et al. 1995). Given that domestic (foreign) brands are part of the consumer's in-group (out-group), we predict:

Hypothesis 1: Consumers are willing to forgive transgressions of domestic brands less than transgressions of foreign brands.

The mediating role of social identity threat

When consumers are exposed to social identity threats, they tend to avoid products that are associated with that identity (i.e., identity-reinforcing products) as a mechanism of self-protection (White and Argo 2009). It is thus expected that consumers experiencing social identity threat resulting from a transgression of a brand they share in-group belongingness (i.e. a domestic brand) would exhibit stronger intentions of revenge and lower likelihood of forgiveness in an effort to reestablish their damages status, honor, image, and identity. Given that consumers share a national identity component with domestic brands, social identity threats would be greater if domestic (vs. foreign) brands engage in transgressions and explain why forgiving domestic brand wrongdoings is more difficult than forgiving foreign brand misconduct. Thus:

Hypothesis 2: Social identity threat mediates the effect of domestic (vs. foreign) brand transgressions on consumer brand forgiveness intentions.

Transgression-related moderators of domestic brand transgression forgiveness

Previous research identifies two main types of brand transgressions: performance-related (where the brand is associated with defective products) and value-related (associated to social or ethical crises by failing to deliver the promised symbolic and psychological benefits). (Dawar and Pillutla 2000). When a brand engages in value-related transgressions, it is seen as deliberately violating the values of the group of consumers that have chosen to identify with the brand (Tyler and Boeckmann 1997). When the brand and consumers share a common perceived identity (e.g., domestic brands) the link between value transgressions and social identity threats should become even stronger (Wenzel and Thielmann 2006). Thus:

Hypothesis 3: Value-related (compared to performance-related) transgressions of domestic brands represent greater social identity threats for consumers and are thus forgiven less.

Domestic Brand Transgressions in Independent versus Interdependent Cultures

According to previous research, individuals vested with interdependent culture (e.g., Asians) would be more willing to defend the morality of the actions of a group member, work with them toward solving the problem, improve the group situation, and extol the virtues of the group to individuals outside the group when faced with transgressive acts (Fehr and Gelfand 2010). This may be explained by the fact that individuals from interdependent cultures view themselves as strictly related to others. As such, they are highly engaged in focusing on the quality and performance of the group, rather than the self, and work toward improving every element of the group (i.e., other in-group members' actions; Gefland et al. 2006). Hence, we predict:

Hypothesis 4: Consumers from independent (compared to interdependent) cultures are less likely to forgive domestic brands transgressions.

Upholding Consumer Forgiveness Following a Domestic Brand Transgression: The Role of Post-Transgression Communications and Attribution Framing

Brand transgressions represent typical examples of actions consumers try to understand (and consequently react toward) using attributional inferences (Aaker, Fournier and Brasel 2004). As a result, consumer forgiveness of brand transgressions should depend on whether they attribute the transgression to dispositional factors such as the brand's unethical motives and profit-seeking, or to situational factors such as environmental pressures or need for survival. The proposed strategy would spin the transgression as a response to competitive threats from foreign competitors. Consequently:

Hypothesis 5: Post-transgression communications attributing domestic brand transgressions to foreign (compared to domestic) competitive threats decreases consumers' social identity threat and thus increases willingness to forgive the transgressive brand.

STUDY 1

Study 1 investigates the main effect of domestic (vs. foreign) brand transgressions on brand forgiveness as well as the moderating role of transgression type (value- vs. performance-related) and consumer self-construal (independent vs. interdependent). We collected data by 762 participants on MTurk (Mage = 31.4 years, SD = 8.98; 40.8% female). Respondents were residents and nationals of either India - interdependent culture - or USA - independent culture. We used a 3 (Transgressing brand type: domestic local vs. domestic global vs. foreign global) \times 2 (Transgression type: value vs. performance) between- participants design. We manipulated brand origin through the location of the brand's headquarters, the country of the brand's founding, and the name of the brand's founder.

Brand availability was manipulated through the geographical dispersion of brand's points of sale within home country borders or around the world (Davvetas & Diamantopoulos, 2018). For the transgression type manipulation (Dutta & Pullig, 2011), we claimed that the brand was involved either in child labor exploitation (value transgression) or defective material usage (performance transgression). Next, participants were asked about the extent to which they would forgive the brand (Xie & Peng, 2009) and willingness to purchase the brand (Estes, Brotto, & Busacca, 2018). Next, respondents completed the manipulation check¹ items for all manipulated factors (transgression type, brand origin, brand globalness, etc.).

We conducted a factorial ANOVA with brand forgiveness as a dependent variable and country, brand type, transgression type and all their corresponding interactions as predictors. The results show a significant main effect of domestic (vs. foreign) brand origin on consumer brand forgiveness ($F = 8.01, p < .01$), a significant main effect of country ($F = 52.77, p < .001$), and a marginally significant effect of transgression type ($F = 3.22, p = .073$). Planned contrasts indicate that consumers forgive value transgressions originated by domestic brands less than value transgressions originated by foreign brands ($M_{\text{value-domestic}} = 3.94, SD = 2.08$ vs. $M_{\text{value-foreign}} = 4.48, SD = 1.89; t = 2.47, p < .05$). No similar differences are observed for performance transgressions which are forgiven with statistically the same intensity both for domestic and for foreign brands ($p = .218$). Regarding culture, planned contrasts indicate that, in line with predictions, US respondents (independent culture) forgive domestic brand transgressions less than foreign brand transgressions ($M_{\text{US-domestic}} = 3.62, SD = 1.95, M_{\text{US-foreign}} = 4.03, SD = 1.97;$

$t = 1.99, p < .05$). The same effect is also observed for the Indian respondents (interdependent culture) ($M_{\text{India-domestic}} = 4.68, SD = 1.91$ vs. $M_{\text{India-foreign}} = 5.11, SD = 1.63; t = 2.11, p < .05$). These results suggest that forgiving domestic brands is more difficult than forgiving foreign ones even in interdependent cultures.

STUDY 2

DOMESTIC BRAND TRASGRESSORS: PRODIGAL SONS OR HOME TRAITORS?

In Study 2, we empirically juxtapose the two mechanisms leading to conflicting theoretical predictions regarding the role of brand origin on transgression forgiveness. We narrow down our investigation to a new value-related transgression (i.e., wage discrimination based on employee's gender).

Method

We collected data through an online survey completed by 250 participants of an online consumer panel (Mage = 34.74 years, SD = 12.45; 52.9% female). Two hundred and six participants continued the study after providing the correct answer to the attention check. To ensure that respondents would perceive the used brand as domestic, all respondents were residents and nationals of the United Kingdom. We used the same domestic manipulation as Study 1. After exposure to the brand, participants read that someone in the company was involved in sexual harassment that they had not promptly addressed.

Following, respondents completed measures of the dependent variables (brand forgiveness, willingness to purchase), the measure of the mediator (social identity threat), a measure of in-group protection, and a series of manipulation checks.

Analysis and Results

To test our proposition that the transgressive brand origin (domestic vs. foreign) affects brand forgiveness through social identity threat, and to rule out the role of protection as an alternative mechanism, we ran a parallel mediation model with brand origin (1 = domestic, 0 = foreign) as independent variable and social identity threat and in-group protection as mediators, and brand forgiveness as dependent variable.

We found a significant mediating effect of brand origin on brand forgiveness through social identity threat ($ab = -0.08, SE = 0.04$, confidence interval [CI] 95%: -0.16; -0.01) but not through protection ($ab = 0.06, SE = 0.07, [CI] 95\%: -0.08; 0.21$).

Study 2 replicates the main effect obtained in Study 1. Additionally, it shows that the reason why consumers forgive domestic brands less is an increased social identity threat experienced when the source of transgression comes from the consumer's own country, ruling out the role of in-group protection as an alternative counter-mechanism.

STUDY 3

CAN POST-TRANSGRESSION COMMUNICATIONS LIMIT THE EFFECTS OF TRANSGRESSIVE BRAND ORIGIN ON FORGIVENESS?

In Study 3, we again collected data exclusively from United Kingdom and we focused again on value-related transgression (i.e. wage discrimination based on employee's gender). Our online study was completed by 408 participants on MTurk (Mage = 37.6 years, SD = 13.6; 70.8% female). We used a 2 (Transgressing brand origin: domestic vs. foreign) \times 2 (Transgression attribution: response to foreign vs. domestic threat) between-subjects design. We manipulated

brand origin and value transgression (here: gender discrimination in payments) similarly to Study 1. Following, respondents completed measures on brand forgiveness, willingness to purchase), a measure of the mediator (social identity threat), and a measure of consumer ethnocentrism.

A moderated mediation model (PROCESS Model 9) with transgressing brand origin (0 = foreign, 1 = domestic) as the independent variable, social identity threat as a mediator, brand forgiveness as a dependent variable and the transgression attribution manipulation (0 = domestic threat, 1 = foreign threat) and consumer ethnocentrism as simultaneous moderators was tested. The results demonstrate that domestic brand origin of the transgressing brand has a positive effect on social identity threat ($\beta = 1.18, t = 4.55, p < .001$) and social identity threat has a negative effect of brand forgiveness ($\beta = -.265, t = -7.65, p < .001$), leading to a significant indirect negative effect. Turning to the moderators, the interaction between brand origin and consumer ethnocentrism on social identity threat is negative and significant ($\beta = -.212, t = -1.916, p_{\text{one-tailed}} = .028$), as predicted. Regarding the moderation by transgression attribution, the respective interaction term is also negative and significant ($\beta = -.462; t = -1.696, p_{\text{one-tailed}} = .045$).

STUDY 4

We collected Twitter posts around two brand transgressions: United and Volkswagen in the 3 months before the scandal was released (we will refer to this as before), in the 3 months after the scandal was released (we will refer to this as short-time after), and in the 3 months following the scandal anniversary (we will refer to this as long-time after), using the PULSAR tracking platform. Our data collection resulted in 227,888 tweets.

Measures

Forgiveness. We proxied forgiveness using the ratings of anger of the tweet. Our assumption was that the greater the anger, the lower would be the forgiveness intentions. The variable anger was calculated using IBM Watson ($M = 16.17, SD = 16.18$).

Domestic brand transgression. We created a binary variable which took the value 1 if the user country and the brand country coincided.

Results

The results of the linear regression suggest a significant interaction effect between domestic brand transgression (domestic vs. foreign) and time (before vs. after the transgression), $\beta = -1.16, p < .001$. The results of the planned contrasts suggest a significant increase in anger before and after the scandal for the domestic brand ($M_{\text{before}} = 15.68, SD = 15.06, M_{\text{after}} = 16.60, SD = 17.04, F = 147.36, p < .001$), but no difference for the foreign brand ($p = .233$). These effects replicated when considering both short-term effects after the event (3 months after) and the long-term effect (1 year after). The results persist if we use sadness as dependent variable, and when we control for number of friends and followers.

While we acknowledge the correlational nature of our results, and the limitation in claiming causality from these findings, we believe that these results show a real behavior of consumers when facing domestic or foreign brand transgressions.

DISCUSSION AND CONCLUSIONS

Our research contributes to brand transgressions literature through (1) extending the list of drivers that determine consumer responses to brand misconduct and (2) considering international variables that should be factored in when investigating the phenomenon of brand transgressions in a globalizing marketplace. Additionally, the findings contribute to the discussion on consumers' domestic country bias by identifying the boundaries of its favorable effects and cases where it might backfire. From a managerial standpoint, the findings (1) inform decisions of domestic and foreign firms when faced with brand crises, product recalls, negative reputation, etc., (2) provide a picture of which countries or consumer segments are more sensitive to these events, and (3) illustrate potential ways to deflect the negative consequences of these events by pinning them to foreign competitors.

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Status-Seeking Aggression

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EXTENDED ABSTRACT

We demonstrate the existence of a novel consumer-brand aggression category absent from prior frameworks: status-seeking. Using real-world data (11.15M tweets from ~90k users) and four studies, we show status motives drive aggression towards brands and manifest in emotions and behaviors that are meaningfully distinct from retributive or reparative aggression.

When brands hurt people, they often become targets of consumer aggression. Aggressive behaviors include boycotts, vandalism, and negative word-of-mouth (WOM); importantly, consumers' motives for aggression are similarly varied. Recent efforts to introduce an aggression schema have uniformly landed on a dichotomy between *retributive* and *reparative* motives (e.g., Grégoire et al. 2019; Kähr et al. 2016; Antonetti 2016). However, such typologies fail to account for status as another important motivation for aggression. Status motivation has been hinted at in past research: Kozinets and Handelman (1998) found that boycotts were used as tools for self-expression, Ward and Ostrom (2006) found consumer protesters desired to portray themselves as "crusaders" for justice, and Anderson and Simester (2014) found that some consumers leave fraudulent negative reviews to look influential. However, these findings were only explored in passing, and no research to date has identified status-seeking as an important causal factor in consumer aggression, explored what situations or traits lend themselves to such behavior, nor identified how status-seeking aggression is conceptually distinct from past accounts of consumer aggression.

We propose that consumers do aggress against brands to garner status, and that this aggression is theoretically distinct from retributive and reparative aggression in both manifestation and underlying motivation. This proposition is informed by past work suggesting aggressive behaviors like expressing moral outrage are more likely to achieve status objectives like going viral on social media, and that individuals can learn to associate aggressive behavior with status (Rathje et al., 2021; Brady et al. 2021). Thus, status-seeking individuals should behave more aggressively towards brands and do so at greater rates when socially rewarded for such behavior.

We conducted four studies to test our theorizing. Study 1 offers real-world evidence for status-motives driving consumer aggression. We examined responses to a viral @BurgerKingUK tweet that read "women belong in the kitchen". We predicted that users who were socially rewarded (via likes) for aggressive tweets expressing moral outrage prior to the Burger King incident (past) would post a higher number of aggressive tweets targeting Burger King (present). We identified and collected all posts that included the text "@BurgerKingUK" in the 48-hour period following Burger King's tweet, yielding 153,046 tweets. From this set, we identified 90,166 unique Twitter users and collected every post from those users for the 7-day period prior to the Burger King tweet (10.98M). Each tweet was classified as containing moral outrage or not, using Brady et al. (2021)'s Digital Outrage Classifier. We then summarized tweet counts and engagement statistics for each user, counting the total number of non-outraged and outraged posts before and after the Burger King tweets, as well as the like counts for each category. Supporting our status-seeking aggression proposition, we found that the effect of likes for past outrage on quantity of present outrage targeting Burger King was significant and positive ($=0.095, p<.001$). These results demonstrate that consumers are sensitive to the status their

aggression garners, and "learn" to behave more aggressively in contexts where aggression is socially desirable.

Study 2 tests the association between status-seeking motives and consumer-brand aggression. Undergraduate participants ($n=136$) were assigned to conditions in a 3 (harm: none vs. low vs. high) x Continuous (Moral Grandstanding Motivations; Grubbs et al., 2019) between-subjects design that tested participants' willingness to engage in marketplace aggression (Grégoire et al. 2010) and unethical aggression (Rotman, et al. 2018). The Moral Grandstanding Motivations (MGM) scale is comprised of two subscales that assess two ways individuals seek status (Cheng et al. 2012): prestige-strivings, and dominance-strivings. We found a main effect of MGM on willingness to engage in marketplace aggression ($=0.46, p<.001$), and unethical aggression ($=0.54, p<.001$). This effect was driven predominately by the MGM-Dominance subscale (aggression: $=0.38, p<.001$; unethical: $=0.37, p<.001$), but not MGM-prestige (aggression: $=0.18, p=.13$; unethical: $=0.08, p=.49$). Importantly, and supporting our framework, this main effect of MGM on aggression persists even when no harm was done by the brand.

Study 3 tests the causal effect of status goals on consumer aggression, while accounting for potential social desirability bias (SDB) in reporting aggressive intentions (Fisher, 1993). Undergraduates ($n=398$) were assigned to conditions in a 2 (Motives: Status vs. Reparative) x 2 (Questioning: Direct vs. Indirect) between-participants design. Participants were presented with the @BurgerKingUK tweet from Study 1, and informed that many consumers were outraged at the sexist message. Participants were asked to answer as themselves or a hypothetical other and given a goal of either gaining status or effecting positive change. Consistent with our theorizing, we found that intention to send aggressive messages was higher for those with status motives compared to those with reparative motives ($F(1,392)=35.34, p<.001; =0.08$). We did not, however, find a significant interaction between indirect questioning and status goals ($F(1,392)=2.77, p=.097; =0.007$), suggesting that status motives for aggression was not subject to SDB.

Study 4 uses a method adapted from Kähr et al. (2016) to demonstrate the conceptual distinctiveness of status-seeking aggression from retributive and reparative aggression. Undergraduates ($n=301$) participated in a 3-factor within-subjects design (aggression type: status-seeking vs. retributive vs. reparative) where they read 2 stories of each aggression type and rated the aggressor on their emotions, cognition, and behaviors. Responses were compared in a series of t-tests, all statistically significant at the $p<.001$ level. Status-seeking aggressors were rated as feeling less angry and less hatred. They also thought less about changing their target's behavior or achieving a fair outcome. Finally, they were rated as being more willing to re-engage in a relationship with the brand and less disappointed if their actions had no impact. In short, status-seeking aggressors lack the negative emotions (anger, hatred) and desire to achieve something with their actions (harm, fairness, impact, change) compared to retributive and reparative aggression. These findings suggest that the emotions and motives previously considered essential characteristics of consumer aggression are not necessary for some consumers.

Taken together, these four studies support our theorizing that status motives play an important role in consumer aggression and demonstrate its conceptual distinction from prior accounts of aggression motives.

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Hospitality in Situation: Dimensions and Ideal-types through the Airbnb Case

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EXTENDED ABSTRACT

This research studies hospitality related to stays via Airbnb. It is based on interviews, observations and guided introspections collected from consumers (hosts and travelers). The results obtained reveal three typical forms of hospitality according to five dimensions, and the interest for consumer research of examining hospitality in situation.

“Welcome home”: the promise of a positive consumer experience based on hospitality is at the heart of Airbnb’s service offer. This community-based accommodation rental platform, created in 2008, has become the market leader. While the platform operates a first framing that contributes to a standardization of hospitality, a great deal of freedom is also given to hosts. Their conception of hospitality can then take on very distinct forms that deserve to be investigated : this is the research purpose.

The concept of hospitality in marketing is frequently associated with the hotel and catering industry (Brotherton and Wood, 2000 ; Lashley, 2000). It has led to the development of “hospitality management”, which focuses on its commercial and economic relationship (Brotherton and Wood, 2008). A second perspective has focused on hospitality as a social phenomenon (Derrida, 1999; Selwyn, 2000). It is based on its sociological, anthropological or historical aspects. These two approaches rarely dialogue with each other (Lynch et al., 2011). Brotherton’s definition of hospitality (1999) seems quite complete: “a contemporary human exchange, which is voluntarily entered into, and designed to enhance the mutual wellbeing of the parties concerned through the provision of accommodation and food or drink”. Each “hospitality situation” has a spatial dimension, a behavioral dimension, a temporal dimension and a physical dimension (Brotherton, 2006). While hospitality is at the heart of Airbnb’s promise, it clashes with the different conceptions discussed above. Indeed, this platform most often allows hosts to accommodate travelers in their homes in exchange for a financial payment. The proposed accommodations can thus be considered as “commercial homes” (Lynch and MacWhannell 2000). This hospitality is hybrid in several ways, at the crossroads of social, private and commercial domains (Lashley, 2000). But, how hospitality is produced in this specific context is still unknown.

In line with the academic literature, we posit that the hospitality situation (Brotherton, 2006) and the interaction between hosts and guests (King, 1995) must be the focus of analysis. The aim is to identify the practices of hospitality in situation and the way they express specific forms of hospitality. Any consumption situation (Belk, 1975; Goffman, 1964) can be determined by the triptych “participants - spatial and material elements - temporal dimensions (Michaud-Trévinal and Stenger, 2018). This triptych is largely consistent with the dimensions of hospitality described earlier (Brotherton, 2006 in particular). A comparison of these two conceptual frameworks reveals their complementarity. The aim here is to understand how hosts and travelers interact in these hospitality situations and to identify possible ideal-types via Airbnb.

This comprehensive consumer research is based on 43 interviews, 10 participating observations and 4 guided introspections of hosts and travelers, conducted in France in 2020-2021. The results analysis highlights the importance of hospitality in the discourses and practices of users. Their differing conceptions of hospitality are

reflected in the dimensions of hospitality situations. First, the participants differ, for example, some can modify the hospitality situation : “my host tells me that if I come back late, I must not make any noise: in another room, another traveler is sleeping” (observation note, 05/10/2020). The behavior of the hosts thus indicates the hospitality they wish to implement. In particular, they are more or less present. The spatial and physical dimensions of the situation are similarly adapted by the hosts to facilitate the implementation of hospitality. The situation of hospitality can also be seen through its temporal dimension. It varies according to the duration of the rental or its regularity: “the people who systematically come back, I leave them the key. That’s how it works, when you know each other you don’t need to make an appointment”. (Alain, host).

The analysis ultimately reveals three forms of hospitality in situation with Airbnb. The first is “convivial hospitality” which brings together the host and the traveler in a spirit of sharing. The latter is immersed in the intimacy of the host, which leads to numerous interactions (e.g. discussions, shared activities): “I just wanted to welcome people as if they were friends who were coming to spend a week in this accommodation” (Chantal, host). “Organized hospitality” aims at empowering travelers. The exchanges serve to make the stay more fluid by allowing the traveler to appropriate the accommodation as best as possible so that he or she can be independent. The host is at the disposal of his guest but does not wish to invest himself in the relationship too much: “I prefer to stay in the background and if they need me they contact me” (Paula, host). “Hotel hospitality” takes its reference model from hotel standards: the service is similar to that of professionals, even when the provider is not. The traveler is considered as a client who must benefit from an exemplary service and impeccable accommodation: “it must be welcoming and be at their disposal, it must be clean and perfect, like in a hotel” (William, host).

This research highlights a variety of possible ideal-types of hospitality when staying through Airbnb. It contributes to the existing literature by showing the value of recognizing a plurality of hospitalities rather than attempting to oppose contradictory views of it. Clearly, two of these forms (hotel hospitality and convivial hospitality) largely correspond to the two poles of the continuum proposed by Lynch et al. (2011), ranging from commercial to altruistic hospitality. However, our results reveal a third form, the organized hospitality, which undoubtedly reflects a specificity of organized exchanges with this intermediation platform. This contribution is based on the perspective adopted here, which aims to understand hospitality through its situations and dimensions. Our results thus confirm the interest of considering hospitality in situation and more broadly consumer research in situation (Brotherton, 2006; Michaud-Trévinal and Stenger, 2018).

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The Consumption Escalation Effect of Over-priced Permission Fees on Consumer Purchase

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EXTENDED ABSTRACT

How do people behave in the following consumption when the focal purchase needs an extremely expensive permission fee? Through five studies, the current research reveals a consumption escalation effect of costly permission fees on subsequent purchase decision-making and provides evidence for the underlying explanation of the proposed effect.

Imagine that you are considering owning a car. In your city, the government asks all citizens to first pay a certificate of entitlement (COE) to get the right of car ownership. Will the price of COE influence your car choice? Previous studies on mental budgeting have demonstrated that subsequent spending is negatively related to prior expenditure in the same category (Cheng et al., 2022; Heath & Soll, 1996). However, evidence from Singapore car sales shows the opposite fact that consumers tend to escalate car purchases when a car's COE is exceptionally high (The Independent, 2013). In this research, we investigate how prior additional fees affect consumers' subsequent choices. We reveal a consumption escalation effect of costly permission fees on subsequent purchases through one field data exploratory study and four lab experiments.

Based on sunk cost fallacy (Arkes & Blumer, 1985), we propose that a large amount of a permission fee facilitates consumption escalation on the subsequent purchase. Specifically, if individuals pay a high permission fee, they tend to spend more money on the focal purchase. We suggest the consumption escalation occurs because individuals tend to take action on the subsequent purchase to avoid wasting the pricey permission fee they have to pay.

In Study 1, we analyzed COE premiums of passenger cars and 63 car brands' sales data in Singapore from 2010 to March 2020. We found that COE price was negatively correlated to Economy and Business car sales ($r_{Economy} = -0.507, p < .000$; $r_{Business} = -0.500, p < .000$) but positively correlated to Luxury and Super Luxury car sales ($r_{Luxury} = 0.592, p < .000$; $r_{Super\ Luxury} = 0.392, p < .000$).

To rule out a potential systematic sampling bias in Study 1, we conducted experiments in Study 2-4. Particularly, Study 2 aims to examine the robustness of the main effect by using two different manipulations (Study 2a & Study 2b). In Study 2a, 497 Prolific workers were asked to choose from ten car prices (\$10,000 to \$100,000) after informed COE premium (\$50/\$500/\$5,000/\$50,000). A one-way ANOVA indicated a marginal significance of the proposed effect ($F(3, 493) = 2.28, p = .078, \eta^2 = 0.014$): Participants in the highest (vs. other conditions) COE condition ($M_{\$50000} = 2.48, SD = 2.41$) chose more expensive (vs. cheaper) cars ($M_{\$50} = 2.06, SD = 1.49, p = .070$; $M_{\$500} = 1.98, SD = 1.57, p = .032$; $M_{\$5000} = 1.96, SD = 1.58, p = .020$).

Besides, Study 2b is a two-level design (low COE: £1,000 vs. high COE: £10,000). 90 valid participants were asked to indicate a specific preferred car price by sliding a bar. An independent t -test further supported the main effect ($M_{low} = 3.73, SD = 0.41$; $M_{high} = 3.92, SD = 0.24$; $t = -2.592$; $p = .011$; *Cohen's d* = 0.34).

Study 3 explored the underlying mechanism of the proposed effect. Arkes and Blumer (1985) assert that sunk cost fallacy occurs because people deny admitting the wastefulness of prior investment; as a result, they invest more on the same investment. We propose that consumers consider a permit fee as a sunk cost of the focal purchase.

A costly (vs. cheap) permit fee leads to the upgrading effect on subsequent purchases because they want to avoid wasting and make the great money worthwhile. Study 3 used two items (1 = strongly disagree; 7 = strongly agree) to test the explanation: "I have already spent a lot on COE, so I don't want to succumb to buying a cheap car."; "It is a waste of the COE cost if I buy a cheap car." 196 workers completed a task similar to Study 2a but with two levels (high: £1,000 vs. low: £10,000). The results showed a robustness of the main effect ($M_{low} = 1.71, SD = 1.22$; $M_{high} = 2.05, SD = 1.42$; $t = -1.841$; $p = .067$; *Cohen's d* = 1.320). Meanwhile, a mediation analysis (Hayes, 2017) revealed the mediator role of wastefulness avoidance on the escalation effect ($\beta = .18, 95\% CI = [.0424, .3507]$).

Study 4 generalized the effect to a relatively cheaper scenario, consumption in a casino. 100 workers participated in a two-level study (entry fee: £10 vs. £100) and were asked to indicate how much to spend on casino tokens. Also, participants' income was asked as a covariate. An ANCOVA indicated the escalation effect of entry fee on preferred spending ($F(1,98) = 11.892, p = .001, \eta^2 = .125, M_{£100} = 165.00, SD = 172.55$; $M_{£10} = 68.08, SD = 67.85, p = .003$).

Our contributions are twofold: first, it explored the successive choices in the multipart pricing area rather than a one-off decision in which additional fees are often perceived as marketers' tricks. Second, it revealed a consumption escalation effect of costly permission fees on subsequent purchases, which diverges from a wane-and-wax relationship among the same categorical purchases in mental budgeting literature. By shedding light on the effect, this study helps consumers better understand successive decision-making, enhance their awareness of rational consumption, and make better financial decisions.

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Effect of Pay Schedules on Consumer Budgets

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EXTENDED ABSTRACT

We examine how consumers select budget timeframes and determine budget amounts across paycheck timeframes. Specifically, we examine how consumers incorporate two opposing factors into their budgets: shorter (e.g., weekly and bi-weekly) paycheck timeframes and longer expense timeframes (rent, utilities, that are paid on a monthly basis) when setting budgets.

Three studies show that when setting budgets, consumers focus on a salient timeframe – the time between pay checks - and selectively recruit timeframe congruent expenses into their budget. As a result, consumers who are paid more frequently consider fewer expenses and have lower budget amounts compared to consumers who are paid less frequently. Across secondary data analysis and several experiments, we demonstrate how pay schedules, which are set by employers and thus outside of consumers' control, affect consumers' ability to set well-calibrated budgets that adequately account for all their expenses.

Study 1: Budgeting App Data

Using a large dataset of budgeting application (Hello Wallet) users, we identify consumers' employers and construct pay frequency based on the pay schedules of all consumers who work for the same employer. The dataset consists of 25 million individual transactions from a panel of more than 25,000 clients observed from 2010-2014. The data provides the day one's budget was set, and the number and amount of the expenses included in one's budget. We use a structural equation model with pay frequency as the independent variable, the number of expenses as the mediator, and the dollar amount budgeted as the dependent variable.

Our results suggest that the effect of pay frequency on the number of expenses budgeted is positive and significant. The direct effect of pay frequency on monthly budget amount is insignificant. However, the indirect effect of pay frequency on monthly budget amount mediated through the number of expenses is positive and significant. The indirect effect accounts for 70% of the total effect. The unstandardized coefficient of the indirect effect of pay frequency on the amount budgeted is \$39.63, 95% CI: [\$17.50, \$61.76]). Thus, a change in pay frequency from bi-weekly to monthly (10 business days) would increase the monthly budget amount by \$396.30, 95% CI: [\$175, \$618]).

Study 2: The Effect of Self-Reported Pay Frequency

In Study 2, (https://aspredicted.org/ROT_MRZ), we demonstrate the effect of pay frequency on budget timeframes and amounts using a one cell between-subjects design. Participants (N=476 CloudResearch-approved Mturkers), indicated how often they receive income and provided their income per pay frequency. Next, they indicated the timeframe they typically set their budget for and provided an estimated budget amount for the upcoming budget period.

Budgeted Amount. As hypothesized, participants' monthly budget amounts varied significantly across pay frequencies ($\eta_p^2 = .027$). Relative to those who were paid monthly, those who were paid bi-weekly budgeted lower amounts ($M_{\text{Diff}} = \$276$; $t(472) = 1.69$, $p = .091$), as did those who were paid weekly ($M_{\text{Diff}} = \$590$; $t(472) = 3.37$, $p = .001$). Additionally, those who were paid weekly budgeted lower amounts relative to those who were paid bi-weekly, ($M_{\text{Diff}} = \$313$; $t(472) = 2.57$, $p = .010$).

Budget Timeframe. Participants' budget timeframes were significantly influenced by their self-reported pay frequency ($\eta_p^2 = .078$). Rel-

ative to those who were paid monthly, those who were paid bi-weekly budgeted for a shorter timeframe ($M_{\text{Diff}} = -.40$; $t(472) = 3.75$, $p < .001$). Additionally, those who were paid weekly budgeted for a shorter timeframe than those who were paid monthly ($M_{\text{Diff}} = -.71$; $t(472) = 6.20$, $p < .001$) and bi-weekly ($M_{\text{Diff}} = -.31$; $t(472) = 3.85$, $p < .001$).

Mediation. The effect of self-reported pay frequency on budget amount was serially mediated through budget timeframe ($ab = 89.86$, 95% CI: [49.42, 139.33]).

Study 3: The Effect of Manipulated Pay Frequency

In Study 3, we provide causal evidence. Additionally, we consider the impact of budget timeframe on the frequency of expenses consumers include in their budget, and how this influences budget amount. We hypothesize that consumers who are paid less (vs. more) frequently, budget across less frequent timeframes, include more less frequently occurring expenses, and budget higher amounts.

We used a two cell (New pay frequency: more vs. less frequent) between-subjects design. Participants (N=215 Prolific) indicated how often they receive income, and provided the income amount they receive each income period. Next, participants were randomly assigned to a revised pay frequency schedule one pay period more (less) frequent. If a participant indicated they were paid weekly, participants imagined they would be paid daily (bi-weekly), resulting in a 5-point scale (daily, weekly, bi-weekly, monthly, bi-monthly). Then, participants indicated the timeframe they would set their budget for as well as a budget amount. Lastly, participants indicated the expenses they included in their budget. Two coders, blind to condition and hypotheses, coded the expenses as occurring monthly, weekly, non-recurring, or uncertain (IRR=73%). None of the expenses were identified as non-recurring.

Budget Amount. Participants who imagined a less versus more frequent pay schedule budgeted higher amounts ($M_{\text{Diff}} = \$234$; $\eta_p^2 = .02$).

Budget Timeframe. A regression with budget timeframe as the dependent variable, and manipulated pay frequency (0=more; 1=less frequent), and self-reported pay frequency (1=weekly, 2=bi-weekly, 4=monthly) as predictors revealed that participants' budget timeframes were significantly related to their manipulated pay frequency ($b = .60$, $F(1, 211) = 17.33$, $p < .001$, $\eta_p^2 = .08$) controlling for monthly income ($p = .066$, $\eta_p^2 = .02$). The less frequently participants were paid, the longer the time periods they budgeted for. The effect of self-reported pay frequency was also significant ($b = .32$, $F(1, 211) = 19.33$, $p < .001$, $\eta_p^2 = .08$).

Number of Expenses. Participants who budgeted for a longer time period, included more monthly ($b = .66$, $F(1, 210) = 25.73$, $p < .001$, $\eta_p^2 = .11$) and weekly ($b = .20$, $F(1, 210) = 4.64$, $p = .032$, $\eta_p^2 = .02$) expenses. The number of uncertain expenses was not significantly influenced by budget timeframe or manipulated pay frequency ($ps > .35$).

Mediation. The effect of manipulated pay frequency on budget amount was serially mediated through budget timeframe and the number of monthly expenses ($ab = 136.84$, 95% CI: [54.57, 262.42]). The effect of manipulated pay frequency on budget amount was not serially mediated through budget timeframe and the number of weekly ($ab = 1.67$, 90% CI: [-7.03, 13.27]) or uncertain expenses ($ab = -.15$, 90% CI: [-10.31, 4.32]).

CONCLUSIONS

Across three studies we find that budget timeframes and amounts are influenced by consumer pay frequencies. Understanding whether consumers anchor on paycheck frequency and thus adopt shorter budget timeframes is important since most expenses are incurred monthly, raising a question of how shorter paycheck frequencies affects consumers' ability to create well-calibrated budgets. With more companies switching to more frequent payment schedules (DailyPay 2021; Fang, 2020; Shapiro 2021), our research has important implications for consumer welfare.

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Apple from Apple, Coach from Coach: How the Feeling of Coherence Affects Store Choice

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EXTENDED ABSTRACT

When and why do shoppers prefer niche direct-to-consumer DTC stores over the more convenient multi-brand stores? Six pre-registered studies (N=2,635) and a field study (N=11,901) show that the feeling of coherence between the product and the store affects store choice, explaining why some DTC stores are more successful than others.

More and more brands are now opening direct-to-consumer or DTC stores, aiming to bypass intermediaries like Amazon and Walmart. The US DTC e-commerce sales are predicted to increase 128%, from \$77B in 2019 to \$175B by 2023 (eMarketer 2021).

However, all DTC stores are not equally successful. For some products, shoppers readily give up the convenience of the multi-brand stores and prefer to purchase from the brand's DTC store. For example, when buying a Coach bag, a shopper might like to purchase it from Coach.com. However, when spending the same amount of money on kitchen utensils, the same shopper might prefer to purchase these items on Amazon.com or Target.com. This research aims to understand when shoppers prefer specialized DTC stores to their regular multi-brand retailers. What factors influence the preference for DTC stores? And what psychological mechanisms underlie this behavioral pattern?

We argue that apart from economic considerations, purely psychological reasons also play a role in shoppers' DTC store preference. Even when the DTC stores do not offer any tangible benefits (i.e., price, quality, and service levels are the same), people might choose them simply because of the psychological fit or the coherence between the DTC store and the product. That is, for a shopper who regularly shops at Amazon.com, although it might be more convenient to buy an Apple laptop or a Coach bag from Amazon.com, it might feel more coherent to purchase an Apple laptop from Apple.com and a Coach bag from Coach.com. We label this phenomenon as the store-product coherence effect.

Specifically, we demonstrate that when consumers' felt involvement—the *phenomenological experience of involvement stemming from the personal relevance of the stimulus or the task*—in the purchase increases, they become more likely to choose the coherent DTC store (Celsi and Olson 1988). Felt involvement increases the relevance of affective inputs in decision-making. Therefore, factors that increase felt involvement, such as personal relevance or perceived value, increase the importance and subsequent reliance on the feeling of coherence in the store choice. We tested the store-product coherence effect using six pre-registered online studies and one study analyzing actual online transactions.

Study 1 (N=450) and study 2 (N=450) aimed to test whether store-product coherence can influence shoppers' preferences for the DTC store. In study 1, participants had to decide whether they would buy a product from an online store, Apple.com or Amazon.com. We used two different products (Apple Watch vs. Logitech Webcam) to manipulate the Apple store-product coherence. Half the participants considered buying an Apple watch, whereas the other half considered buying a Logitech webcam. In study 2, we kept the product and the store identical across the two conditions. We manipulated DTC store-product coherence by merely changing the store name. Participants decided whether they would prefer to buy a Coach bag from Coach's DTC store or Macys.com. Half the participants were told that Coach's DTC store is called Coach.com, whereas the other half

were told that Coach's DTC store is called Tapestry.com, Tapestry being the name of the company that owns the Coach brand.

Note that these two studies used externally valid designs as Logitech webcams are sold on the Apple and Amazon stores, and Tapestry is indeed the company's name that owns the Coach brand. We informed participants that the two stores are identical on all parameters such as price, return policy, quality, etc. in all the studies. We found that participants were more likely to select the DTC store when DTC store-product coherence was high (i.e., study 1-47.89%; study 2-70.09%) compared to when DTC store-product coherence was low (i.e., study 1-19.72%, $p<.0001$; study 2-46.46%, $p<.0001$). We also found that perceived coherence fully explained the effect of DTC store-product coherence on store choice.

Study 3A (N=255) tested whether the store-product coherence effect is stronger in categories where felt involvement is high. Participants saw seven products—vacuum, jeans, chocolate, TV, headphones, bag, and laptop—and indicated whether they wanted to buy each product from the brand's DTC store or Amazon.com. Next, we assessed participants' felt involvement using three dimensions (care, importance, and concern) in each purchase decision. We found that felt involvement significantly increased participants' propensity to choose the DTC store ($B=.71$, $p<.0001$).

Study 3B (N=11,901) analyzed actual purchase data from an online US consumer panel. Each data point corresponded to the purchase of one of the 15 electronic products—from five brands (HP, Apple, Lenovo, Dell, and Samsung) and three product categories (laptops, desktop computers, and tablets). We conducted a separate study to measure shoppers' felt involvement for each of the 15 products ($M_{Apple\ laptop}=.21$, $M_{Lenovo\ laptop}=-.05$). Using store choice (1-DTC, 0-other stores such as Walmart, Amazon, Best Buy, etc.) as the dependent variable; felt involvement as the independent variable; and brand, category, product price, and various shopper characteristics as covariates, we found that felt involvement significantly predicted consumers' propensity to choose the brand's DTC store ($p<.001$).

Study 4 (N=330) used a quasi-experimental consequential design. We posited that New Yorkers (vs. other US state residents) would perceive a New York University (NYU) coffee mug as more personally relevant and hence, would prefer to purchase it from NYU online store (vs. Amazon.com). To test this idea, we recruited half the participants from NY state and the other half from the rest of the US. We showed participants NYU coffee mugs and asked them to indicate their mug and store preferences. We found that NY participants were more likely to choose the DTC store (59.85%) compared to non-NY participants (44.59%, $p<.01$). Seven lucky participants received the NYU mugs based on their responses.

In Study 5 (N=300), we manipulated felt involvement by changing the product's perceived value (i.e., \$30 vs. \$250 Lacoste sneakers). We found that participants were more likely to choose the DTC store when the perceived value of sneakers was high (56.74%) than when it was low (42.36%, $p=.018$). Finally, study 6 (N=850) showed that even when the perceived value of a product is low, individuals who engage in experiential thinking prefer the more coherent DTC store to the more convenient multi-brand store.

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On The Hunt: Search Enjoyment Motivates Collecting Behavior

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EXTENDED ABSTRACT

Five pre-registered studies ($N = 1,951$) using real behavioral tasks, incentive-compatible designs, and hypothetical scenarios demonstrate that when people collect, or simply perceive certain items as collectibles, they experience greater search enjoyment, which in turn boosts their valuation for additional items.

Collecting is a unique and yet very popular form of consumption (Evers, Ryan, and Lindenberg 2022) with substantial economic and social impact (MarketDecipher 2021; Murphy 2022). Yet, little is known about this phenomenon. Most academic work on collecting has focused on delineating extreme collectors' distinguishing features (Carey 2008; Baekeland 1994) and motivations to collect (Belk 1994, 1995; Formanek 1994; McIntosh and Schmeichel 2004; Pearce 1994), or possible item-specific triggers of collecting projects (Gao, Huang, and Simonson 2014; Keinan and Kivetz 2010). Yet no prior empirical work has asked whether framing products as part of a collection affects consumers' valuation of those products, and, if so, why. The current research aims to close this gap.

Being collecting a transformative and inherently playful activity (Belk 1995; Danet and Katriel 1989), we posit that when sought goods are framed as part of a collection (i.e., they are labelled as collectibles in consumers' minds), they become intrinsically more desirable generating higher enjoyment during the search and acquisition process. Such heightened enjoyment leads people to increase their valuation for such items.

We demonstrate our account across five pre-registered studies using real behavioral tasks, incentive-compatible choices, and hypothetical scenarios.

Studies 1 and 2 ($N=550$) tested, respectively, whether collecting increases search enjoyment, and valuation in a highly naturalistic setting: eBay. After reflecting on a lay definition of collection, participants self-selected an item that they either collected or did not collect, and then engaged in a search task for two (study 1) or just one (study 2) additional items on eBay. In Study 1, participants rated how much they enjoyed searching for the items, and as predicted ($n = 22$ preregistered exclusions), people enjoyed the search process to a greater extent for collected ($M = 5.30$, $SD = 1.39$) than for non-collected items ($M = 4.30$, $SD = 1.89$; $t(226) = 4.52$, $p < .001$, $d = .60$). In Study 2, participants made an incentive-compatible choice between an eBay gift card valued at the price of their chosen item (proxy of higher valuation), and a 20% lower-priced cash bonus. As predicted ($n = 25$ preregistered exclusions), the eBay gift card was chosen more often (36%) in the collecting than in the non-collecting condition (20%), $B = 0.81$, $SE = .28$, $z = 2.88$, $p = .004$, suggesting higher valuation for collected items. The effect was not due to variations in item prices ($M_{collecting} = 19.32$, $SD = 10.91$ vs. $M_{non-collecting} = 19.00$, $SD = 10.87$; $t(273) = .25$, $p = .805$).

Studies 3A and 3B ($N=601$) tested whether search enjoyment underlies the effect of collecting on valuation through mediation. In Study 3A, participants self-selected a collected (vs. non-collected) item, and expressed their preference between a hypothetically chosen, yet unexpectedly overpriced item (proxy of higher valuation) versus an alternative, more affordable option on a continuous bipolar scale, and rated the expected enjoyment to search for this additional piece. Results shows that ($n = 26$ preregistered exclusions) people preferred the unexpectedly overpriced item ($M_{collecting} = 4.13$,

$SD = 1.88$ vs. $M_{non-collecting} = 3.28$, $SD = 2.01$; $t(273) = 3.57$, $p < .001$, $d = .44$) and stated higher search enjoyment for collected than non-collected items ($M_{collecting} = 5.37$, $SD = 1.26$ vs. $M_{non-collecting} = 4.11$, $SD = 1.81$; $t(273) = 6.56$, $p < .001$; $d = .81$), and search enjoyment successfully mediated the effect, $B = .26$, $SE = .11$, $CI95 = (.06, .49)$. Study 3B had the same set-up, with the exception that the items (coffee mugs) were held constant and their perception as collectibles (vs. not) was experimentally induced. The effects of collecting on valuation ($M_{collecting} = 4.29$, $SD = 1.85$ vs. $M_{non-collecting} = 3.56$, $SD = 1.99$; $t(299) = 3.32$, $p < .001$, $d = .38$), search enjoyment ($M_{collecting} = 4.92$, $SD = 1.45$ vs. $M_{non-collecting} = 3.81$, $SD = 1.65$; $t(299) = 6.22$, $p < .001$, $d = .71$), as well as the predicted indirect effect, $B = .42$, $SE = .11$, $CI95 = (.22, .66)$ replicated.

Study 4 ($N=800$) followed a 2 (collecting: present vs. absent) x 2 (search enjoyment: low vs. control) between-subjects design and tested whether search enjoyment underlies the effect of collecting on item valuation, using moderation. Participants focused on either a collected or non-collected item, and imagined going to either a neutrally-valenced or unpleasant store to search for an additional piece. We predicted the effect would replicate in the neutral search environment scenario (control), but it would attenuate in the unpleasant one as search enjoyment would be low. All participants rated their willingness to buy their chosen, yet unexpectedly overpriced item (proxy of higher valuation). After making the preregistered exclusions ($n=51$), the 2x2 between-subjects ANOVA yielded significant main effects for collecting ($M_{collecting} = 2.71$, $SD = 1.82$ vs. $M_{non-collecting} = 2.28$, $SD = 1.65$; $F(1, 745) = 20.10$, $p < .001$; $d = .25$), and search enjoyment ($M_{neutral} = 3.62$, $SD = 1.67$ vs. $M_{unpleasant} = 1.37$, $SD = .90$; $F(1, 745) = 544.76$, $p < .001$, $d = 1.68$), and the predicted significant interaction ($F(1, 745) = 4.38$, $p = .037$), such that in the neutral search environment, people were more willing to buy the item when collecting than when not collecting ($M_{collecting} = 3.94$, $SD = 1.65$ vs. $M_{non-collecting} = 3.31$, $SD = 1.63$; $F(1, 745) = 21.53$, $p < .001$, $d = .38$), but such effect was attenuated in the unpleasant search environment ($M_{collecting} = 1.49$, $SD = .98$ vs. $M_{non-collecting} = 1.26$, $SD = .80$, $F(1, 745) = 2.87$, $p = .091$, $d = .26$).

Our findings suggest that when people collect (or simply perceive collecting) a certain item type, they experience greater enjoyment during the search process, which in turn boosts their valuation for such items. Our findings are robust with real (studies 1, 2, 3A, 4) and fictitious (study 3B) collectibles, in both naturalistic (eBay) and controlled (online) settings, using self-selected (study 3A, 4) and constant items (study 3B).

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Video cures mind: Estimating how the disaster shifts video consumption

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EXTENDED ABSTRACT

Natural disasters are believed to change the way how people use social media platforms and consume online streaming content. This research explores how the pandemic, as a context of a disaster, impacts consumer video consumption behavior. Specifically, it examines how consumers react to positive versus negative videos during a disaster.

Video viewing has gradually become the most popular web-based activity and is predicted to account for around 82% of all IP traffic by 2022 (Cisco, 2021). Such an increase in video's popularity calls for a better understanding of what types of videos become popular among viewers (e.g., received more views, likes, comments, and shares). Although past research highlights the importance of valence on consumer engagement such as viewing, liking, commenting and sharing (Baumeister et al., 2001; Berger & Milkman, 2012), whether consumers engage more with positive content (as opposed to negative content) is still debatable. We argue that a context, for example a disaster, is essential to understand the impact of valence on engagement. Prior research has solely focused on a certain timeframe and fails to consider the context in their conclusions.

Therefore, to fill these gaps, we utilize COVID-19 pandemic as a viable context and investigate how valence of videos on YouTube affects consumer engagement. More specifically, we aim to answer the following questions: (1) What types of videos (positive or negative) do consumers engage more with before and during a natural disaster? (2) What are the underlying motives of such a behavior? (3) How do these motives evolve during the development of the disaster?

METHOD

We compiled two datasets, covering the time periods before and during the COVID-19 pandemic. Both datasets contained the daily YouTube trending videos in the UK. Our first dataset contained 38,916 videos on the trending list from November 14, 2017 to June 14, 2018 (i.e., the pre-COVID-19 time period). The second dataset, which covered the second national COVID-19 lockdown in the UK, composed of 29,597 trending list videos from August 12, 2020 to January 10, 2021. We then applied the propensity score matching technique to account for the self-selection bias.

For the resulting balanced datasets, we used the sentiment of the video title as a proxy to measure video valence. To obtain the sentiment of video titles, we relied on standard automated text mining procedures. We started by pre-processing all video titles, which consist of tokenizing, stemming, and removing unmeaning phrases (see Klostermann et al. (2018) for standard text analytics procedure). After pre-processing, we used three different approaches for sentiment analysis: Two lexicon and rule-based tools and one machine learning classifier.

We applied AFINN lexicon (Nielsen, 2011) for the main analysis, consisting of over 3,000 coded words. Each word in this dictionary is manually assigned with a score ranging from -5 (negative valence) to +5 (positive valence). The overall valence of the title was calculated by summing up the score for each word within the focal title. We then ran regression models for analysis.

The other two sentiment analysis tools including VADER and distilbert-base-uncased-finetuned-sst-2-english (a machine learning classifier) have been applied for robustness checks. We collected comments for each video and applied VADER for an additional robustness check.

RESULTS

In **Study 1**, regression models indicated a significant and consistent effect of video valence on consumer engagement. Comparing the periods before and during the pandemic revealed an opposite effect direction. In specific, videos with negative titles received more views before the pandemic ($\beta = -0.024$, $p < 0.001$), while videos with positive titles received more views during the pandemic ($\beta = 0.074$, $p < 0.001$). We also found a consistent impact of video valence on other consumer engagement metrics including likes, comments, and virality.

In **Study 2**, to get a better insight into the increased consumption of positive videos during the pandemic, we incorporated national-wide personal well-being data from UK Office for National Statistics (2021). We divided the COVID-19 dataset (the one only contains the trending videos during the pandemic) into five phases, based on four key dates: September 14th when the "Rule of six" social distancing policy was executed; October 31st when PM announced a second lockdown; December 2nd when the second lockdown ended; and January 6th when the third lockdown started. We calculated the strengths of effects and average anxiety levels among each time phase. The estimated coefficient of our main effect was highly correlated with the average national-wide anxiety level ($r = 0.75$).

In **Study 3**, we focused on the same time periods as described in Study 1 and collected daily trending videos in the US. Our results confirmed our main conclusion in Study 1: Before the COVID-19 pandemic, consumers engaged more with negative videos. However, such behavior was shifted during the COVID-19 pandemic, where consumers revealed more taste for positive videos.

IMPLICATIONS

Our research revealed that people actively seek for more positive media content after the outbreak of COVID-19. We suggested and demonstrated that consumers became more dependent on positive videos when they felt more anxious during the pandemic, especially when stricter lockdown restrictions were imposed. Stronger negative emotions may intensify consumers' need for mood regulation. Therefore, they showed increasing favour of positive videos and regarded watching positive videos as an active strategy to cope with negative moods. The revealed effect was not unique to the UK. The same pattern for the US suggested that the phenomenon could be universal for other countries in the world.

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Brand Activism: What Factors Shape Outcomes for Represented Consumers?

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EXTENDED ABSTRACT

Integrating social identity and consumer vulnerability, this phenomenological study explores how consumers represented in brand activism experience and evaluate brand activism messages. It identifies factors that shape consumers' brand activism experiences with the aim of helping leaders understand how brand activism can be used to effectively improve relationships and society.

Over the last decade, companies have increasingly participated in brand activism, taking a stance on a divisive sociopolitical issue (Moorman, 2020). Although research has examined brand activism's effect on general stakeholder groups (Bhagwat et al., 2020; Mukherjee & Althuizen, 2020; Burbano, 2021), little is known about how brand activism is perceived by those represented in activism messages. Grounded in social identity theory and the consumer vulnerability literature, this study addresses two questions: 1) How do consumers' issue-relevant identities impact brand activism's effect on consumer attitudes and behaviors? 2) What factors influence brand activism evaluations by the consumers who are represented in the activism? Using phenomenological research, the paper explores the lived experiences of consumers advocated in brand activism and offers insights to firms employing brand activism to improve society and build relationships.

Social identity is "part of an individual's self-concept which is derived from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership" (Tajfel, 1981, p. 255). Social identity is applied in the marketing literature to examine how consumers' sense of self impacts their perceptions and behaviors in the marketplace (Bhattacharya & Sen, 2003; Reed, 2002). This study posits social identity could explain how consumers experience activism.

Consumer vulnerability refers to "a state of powerlessness that arises from an imbalance in marketplace interactions or from the consumption of marketing messages and products" (Baker et al., 2005, p. 134). The vulnerability literature explores factors leading to consumer vulnerability and how consumers respond to vulnerability, often with the aim of exposing vulnerable experiences to bring about change in the marketplace (Baker et al., 2005). It is unclear whether brand activism empowers and/or disempowers people in represented groups. For consumers experiencing vulnerability, brand activism may prompt different evaluations and outcomes unlike general consumers.

To understand the lived experiences of consumers advocated in brand activism, a phenomenological approach using depth interviews is adopted. Phenomenological research seeks information-rich participants who have knowledge regarding the phenomenon under investigation; therefore, the purposive sample includes two social groups: LGBTQ (Lesbian, Gay, Bisexual, Transgender, and Queer) and BIPOC (Black, Indigenous, and People of Color). These social groups have recently and regularly been represented in brand activism, which means they have rich experiences to share. In addition, each group represents multiple identities, which offers diverse experiences to inform the study. Members of LGBTQ and BIPOC communities may perceive they have experienced vulnerability or trauma in the marketplace, which gives them a unique experience of being advocated for by an institution where they have previously been mistreated. Participants were recruited via personal and professional networks and through a snowballing technique.

Following a semi-structured interview guide, the interviews explored participants' experiences with the phenomenon, including questions about past brand activism experiences, social identities, and brand activism outcomes. Interviews took place via Zoom and were transcribed by two independent workers. In total, the 23 depth interviews produced 29 hours, 30 minutes, and 47 seconds of recorded interview time. The transcripts totaled to 476 pages and 237,950 words.

Using phenomenological data analysis, significant statements were organized into themes or "clusters of meaning" (Creswell and Poth 2018, 79) to understand the phenomenon. The analysis followed Thompson's (1997) three-stage interpretive framework: 1) identifying themes within individual interviews, 2) finding patterns of shared themes across interviews, and 3) determining broader theoretical and managerial implications.

The results demonstrate that social identity plays a complex and nuanced role in shaping represented consumers' brand activism experiences. Synthesizing the data from 23 interviews, 25 themes emerge that influence brand activism evaluations by consumers who are represented in brand activism, including six themes related to social identity. The study reveals that advocative brand activism triggers various cognitive processes resulting in both positive and negative behavioral, affective, and cognitive consumer outcomes. To summarize the findings, the brand activism evaluation framework is proposed to explain consumers' process of brand activism evaluation.

While other studies have focused on general stakeholder experiences (Bhagwat et al. 2020; Mukherjee and Althuizen 2020; Burbano 2021), to the researchers' knowledge, this is the first to focus on the experiences of those advocated in brand activism. This study yields unique insights into consumer behavior not otherwise observable because the unique experiences of minorities, who are often at the center of brand activism messages, are eclipsed in studies that sample a general consumer population. Further, this study takes the novel approach of integrating social identity and consumer vulnerability literatures with brand activism. Together, these findings can help leaders better understand the impacts of brand activism on the communities they desire to support and how to effectively use activism to improve relationships and society.

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Feeling threatened by robots? The role of service failure on consumers' service evaluations

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EXTENDED ABSTRACT

Across four studies, we show that consumers respond more positively to service failure involving robots than automatic machines. We show that this effect is driven by attributions of agency and reduced threat to human distinctiveness perceived when robots make mistakes (service failure) than when they work as expected (service success).

Understanding how individuals react to artificial intelligence is crucial and increasingly important. In particular, "anthropomorphism" (Epley et al., 2007), that is the extent to which machines are imbued with human-like characteristics, is a key determinant of consumers' response to AI. This is the case of service robots, which as a result are perceived as having more "agency" (Yam et al., 2021), but also as threatening "human distinctiveness" (Mende et al., 2019).

However, while this effect has been shown when robots are working as expected (i.e., service success) (e.g., Mende et al., 2019), prior research has neglected to account for the threat perceived by consumers when robots make mistakes (i.e., service failure). We fill this gap and show that in the case of service failure (vs. service success) the negative effect of the perceived threat on evaluation is mitigated. We argue that this occurs because making mistakes and being wrong is an innate human trait (Schulz, 2011) that dampens consumers' fears of robots threatening human relations, human identity, and humanity in general. We test our prediction in four experimental studies.

Through an Implicit Association Test (IAT; Greenwald et al., 1998), Study 1 (N = 72, 81% female, $M_{age} = 22.09$, $SD_{age} = 0.94$, European sample) shows that participants had the tendency to attribute agency to the robots rather than to the automatic machine ($M_{D-score} = 0.160$, $SD_{D-score} = 0.440$; $t(71) = 3.085$, $p < 0.0020$, 95% CI [0.05667, 0.2638]). In this sense, we show that consumers subconsciously believe that robots are more intelligent and have more agency than traditional machines and that this belief is activated regardless of whether individuals can observe the physical appearance of such robots.

In Study 2a (N = 400, 85% female, 4% non-binary; $M_{age} = 24.17$, $SD_{age} = 6.82$, US sample from Prolific), and Study 2b (N = 400, 76% female, 3% non-binary; $M_{age} = 26.14$, $SD_{age} = 7.87$, US sample from Prolific), we employed a 2 (type of agent: robot vs. self-check-in machine) \times 2 (service outcome: success vs. failure) between-subjects design to test the effect of agent's type and service's outcome on consumers' evaluation of the service. We tested our conceptualization respectively in two different settings: hotel check-in and restaurant order. In both studies, we run a conditional moderated mediation on PROCESS (model 14) with 10,000 bootstrap analyses. Results of Study 2a show that participants attributed more agency to the robot than to the automatic machine ($b = .2954$, $SE = .1134$, 95% CI [.0664, .5124]). Moreover, an increase in perceived agency leads to an increase in hotel evaluation ($b = .2346$, $SE = .0581$, 95% CI [.1203, .3488]). Most importantly, the index of moderated mediation was significant (Index = $-.0720$, $BootSE = .0490$, 95% CI [-.1894, -.0018]). When the service is a failure, participants tend to give higher hotel evaluation when they perform the check-in with the robot instead of the automatic machine (.1055, $BootSE = .0546$, CI 95% [.0218, .2320]). When the service is a success, there is no significant effect of the type of agent on hotel evaluation (.0356,

$BootSE = .0254$, [-.0044, .0940]). The direct effect of type of agent on hotel evaluation was not significant ($b = -.1092$, $SE = .1223$, 95% CI [-.3497, .1312]). Results were replicated in Study 2b.

In Study 3 (N = 400, 77% female, 3% non-binary; $M_{age} = 35.21$, $SD_{age} = 14.47$, US sample from Prolific), we used the same design as Study 2a and 2b but also included a measure of human identity threat (HIT; Mende et al., 2019).

We run model 87 in PROCESS (Hayes, 2018) with perceived agency as first mediator and HIT as second mediator. The results show that participants attributed higher agency to the robot than they did to the automatic machine ($b = .3130$, $SE = .1209$, 95% CI [.0753, .5507]). Moreover, an increase in perceived agency leads to an increase in human identity threat ($b = .2563$, $SE = .0603$, 95% CI [.1379, .3747]). Most importantly, the index of moderated mediation was significant (Index = $-.0265$, $BootSE = .0162$, 95% CI [-.0669, -.0041]). When the service is a success, participants tend to evaluate the service less positively when they interact with a robot rather than an automatic machine ($-.0306$, $BootSE = .0170$, CI 95% [-.0719, -.0057]). When the service is a failure, there is no significant effect of type of agent on evaluation ($-.0041$, $BootSE = .0065$, [-.0196, .0072]). The direct effect of type of agent on evaluation was not significant ($b = -.0387$, $SE = .0568$, 95% CI [-.3026, .2253]).

Overall, our results contribute to a better understanding of consumers' reactions to automatic machines in service contexts. In particular, we show that consumers are more likely to judge a service failure less negatively when the failure involves a robot rather than an automatic machine. We provide evidence that while robots are perceived as having agency and as threatening human identity, the negative effect of threat on consumers' evaluations is mitigated in case of service failure.

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The Influence of Caffeine on the Attraction Effect

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EXTENDED ABSTRACT

Caffeine as the world's most popular stimulant has been widely neglected in consumer research. We manipulated participants' caffeine consumption and assessed its impact on the attraction effect. We find that caffeine increases the attraction effect in consequential choice scenarios and that this increase is mediated by cognitive processing.

Caffeine is the most widely used psychostimulant worldwide. One recently published study shows that caffeine consumption increases spending behavior (Biswas et al. 2022). However, despite caffeine's huge popularity and ubiquitous presence in and around shopping endeavors (Dolbec, Arsel, and Aboelenien 2022), further studies on caffeine's effect on consumer behavior are missing. We investigate whether caffeine increases consumers' propensity for decision anomalies, more specifically, the attraction effect as the most prominent context effect in consumer research literature (AE; Lichters, Sarstedt, and Vogt 2015).

The AE can be observed when an asymmetrically dominated decoy option is added to a binary choice set consisting of a target and competitor product option: Introducing the decoy, which is dominated by the target but not by the competitor, increases consumers' preference for the target (Huber, Payne, and Puto 1982). Several researchers propose that detecting the dominance relationship requires cognitively demanding and deliberate attribute-wise comparisons of choice options (Pettibone 2012), especially with more complex realistic choice stimuli (Lichters et al. 2017).

Caffeine enhances cognitive processing capabilities, such as reasoning (Jarvis 1993) and attention (Heatherley et al. 2005). Given caffeine's enhancing effect on cognitive processing capabilities, we expected caffeine to increase the AE. We assess this expectation in two double-blinded lab experiments masked as a coffee tasting.

Study 1 applied a 2 (caffeine: treatment vs. placebo) \times 2 (choice set: binary vs. trinary) between-subjects design with real products (trail mixes) in a consequential choice setting. Participants received a 200 ml decaffeinated coffee (placebo group), mixed with 200 mg of caffeine in the treatment group. Participants completed five choice tasks composed of identical product options at varying prices. Participants in the binary condition chose between a lower-price and a lower-quality competitor (L) and a higher-price and a higher-quality target (M). Choice sets in the trinary condition consisted of the identical two products and an additional decoy (D), dominated by M in price and quality. Each choice set also included a no-buy option. A sample of 64 participated in study 1 ($n_{\text{treatment}} = 31$, $n_{\text{placebo}} = 33$). We find a significant AE in the treatment group ($p_{\text{directed}} = .006$, OR = 4.31), but not in the placebo group ($p_{\text{directed}} = .359$, OR = 1.63). Hierarchical logistic regression reveals a significant interaction effect ($\beta = 18.13$, $z = 2.28$, $p = .022$), whereas both main effects were not significant, indicating that the AE only emerges in the treatment condition.

Study 2 also applied a 2 (caffeine: treatment vs. placebo) \times 2 (choice set: binary vs. trinary) design with the same caffeine manipulation as in study 1. Participants chose from five choice sets manipulated between-subjects in the product category *spekulatius* (spiced cookies). These between-subjects-manipulated choice sets occurred between each five binary and trinary choice sets as a within-subjects manipulation (product category: chewing gums). We applied a forced-choice setting without a no-buy option. We used the enhanced version of the Cognitive Reflection Task (CRT-L; Primi et al. 2016) to assess caffeine's influence on cognitive capabilities. A sample of 51 partici-

pated in study 2 ($n_{\text{treatment}} = 26$, $n_{\text{placebo}} = 25$). On a within-subjects level, the AE emerges in the treatment group ($p_{\text{directed}} = .002$, OR = 7.00) but not in the placebo group ($p_{\text{directed}} = .813$, OR = 0.67). Switching rates were significantly higher in the treatment ($M = 0.09$, $SD = 0.25$) than in the placebo group ($M = -0.01$, $SD = 0.12$; $t(49) = 1.82$, $p_{\text{directed}} = .037$, Cohen's $d = .51$), confirming a stronger AE after caffeine consumption. Mediation analyses (PROCESS model 4) reveal a significant indirect effect of caffeine on switching rates mediated by cognitive reflection ($b = 0.18$, $SE = 0.09$, 95% CI [.01, .35]). Furthermore, a hierarchical logistic regression reveals a significant interaction effect of caffeine and choice set ($\beta = 36.74$, $z = 6.46$, $p < .001$), thereby also confirming a stronger AE in the treatment group in between-subjects-manipulated choice sets.

This research shows that consumers' purchase decisions depend on psychophysiological state alterations induced by psychostimulants. Specifically, caffeine increases the AE. This increase is mediated by enhanced cognitive processing capabilities. These results provide evidence that caffeine consumption enhances consumers' decision making in line with behavioral anomalies.

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Consumer Empiricism: Consumers' quasi-scientific strategies to evaluate consumption routines

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EXTENDED ABSTRACT

How do consumers evaluate consumption routines? Using a qualitative research design, we study consumers who quasi-scientifically evaluate consumption routines. We conceptualize consumers' quasi-scientific approach as consumer empiricism. We uncover four empiricist strategies consumers use to evaluate consumption routines and show how an increasing lay-notion of rationality impacts consumption behavior.

How do consumers evaluate consumption routines? Prior research suggests that consumers use feelings (interpretive reasonings) and reasons (rational reasonings) to guide their evaluations (Hsee et al., 2015). While consumers' interpretive reasonings have been extensively studied (suggesting that consumers for instance rely on brands (e.g., Beverland et al., 2020; Holt, 2002) or aesthetics (e.g., Arsel & Bean, 2013; Huff, Humphreys & Wilner, 2021) to evaluate products), research on consumers' rational reasonings remained scant. To study consumers who seek rational reasonings to evaluate consumption routines, we conducted in-depth interviews and netnographic data collection between 2019 and 2022

We find that consumers use one of four types of quasi-scientific at-home experiments to evaluate consumption routines with seemingly objective and rational reasonings: *control group comparisons* (Consumers compare a purchased product or its effect to a control condition that is not exposed to the product.), *pre-post comparisons* (Consumers compare a purchased product or its effect to the past, prior to using the product.), *side-by-side comparisons* (Consumers compare multiple products of the same category simultaneously.), and *sequential comparisons* (Consumers compare multiple products of the same category in chronological order.). With each strategy, consumers aim for objective and lay-rational reasonings to guide their evaluations. We conceptualize consumers' quasi-scientific evaluation strategy as *consumer empiricism*. Empiricists believe that theories and hypotheses must be observed and tested to be accurate (Curd & Psillos, 2013). Primarily, this worldview is found in philosophy, experimental research, and natural sciences. We find it with consumers who seek to evaluate consumption routines.

Our study finds that consumers increasingly seek quasi-objective lay-rational reasonings to guide their evaluations (complementary to interpretive evaluation strategies) for high-involvement consumption practices as they are driven by three interlocking cultural discourses: *institutional mistrust* (Consumers mistrust brands and institutions.), *hyper-individualization* (Consumers believe they are special and statements from others do not apply to them.), and an urge for *optimization* (Consumers seek to continuously optimize themselves and their consumption behavior.).

Our literature review finds numerous studies that allude to the phenomenon of consumer empiricism. Recent research suggests that more and more consumers use empiricist (analytical, evidence-based, and quasi-rational) strategies to guide their evaluations (e.g., Maciel & Wallendorf, 2016). By mapping the instances of consumers' quasi-systematic and quasi-objective strategies evaluation strategies, we show that the phenomenon of consumer empiricism is evident in previous literature but has not yet been identified and studied as such.

Uncovering and conceptualizing the phenomenon of consumer empiricism yields multiple contributions to consumer research and

marketing practice. First, our study helps to disclose how consumers form product evaluations (e.g., Hsee et al., 2015). Specifically, we stress product evaluation as an explicit process, in contrast to research that theorizes implicit evaluation strategies (e.g., Wirtz & Bateson, 1999). Second, this research shows how an increasing lay-notion of rationality impacts consumer behavior. Third, we contribute to understanding how consumers develop and share lay theories (Broniarczyk & Alba, 1994). In contrast to naïve theories (Deval et al., 2012; Faro, McGill, & Hastie, 2010) we show how consumers believe to develop empirically-grounded logical and profound theories. Fourth, we suggest that the phenomenon of consumer empiricism might affect how consumers perceive marketing claims. Our findings and our literature review suggest that consumers with an empiricist mindset do rather not trust marketing claims a priori (in principle and without further evidence). Instead, we find consumers who test marketing claims a posteriori (drawing from empirical evidence). Finally, our study paves research avenues for future quantitative analyses.

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Natural wines as subversive art: Exploring expert consumer and producer framings of an unconventional product

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EXTENDED ABSTRACT

We explore a new way to define natural wines, a largely undefined type of wine, through the lens of art. In particular, we borrow from previous theorizations of wine seen as art and incorporate the specific lens of subversive art to frame natural wines as artifacts that oppose the mainstream.

By analyzing data from wine producers and expert consumers, given their influence in a market-driving industry (Humphreys and Carpenter 2018), this paper addresses the lack of an accepted definition of natural wines, a niche segment of the wine world characterized by an unconventional approach to winemaking that seeks to reduce the number of human interventions in the process of wine production while implementing sustainability oriented initiatives (Legeron 2014).

Most of the current definitions of natural wines are contested in the wine world and have not reached a level of widespread acceptance that other conventional winemaking approaches have (Alonso González and Parga-Dans 2020). Additionally, these definitions miss to incorporate an important aspect of natural wines: the subversive element that opposes the status quo.

In order to incorporate this missing subversive element, this paper evidences an emergent finding of how natural wines can be characterized as subversive art. By doing this, the paper expands the limited number of studies on artification - i.e., the process of making non-art into art (Shapiro 2019) - of wines (e.g., Joy et al. 2021; Tomasi 2012). In particular, it looks at how art can help define and frame a largely undefined type of product (such as natural wines).

We consider subversive art, for the purposes of this paper, as a countercultural expression of disconformity with the status quo (Auther and Lerner 2012; Kan 2001). Particularly, subversive art can be considered different from other forms of art in that it carries a sense of subversion that can sometimes border in the illegal (Daniels 2016). With no universally accepted definition of “subversion”, subversive art is characterized by actions that seek to undermine institutionalized systems, with subversive artists attempting to oppose and transgress current social norms and practices (Topuzovski 2017). For instance, street art can be appreciated for its ideological message, such as its indictment of consumerism and excessive materialism in public space (Visconti et al. 2010).

The main research question explored in this paper is: In what ways can sustainable and unconventional wines be characterized as artworks? First, to examine how natural (and overall sustainable) wines are framed by wine producers and wine expert consumers, interview and participant observation data was collected and analyzed as part of a broader study on sustainability in British Columbia’s Okanagan (and Canadian) wine industry. During the fieldwork, interviews, informal conversations, and participant observations (working in a cellar, a vineyard, and a wine shop, as well as participating in multiple wine events and fairs), it was evidenced how an emergent theme for (natural and sustainable) wine producers and expert consumers (wine critics, writers, educators, and experts) involved the opposition to mainstream winemaking and positioning of sustainable and natural winemaking that closely resembled subversive movements in other contexts.

Interviews lasted between one and two hours each, and in some cases a second set of interviews was conducted. In-depth, semi-

structured interviews were conducted on-site (usually at a winery, vineyard, or at a convenient and quiet enough venue) or via telephone/video calls. Each interview started with questions regarding the participants’ context and background, and then moved into topics regarding the concept of sustainability, the broader wine world, and the wine industry and sustainability in the Okanagan Valley and Canada. 27 interviews were analyzed: 11 with expert consumers (6 women and 5 men) and 16 with winemakers and/or winery employees/owners (6 women and 10 men). Participant observation methods were also implemented as well as informal conversations with various winemakers and wine experts while attending the international annual Raw Wine Fair twice (2017 in Los Angeles, California and 2018 in Montreal, Quebec).

With artification seen as a process constituted of over ten microprocesses that explain how non-art becomes art (Shapiro 2019; Shapiro and Heinich 2012), this paper is based on the description of how wine can become art, detailed by Joy et al. (2021). The following were key microprocesses that were evidenced through the data collection and analysis and that are of relevance for this particular paper in explaining how natural wines become art, given that Shapiro and Heinich’s (2012) conceptualization of artification specifies that the number and relevance of microprocesses depends on the context being studied: (1) a process of institutional and organizational change is evidenced in the creation and expansion of international and regional natural wine fairs and groups and the ongoing discussion around new normative and regulations about what is a natural wine; (2) the individualization of labour evidenced in certain well-known natural wines (also evidenced in some conventional wines); (3) the displacement seen in iconic natural wines that are no longer just wines but coveted products, sometimes endorsed and revered by well-known public figures; (4) and the redefinition of time that differentiate natural wines that are artisanal and manually cared for and made by winemakers that oppose the growing standardization seen in some conventional wines.

Finally, three key characteristics emerged from the study that help characterize natural wines and differentiate them as subversive art in comparison to mainstream wines: (1) the opposition to the mainstream: natural wines oppose current institutionalized forms of winemaking, similar to subversive indie art and indie cinema opposing mainstream media productions that are seen as more interested in revenue than in generating value and uniqueness in the art produced; (2) the reclaiming of spaces: similar to graffiti that offers young artists and writers a way to reclaim the spaces they work in and inhabit, natural winemaking allows this for farmers; and (3) rituals of resistance: natural winemakers engage in practices that fall outside accepted industry standards, as seen in graffiti and street art where creators are not satisfied with current forms of art or do not want to engage with its norms.

This paper provides an additional understanding of natural wines, with insights that could be used by practitioners when approaching this niche wine market segment. It also provides further analysis of the artification of wines (Joy et al. 2021) by exploring a specific and largely undefined type of wine and category of art.

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Brand Faith: How Consumers Develop Faith in Brands

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EXTENDED ABSTRACT

Consumers seek existential security, especially during times of personal and societal disruption. They often consider a brand as an object of faith and try to find existential security in the brand. Analyzing interview and online forum data, we identify key characteristics of “brand faith” and outline its developmental process.

Consumers seek existential security to provide a sense of order and meaning in response to uncertainties and disruptions (Phipps and Ozanne 2017). Even in the COVID-19 pandemic, more consumers try to find answers to existential questions to cope with anxiety for the future (Pew Research Center 2021). The process of searching for existential meaning as a fundamental human need is defined as faith (Fowler 1981). Human beings can have diverse levels of faith both inside and outside of organized religion (Fowler 1981). For example, since ancient society, humans have developed faith in material objects by transforming them symbolically through rituals, inheritance, etc. (Belk, Wallendorf and Sherry 1989). This paper focuses on faith developed by consumers toward brands and examines how this phenomenon we call “brand faith” shapes consumer meaning-making and responses to uncertainties about the future.

The concept of faith is part of theories and popular discourse related to consumers’ relationships with brands. For example, consumers often talk about ‘having faith in Apple’ or ‘losing faith in Tesla.’ Consumers who have faith in Apple maintain relatively strong relationships with brands, even in this era of numerous brand choices. Therefore, other brand managers have desired to develop consumers’ faith in their brands (Thompson 2004). However, although previous research examines “tales of faith being rewarded” as one of the major narratives within brand communities (Muñiz and Schau 2005, 739) and processes of sacralizing material objects (Belk et al. 1989), the concept of brand faith has not been explicitly defined and examined. Therefore, we lack an understanding of how spiritual concerns shape consumer experiences beyond participation in brand communities or attachment to special possessions. Our research addresses this gap by defining brand faith and examining how it develops, diminishes, and recovers.

We focus specifically on Apple and Tesla to investigate the definition and the development of brand faith. Several articles identify Apple and Tesla as brands that inspire faith among consumers (Moorman 2018). Differences between the two brands allow us to analyze multiple dimensions of faith across brands with different histories and product categories. We conducted an iterative analysis on in-depth interview data and netnographic data. The in-depth interview data includes 21 transcripts and 21 biographies that summarize impactful events or attitude changes that may affect brand faith. Also, the netnographic data contains 50 randomly selected postings and 20 biographies created by summarizing impactful events or attitude changes of 20 randomly selected users. We randomly selected postings and users of MacRumors and Tesla Motors Club after filtering 254,449 postings with a customized dictionary of brand faith.

Based on the analysis, we define brand faith as an evolving pattern of believing, valuing, and committing to the brand that strengthens existential meaning in a consumer’s life. Also, our analysis identifies five key stages that represent deepening levels of brand faith: intuitive brand faith, associative brand faith, reflective brand faith, conjunctive brand faith, and holistic brand faith. Consumers in the intuitive brand faith stage develop faith in vague and imagined aspects of the brand by observing visible faith from other consumers or finding symbolic values from brand offerings. In the associative brand faith stage, consumers

develop faith in the pragmatic superiority of the brand by seeking out descriptive and experiential knowledge about the brand. In the reflective brand faith stage, consumers encounter contradictions that conflict with their expectations. Therefore, they start to reflect on whether the brand’s superiority is absolute and will lead to a meaningful future, but they still show strong motivation to seek resolutions. In the conjunctive brand faith stage, people settle into the brand by providing benefits of doubts and affirming the absoluteness of the brand value. In the last stage, the holistic brand faith stage, the brand is firmly embedded into their lives as these consumers consider the brand more holistically, like a belief system of living a meaningful life. At this stage, individuals consider the brand as a part of the center of moral values, which decide what is right or wrong.

As brands and individuals are living entities changing over time, sometimes consumers’ brand faith diminishes, regressing to prior stages or dissolving altogether. When consumers who have brand faith confront doubts that dwindle their expected belief or value of the brand, they regress to the previous stage. Three types of doubts diminish brand faith: doubts about pragmatic superiority, doubts about futurity, and doubts about morality. Consumers also can dissolve brand faith followed by a gradual process by which faith is lost, and lost, until the losses outnumber the original benefits from their beliefs and perceived values of the brand.

This research expands studies on consumer experiences of spiritual devotion toward brands. We provide insights into how such devotion develops at an individual level by identifying key characteristics of brand faith. Our research suggests that brands can support consumers’ secular experiences of faith by offering symbolic and material resources that consumers can draw on to find existential meaning in the uncertain future. Brands provide a means to improve consumer wellbeing while at the same time delimiting the meanings, resources, and actions available for consumers to achieve that end.

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“More the Merrier? Or Do Too Many Cooks Spoil the Broth?” Effects of Plural Brand Names on Brand Attitude

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EXTENDED ABSTRACT

Using a combination of real-world data and lab experiments, we demonstrate that plural brand names are preferred over singular names. This is driven by the belief that a collective team is more efficient, which increases competence, leading to more favorable attitude. The effect is attenuated when self-expressive motive is salient.

Brand names serve as an important strategic tool for companies to communicate to consumers, and firms invest heavily in naming and maintaining a brand (Heath and Heath 2011). To address this important topic, prior work has suggested that linguistic qualities including phonetic (specific sounds), morphological (word formation) and semantic (connotative meanings) characteristics convey brand information (Vandenbergh, Adler and Oliver 1987). While substantive research has focused on phonetic (Argo, Popa and Smith 2010; Lowrey and Shrum 2007; Pogacar et al. 2021) and semantic (Gunasti and Ross 2010; Keller, Heckler, and Houston 1998) characteristics, few research examines morphological characteristics of brand names. To address this gap, we study how consumers react to the use of the pluralizing morpheme in brand names, i.e., the inclusion of a suffix *-s* at the end of a brand name.

To understand the impact of plural brand names on consumers, we draw from prior work on grammatical number — a linguistic device that expresses quantity by adding affixes to the root word, thereby distinguishing singular from plural entities (Wallis, Robins, and Knott 2014). A singular form of an entity focuses on a single instance of an object. Whereas the plural form of an entity construes a collective composed of a homogenous group of more than one instance of the unit object (Wallis et al. 2014). These homogenous groups can further be interpreted as an assemblage – a group collectively performing as a cohesive entity (collective reading) or as multiple individuals performing separately (distributive reading) (Rossi, Kumar, and Cohen 2005). When plural nouns are marked with partitive phrases (e.g., *each of the cars*), they are processed through distributive reading. However, when plural nouns are unmarked, they are processed through collective reading (e.g., *the cars*) (Kaup, Kelter, and Habel 2002). In the context of brand names, we expect plural names to activate collective reading by default because brand names are not preceded by partitive phrases. Collective reading leads to the perception of the plural entity as a cohesive group, where multiple individuals together represent common intention and collective agency (Gallotti and Frith 2013).

Another form of plural noun, especially when used with proper nouns (i.e., person names or family names) is the associative plural. It is used to refer to a close-knit group of individuals associated with a dominant reference-group identity and strong internal cohesion (Daniel and Moravcsik 2013). For example, family names like *The Joneses* are used to create a reference to social groups. Since brand names are proper nouns, we expect plural brand names to be processed the same as associative plural nouns, i.e., as a cohesive group. We posit that being perceived as a cohesive group is likely to offer advantages to the brand because of an increased perception of synergy.

To test our propositions in a real world setting, we first analyzed an archival dataset containing brand ratings for 618 brands by a representative sample of 17,000 individuals from the U.S. (Lovett,

Peres, and Shachar 2014) and found that the plural named brands were evaluated more favourably than brands with singular names ($M_{\text{singular}} = 2.75$, $SD = .72$; $M_{\text{plural}} = 2.96$, $SD = .69$; $F(1, 527) = 5.05$, $p = .025$). Next, we conducted an online field experiment using Google Ads, where we designed two versions of a display ad for a landing page with the objective to generate traffic to the landing page by maximizing clicks on the ad. We found that the ad with the plural brand name performed better than the ad with the singular brand name (Singular: investment = USD 13.34, clicks = 91, ROI = 6.82%; Plural: investment = USD 12.21, clicks = 132, ROI = 10.81%). Taken together, these two studies in the real-world setting demonstrate initial evidence suggesting a plural brand name advantage. We then used a series of controlled lab experiments to further investigate the basic effect and the underlying psychological mechanism.

While linguistics offers a wide toolkit to analyze language at multiple levels—including phonology (specific sounds), morphology (word formation) and semantics (connotative meanings), research on brand names has predominantly focused on phonemes (e.g., Argo et al. 2010; Lowrey and Shrum 2007; Pogacar et al. 2021). There is little work on understanding the role of morphemes in brand names. We make a theoretical contribution in the field of brand linguistics by examining the effect of a prevalent but understudied grammatical morpheme, the pluralizing suffix *-s*, on brand name evaluation.

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The Time-varying Effects of Nutrition Claims on Product Sales and Its Drivers

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EXTENDED ABSTRACT

This research examines the effect of a nutrition claim and its relationship with associated product marketing efforts. Using sales of yogurt and cereal categories, the authors find a negative effect of market presence, indicating that over-presenting claims in the market leads to decreases in consumer preference.

Consumers worldwide struggle with weight management and face serious health issues due to obesity and other food-related chronic diseases. To encourage a healthy diet, the consumer-packaged goods industry has applied food labeling techniques to address regulatory changes as well as to differentiate their products from the competition. (Food and Drug Administration 2006). One of these labeling techniques is nutrition claims (NCs) which either describe the level of a nutrient in the product using terms such as “free”, “high”, and “low”, or compares the level of a nutrient in a food item to that of another food item, using terms such as “more”, “reduced”, and “lite” (Food Standards 2016). Aiming to aid the interpretation of nutrient tables and health benefits and to avoid misleading information, NCs have been widely adopted by manufacturers across nations and product categories.

Although there has been an ever-increasing consumer demand for a healthier diet (Andrews et al. 2014; Chrysochou and Grunert 2014), the findings on consumers’ response to NCs are mixed. Some studies found NCs to be helpful in simplifying the cognitive process of product evaluation (Williams 2005) and in invoking more attention to the nutrient by alluding to its importance (Garretson and Burton 2000). As a consequence, consumers perceive these products as healthier (Roe, Levy and Derby 1999), have a more favorable attitude (Kozup, Creyer, and Burton 2003), and are willing to pay a premium price (Ballco, Jurado and Gracia 2020). Conversely, a growing body of studies has highlighted the negative impact of nutrition claims. This stream of work has revealed that NCs could lead to decreased perceived tastiness (Civille and Oftedal 2012; Raghunathan, Naylor, and Hoyer 2006), consumer skepticism (Garretson and Burton 2000), negative evaluations, and lower purchase intentions due to confusion and misleading information (Benson et al. 2018; Williams 2005).

While many papers attempt to address these mixed results with factors such as variations of claim type (e.g. André, Chandon and Haws 2019) or consumer characteristics (e.g. Cavaliere, De Marchi and Banterle 2016), the learning and evolution of NC perception over time has been overlooked. For example, longitudinal research conducted by the Canadian Foundation for Dietetic Research (2013) shows that there has been an increasing trend in the frequency of consumers’ food choices based on the amount of a specific nutrient the food contains. However, such dynamics have been understudied in the literature.

We aim to address two important research questions: (1) Whether the increasing market-level presence of products with NCs improve or impair NC effectiveness? (2) To what extent, do marketing-mix changes and the competition among products with NCs and their regular counterparts influence NC effectiveness?

We address these questions by measuring the effectiveness of various NCs over four years with scanner data. The advantage of using scanner data is two-fold. First, there is increasing evidence that

what consumers say about their preference for NC is inconsistent with what they purchase (Ballco et al. 2019). For example, despite an increasing self-reported trend towards a healthy diet and well-being (Block et al. 2011; Chrysochou and Grunert 2014), only 10 to 30% of new nutritious food products survive in the market for over two years (Bimbo et al. 2017). As opposed to survey reports or household panel data, the scanner is free of self-report errors and less vulnerable to sample selection bias (Sriram, Balachander and Kalwani 2007). While some researchers have utilized scanner data to measure actual healthy purchases in a retail environment (e.g., Nikolova and Inman 2015, Ma, Ailawadi and Grewal 2013), we are one of the first to examine NCs’ impact. Second, the point-of-sales data allows us to capture the impacts of retail marketing strategies and marketing presence on NCs’ effectiveness.

Using the scanner data from two widely used packaged food categories in the NC literature – namely, yogurt and breakfast cereal – we estimated a dynamic linear model that captures the time-varying effects of NCs on brand sales. The time-varying parameter measuring NC effectiveness is modeled as a function of the marketing effort of NC products with respect to regular products as well as of the intensity of market presence of the NC within the product category. Our results provide managerial implications for marketers and policymakers by capturing a multilayered dynamic of NC effectiveness, which potentially explains the conflicting findings in the literature and the failure of most new product introductions with nutrition claims in the market.

This research contributes to the food marketing literature in the following ways: first, to our knowledge, this is the first study to account for the changes in the effectiveness of NCs over time. As previously discussed, the controversy over the value of NC has raised multiple concerns for marketers and policymakers. Factors such as taste inference (Civille and Oftedal 2012) or consumer skepticism (Garretson and Burton 2000) may cause backfires for the brand. Second, there has been a call for research to analyze how the use of nutrition information is related to market response because most studies focus on consumer use and understanding of nutrition labels (Cao and Yan 2016). This research fills in the gap by quantifying the actual effect of NC on sales over time.

In addition, we examined the moderation effects of marketing presence and marketing mix. We first confirmed the negative impact of marketing presence on the effectiveness of NC. It suggests that repeated claiming will not provide extra competitive advantages. An NC is more effective when it’s scarce in the market. Marketers should focus on health benefit innovations to appeal to consumers. Policymakers may help mitigate this wear-out effect by imposing stricter and more detailed standards, which reduce the competition in the market. Secondly, the impact of marketing strategies such as price and feature and display promotion has been overlooked in the extant literature. We found that the price difference and feature and display promotion intensity between NC products and regular/no-NC options increase the effectiveness of NC. Our results highlight how the retailer environment could shape consumers’ preference for NC. Policymakers should take such effects into account.

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Social Exclusion and Consumers' Decision to Reject Unethical Brands

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EXTENDED ABSTRACT

This research examines the effects of social exclusion (i.e., being ignored and being rejected) on consumers' reactions to socially irresponsible businesses. We propose that out of an intention to punish unethical behaviors, socially ignored (but not rejected) consumers actively avoid socially irresponsible businesses at the sacrifice of consumption benefits.

Social exclusion is the state of being forced into solitude or denied social contact (Blackhart et al. 2009; Baumeister et al. 2005; Williams 2007). It threatens the fundamental need to belong (Baumeister and Leary 1995), which is a powerful motivational basis for social interaction (Baumeister et al. 2005). In this paper, we attempt to expand the bright side of social exclusion in the marketing domain. We argue that social exclusion may trigger consumers' urge to do something in a morally desirable direction. We argue that with the intention of punishing an unethical brand, excluded consumers may decide to stop purchasing from the brand even if the purchase seems beneficial. Furthermore, we distinguish the effect of being ignored and being rejected. We propose that only the experience of being ignored (but not rejected) triggers the above effects.

THEORETICAL BACKGROUND

Evidence in the consumer domain suggests that people who feel socially excluded may try to re-develop social ties through affiliative consumption (Mead et al. 2011; Loveland, Smeesters, and Mandel 2010). Even though prior research has shed light on the positive effect of social exclusion (e.g., Lee and Shrum 2012), no research has investigated how social exclusion influences consumers' decisions to withdraw consumption in order to punish a company due to concerns about its social responsibility (Garrett 1987). Neither has any prior research distinctively discussed the effects of being ignored and rejected on consumers' ethical decisions.

Research shows that while being rejected leads to deficiency in relational needs, being ignored undermines one's self-efficacy needs (Lee and Shrum 2012). Because ignored consumers face more threats on the self-efficacy needs including power and need to control, they are more likely to engage in attention-gaining behaviors (Lee and Shrum 2012).

Based on prior findings about the motivational and behavioral differences behind the experience of being rejected versus ignored (Lee and Shrum 2012; Molden et al. 2009), we predict that ignored individuals, but not rejected ones, will punish an unethical/socially irresponsible business by deliberately withdrawing purchase from such a business.

OVERVIEW OF THE STUDIES

We ran three pretests and two experimental studies to test our hypotheses. In the three pretests, across three different purchase contexts, we demonstrated that the feeling of being socially excluded (ignored) increases one's likelihood to reject an appealing, yet socially irresponsible/unethical business. In Study 1, we showed that only the feeling of being ignored (but not rejected) reduces the likelihood to visit an unethical business. In addition, we detected the mediating role of the intention to punish the business and ruled out the prosocial intention as an alternative explanation. In Study 2, we replicated the effects of the two types of social exclusions through direct scenario manipulations.

Study 1

In Study 1, we had participants complete two ostensibly different tasks. In task one, we measured how ignored and rejected participants feel in general (Molden et al. 2009; Su et al. 2017). Then in the second task, participants imagined that they would like to visit a nearby restaurant for dinner. The restaurant seemed very favorable as it received plenty of positive reviews recently and the visitors enjoyed the food there. However, it treated its employees unfairly. Following the scenario, on a 7-point scale, participants reported their likelihood to look for other restaurant options. Next, participants reported how much they agreed or disagreed with three items testing their general intentions to punish unethical businesses. Following Baumsteiger and Siegel (2019), prosocial behavioral intentions were measured with four items ($\alpha = .77$).

The analysis confirmed the hypotheses, such that when controlling for rejection which had no impact ($p > .41$), the more neglected one felt in general, the higher likelihood s/he looked for other restaurant options ($B = .27, b = .35, t(172) = 3.17, p = .002$). Consistently, when controlling for rejection which had no impact ($p > .65$), the effect of being ignored strongly shaped the intention to punish ($B = .34, b = .47, t(171) = 4.61, p < .001$). We then used bootstrapping procedures to test whether the intention to punish unethical businesses was the mediator (Model 4, Hayes 2013). The analysis confirmed its mediating role ($b = .17, 95\% \text{ CI: } 05, .33$). Our analysis also ruled out prosocial intentions as an alternative explanation.

Study 2

In Study 2, we aimed replicate the effect of being ignored through direct manipulations of social exclusions. The experiment employed a 3 (social exclusion experience: rejected vs. ignored vs. control) between-subject design. The first task involved a manipulation of being ignored or rejected, which was adapted from prior work (Lee & Shrum, 2012). The second task involved having participants choose to stay in a hotel (i.e., Hotel A) or to keep looking for other hotels located 15 minutes' drive away. Despite positive online reviews, the hotel was involved in a labor dispute over low employee wages and lack of medical benefits. Participants could choose Hotel A or searched for other hotels. Next, on 7-point scales, participants reported their likelihood not to spend money there to punish Hotel A and

Consistently, participants who felt ignored were less likely to book Hotel A than those in the rejected and control conditions ($M_{\text{ignored}} = 2.78, SD = 1.76$ vs. $M_{\text{rejected}} = 3.63, SD = 2.01$ vs. $M_{\text{control}} = 3.67, SD = 1.99, F(2, 209) = 4.69, p = .01$). Further, participants who felt ignored were less likely to book Hotel A than those in the control condition ($t(138) = -2.79, p < .01$). However, we did not observe the same pattern when comparing rejected individuals with those in the control condition ($t(142) = -.13, ns$). Consistent with Study 1, bootstrapping procedures (Model 4, Hayes 2013) revealed significant mediating pathways through the punishment likelihood to both booking intentions ($b = -.19, 95\% \text{ CI: } -.4056, -.0146$) and choice ($b = -.21, 95\% \text{ CI: } -.4945, -.0104$).

GENERAL DISCUSSION

The present research complements our understanding about how social exclusion impacts ethical consumption. This finding suggests that social exclusion, particularly the experience of being ignored, may heighten the instrumentality of money as a means to exert control (Duclos, Wan, and Jiang 2013; Lee and Shrum 2012).

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Snimex for Nasal Congestion: Phonaesthetic Brand Name Priming

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EXTENDED ABSTRACT

Many brands adopt pseudo-words as brand names, but how can meaning be delivered via this approach? This research introduces a novel approach to developing brand names—phonesthemes (meaningful letter clusters). Across six experiments, we show that brands can communicate meaning and promote brand preference and choice through utilizing phonesthemes.

A brand name is a fundamental brand element that influences brand image, and creates points of difference and competitive advantage. With 72% of brand names being pseudo words (non-words) or acronyms, it is important to consider how these non-words can be imbued with meaning. Some work has focused on the meaning derived from brand name sound (i.e., *phonology*). However, in this work we introduce a novel approach to developing brand names – *phonesthemes*. Phonesthemes are letter clusters that have a predictable effect on a words meaning. For example, in the Brown Corpus, 60% of words starting with *gl-* have definitions relating to light (e.g., *glow, glisten, gleam, glitter*). Phonesthemes may take the form of a prefix (initial phonestheme; e.g., *Squ-*; soft, compressed; *squish, squeeze, squash*) or a suffix (final phonestheme; e.g., *-imple*; uneven; *dimple, crimple, pimple*). The defining attribute of phonesthemes is that their existence relies on the recurrent pairings of *form* and *semantic* (meaning) properties which allows them to play a role in unconscious language processing. Phonesthemes are prevalent across languages (e.g., English, Indonesian, Japanese). While research has confirmed the existence of phonesthemes in language, their effect on consumer perceptions, preferences, and choice is unknown.

Across six studies this research aims to: (1) provide evidence of phonesthemic brand name priming (perceptions, preference, and choice), (2) eliminate phonology (brand name sound) as an explanation for our phonesthemic brand name priming effect, and (3) demonstrate brand positioning as a boundary condition of the effect.

Study 1 sought to establish the presence of phonesthemic brand name priming. Specifically, we examine whether phonesthemic brand names prime: (1a) product attribute perceptions (n = 170), (1b) preference (n = 240), and (1c) choice (n = 130). Results of Study 1a showed that phonesthemic brand name primes significantly affect participants' perceptions of product texture. Specifically, participants perceived a facial scrub to be rougher in the phonesthemic prime condition (*-imple*) than the control condition. In Study 1b, a large majority of participants chose the phonesthemic brand name *Snimex* (Sn- related to nose, or breathing) over the control brand name *Srimex* (Sr- unrelated to nose, or breathing) for a nasal spray product. Study 1c revealed that significantly more marshmallow packets were taken in the phonesthemic brand name condition (*Squegz*) than in the control condition (*Schegz*).

Study 2 aimed to demonstrate that morpho-semantic priming facilitates the phonesthemic brand name priming effect (n = 190). Participants were shown a fictitious logo for a brand of dishwashing liquid. Participants were asked to list five words that came to mind when seeing the brand logo. Next, participants evaluated the products ability to create luminous dishes. Participants were found to report a greater proportion of words that shared the same morpheme as the prime and were semantically related to the phonestheme in

the phonesthemic brand name prime condition than in the control condition. Next, morpho-semantic lexical representation was found to mediate the relationship between the phonesthemic brand name prime and product perceptions.

Study 3 aimed to eliminate phonological priming (Flurz vs Phlurz) as a process underlying our phonesthemic brand name priming effect (n = 170). Participants were shown a fictitious logo for a brand of chair and were asked to evaluate the chairs movement. Results showed the phonesthemic brand name prime to have a significant effect on participants' perceptions of product movement when compared to the phonological control.

Study 4 aimed to demonstrate brand positioning as a boundary of the phonesthemic brand name priming effect (n = 312). Participants were informed that a new brand of car wax was seeking input from consumers on their brand name. Results show that when product attributes were linked to luminance, the large majority of participants chose the phonesthemic brand name *Glif*, over the control brand name *Blif*.

With the over two-thirds of marketers adopting pseudo (non-word) words and acronyms as brand names, understanding approaches to developing novel, yet meaningful brand names makes a contribution to both marketing theory and practice. Numerous studies in marketing have demonstrated that phonological sound-based devices (such as homophones, pseudohomophones, and phonemes) can have a priming effect, influencing consumer purchase intentions and brand evaluations. Our research provides a novel approach to brand linguistics and contributes to the marketing literature by being the first to demonstrate phonesthemic brand name priming effects. Marketers can use phonesthemes to create distinctive brand names which connote product meaning. The strategic use of phonesthemes in the creation of brand names can therefore assist marketers in communicating important information about products. For example, a brand of hairspray that holds the hair but also allows the hair to move might benefit from a brand name with the sub-morphemic unit *fl-*, for example *F/alek*, to create perceptions of movement. Furthermore, a brand of hammer may create stronger associations that influence perceptions and preference by adopting the brand name *Zash*, as the phonestheme *-ash* means to apply energetic force (e.g., *bash, clash, slash*).

Besides contributing to research on brand name development, this research advances psycholinguistic research in marketing and, in particular, the emerging area of brand linguistics. While research has examined the effect of brand name phonology on brand preferences and recall, this body of work adopts either a phonetic symbolism, or homophonic (same pronunciation but different meaning) perspective. Our research introduces an innovative psycholinguistic device and presents novel findings within an emerging research stream.

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Threshold versus Capped Framing: An Equity Theory of Restricted Promotions

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EXTENDED ABSTRACT

We examined how restricted promotions affect consumers' choices. We found consumers were more likely to make a purchase with threshold promotions than with comparable capped promotions when the threshold was low because consumers perceived threshold promotions as higher than expectations and fairer. The reverse happened when the threshold was high.

Marketers regularly send coupons like "\$5 off a purchase of \$10 or more" or "50% off a purchase, max \$5 discount". The former one is a *threshold promotion* where the offer is applicable if the spending amount exceeds a threshold, and the latter one is a *capped promotion*, a percentage-term promotion for which the value is capped. Although capped promotions dominate threshold promotions, we propose that consumers prefer threshold promotions to capped promotions when the threshold is low. The percentage in the capped promotions shapes consumers' expectation while the actual percentage is lower than the expectation. For comparable threshold promotions, consumers' attention is anchored to a spending amount equal to the threshold, and thus their perceived outcome-input ratio is larger than the usually expected ratio. Six pre-registered studies including five on Prolific and a field study tested our hypotheses:

Hypothesis 1: When the threshold is low, consumers are less likely to make a purchase with a capped promotion than a comparable threshold promotion.

Hypothesis 2: When the threshold is low, consumers expect higher promotion value from the capped promotion and perceive it as less fair than the threshold promotion.

Study 1 (N = 403) tested H1. Participants were asked to decide whether to hail a ride and take a bus. Half of the participants read "If you hail a ride, you will spend \$20 on average" and half did not. Participants in the threshold promotion condition read "Enjoy \$5 off a ride. On a ride of \$10 or more"; this read "Enjoy 50% off a ride. \$5 max discount per ride." in the capped promotion condition. Results revealed that people seeing the capped promotion are less likely to use the offer, $p = .017$, and perceive the deal as worse, $p < .001$, than participants seeing the threshold promotion regardless of whether the average spending is mentioned.

Study 2 (N = 127,443) tested H1 in a field experiment. Tiktok users saw either a threshold promotion ("Enjoy \$3 off, on an order of \$5 or more") or a capped promotion ("Enjoy 60% off, \$3 max discount on an order"). We found that the audience were more likely to click on the threshold promotion than the capped promotion, $p = .021$.

Study 3 (N = 403) tested H1 and H2 in charity promotion. Participants were asked to imagine buying groceries in a store. Participants in the threshold promotion condition read "We donate \$5 per purchase (if you purchase \$10 or more)"; this read "We donate 50% of your purchase price (up to \$5 per purchase)" in the capped promotion condition. We found that people seeing the capped promotion are less likely to make a purchase, $p = .039$, perceive lower fairness, $p < .001$, and higher negative expectation discrepancy, $p < .001$. The effect of promotion framing is serially mediated by negative expectation disconfirmation and fairness perception.

Study 4 (N = 600) tested H1 and H2 in food ordering context. We included an unrestricted promotion condition as a reference. Participants were asked to decide whether to order food OR to cook dinner at home. Participants in the threshold promotion condition read "Enjoy \$3 off on an order of \$5 or more"; this read "Enjoy 60% off. \$3 max discount on an order" in the capped promotion condition, and "Enjoy \$3 off" in the unrestricted promotion condition. Results reveal that people are more likely to make a purchase with a threshold promotion than they are with a capped promotion, $p < .001$. Intriguingly, we find that compared with an unrestricted promotion, people are more likely to make a purchase with a threshold promotion ($p < .001$) and less likely to make a purchase with a capped promotion ($p = .008$). Results on fairness perception show same pattern, and fairness mediates the effect of framing.

Study 5 (N = 200) examined people's evaluation between two food-ordering apps side by side, one using threshold promotion and the other capped promotion. We find that consumers prefer the app using threshold promotions (61.5%) to the app using capped promotions (38.5%), $p = .001$, and perceive the threshold promotion as fairer and to have lower negative expectation disconfirmation than the capped promotion. Thus, H1 and H2 are supported even in a joint evaluation mode.

However, when the threshold is high, the threshold promotion ("\$5 off on orders of \$50 or more") would not be applicable and the actual outcome would be zero. Thus, the actual outcome-input ratio of the threshold promotion (0) would be lower than the expected ratio (10%). In contrast, consumers typically can get the expected percentage (10%) in capped promotions ("10% off, max \$5") when the threshold is high.

Hypothesis 3: When the threshold is high, consumers are more likely to make a purchase with a capped promotion than a threshold promotion.

Hypothesis 4: When the threshold is high, consumers expect higher promotion value from the threshold promotion and perceive it as less fair than the capped promotion.

In Study 6 (N = 398), participants in the low-threshold threshold promotion condition read "Enjoy \$5 off (On an order of \$10 or more)"; this read "Enjoy 50% off (\$5 max discount on an order)" in the low-threshold capped promotion condition. Participants in the high-threshold threshold promotion condition read "Enjoy \$5 off (On an order of \$50 or more)"; this read "Enjoy 10% off (\$5 max discount on an order)" in the high-threshold capped promotion condition. In low-threshold conditions, consumers have higher purchase intention with threshold promotion than they do with capped promotion, $p < .001$; however, in high-threshold conditions, consumers have lower purchase intention with threshold promotion than they do with capped promotion, $p < .001$. The mediation effect of promotion framing on purchase intention serially through negative expectation disconfirmation and fairness perception is moderated by threshold level, which supports all hypotheses.

Theoretically, our findings of dominance violation are inconsistent with the standard economic models. We further reveal the cognitive mechanism of evaluating restricted promotions based on equity theory (Adams 1965) and expectation disconfirmation (Oliver and Swan 1989).

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Women's Resistance to Artificial Intelligence: The Zero-Sum Game of Thing-People Interests

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EXTENDED ABSTRACT

Women resist AI because AI (like STEMs) is perceived as thing-oriented, and women are less thing-oriented than men. The perception that AI is incompatible with caring about people extends to consumers who like AI and is rooted in the belief that liking AI and humans is a zero-sum game.

Today, women are underrepresented in the fields of robot's technology and AI. The question is whether this gender imbalance extends to AI consumption: are women more likely to resist adopting AI than men, and if so, why? Academic research on this potential gender gap is scarce, and the evidence is mixed. Nor has prior research addressed the underlying cause of this potential gender gap.

Recent research that details gender-related trends linked to warmth and competence dimensions (Martin & Slepian, 2021) and different motivational drivers of people and thing orientations (Woodcock et al., 2013) offer a relevant framework for investigating why resistance to AI may be stronger among women. Arguably, women's generally stronger communality and people orientation, and weaker thing orientation influence their personal preferences and interests, such as their pursuit of education and jobs in STEM (science, technology, engineering, math) fields. Accordingly, we gather insights from research devoted to understanding this gender gap in STEMs with a novel application to AI consumer solutions.

We posit that women might be more likely to resist AI because, similar to STEMs, AI is thing oriented, not people oriented (Yang & Barth, 2015). In turn, AI is not compatible with a sense of communion or an orientation to interact with and care about other people. Because women are more people-oriented and tend to endorse communal goals, they may be more likely (than men) to resist AI in favor of real relationships that afford them more communion.

We tested our predictions in seven studies.

Study 1 (qualitative study; 2 focus groups and 8 face-to-face interviews) suggests that imaginary others, described as liking AI, are perceived as more likely to be men, thing-oriented, agentic, and competent rather than women, people-oriented, communal, and warm. These initial results also suggest that interest in AI means less interest in people.

Study 2 (between-subject experiment; $N = 315$ respondents, 152 women, $M_{age} = 31$) confirms these preliminary findings: Consumers believe that people who like AI (vs. who don't) are more likely to be men ($p < .01$), to be more thing-oriented ($p < .001$) and less people-oriented ($p < .001$), and to trust people less ($p < .001$).

Studies 3–5 (surveys and within-subject experiment; $N = 895$, 436 women, $M_{age} = 34$) investigate whether these lay beliefs that people hold are true. Study 3 confirms that women are less likely than men to express positive attitudes toward AI ($p = .01$) and to trust AI ($p = .02$). This study also reveals that AI is more associated with a thing (vs. people) orientation, as well as with masculinity, competence, and agency. Studies 4 and 5 provide further evidence that women express less acceptance of AI than men as well as process evidence of a mediating role of thing orientation in acceptance of AI. More specifically, Study 4 reveals that women are more people oriented ($p < .001$) and less thing oriented ($p < .001$), and their thing orientation (or lack thereof) mediates the relationship between gender and attitudes toward AI (CI: $-.576, -.132$). Women's perception of the risks involved in AI also explains their resistance, but adding this variable in the model does not suppress the role of

their low thing orientation in resistance to AI. Study 5 replicates the finding of a gender gap in acceptance of AI: Women are less likely than men to accept ($p < .001$) and trust AI ($p < .001$). However, this study also delineates a boundary condition for resistance toward AI, related to the communal or agentic goal of the AI task. While women resist all types of AI to the same degree, men are less likely than women to resist AI for agentic rather than communal tasks ($p < .001$), and thing orientation only influences acceptance of AI for agentic tasks.

Study 6 (experiment, 286 respondents, 145 women, $M_{age} = 39$) reveals a potential new underlying mechanism of consumers' resistance to AI: the belief that liking AI is a zero-sum game. Participants imagine that people who like AI are more likely to spend time on things ($p = .002$) but less time on people ($p < .001$). They appear to have fewer friends ($p < .001$), to have weaker feelings for their romantic partner ($p < .001$) and trust people less ($p < .001$). Women's higher belief in this zero-sum game operates through their people orientation (CI: $.0197, 2.053$).

Finally, **Study 7** (experiment: 386 women, $M_{age} = 35$) tests three interventions to increase women's attitudes toward AI. The proposed interventions do not directly mitigate women's resistance to AI, though. The intervention highlighting the sexist threat of an AI gender gap even has the opposite expected effect and triggers increased reactance.

Overall, we show a novel effect of thing and people orientations to help explain variability in AI aversion, particularly between men and women. With this new perspective on thing vs. people orientation and AI, we reveal a tension related to the role of AI in people's daily lives. Consumers, and especially women, fear that AI can decrease humanity by dampening human connections and decreasing the time and resources devoted to interpersonal relationships in a zero-sum fashion and in line with sociology research by Turkle (2011). These insights raise ethical quandaries for AI designers and policymakers: Increasing women's thing orientation to increase acceptance of AI could undermine humanity, and interventions emphasizing communal AI could be deceptive.

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Reasoning about Robot Abuse

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EXTENDED ABSTRACT

The abuse of social robots in retail is on the rise. Four studies show that exposure to robot abuse and reasoning about this issue increase perception of robots' moral standing, thus expanding consumers' moral circle. This reaction is automatic and intuitive, correlated to moral identity, and immune to cognitive deliberation.

The use of social robots, such as toy bots, nursing bots, sex bots, personal assistant bots, and educational bots, is pervasive. Along with increasing uses of these bots, their abuse by consumers is on the rise. For example, a robot was molested at a tech fair and security robots keep being assaulted in shopping malls. Beyond material costs, robot abuse affects consumers who witness the abuses, as indicated by surprisingly strong public responses. Consequently, several groups call for protecting robots from abuse and granting them rights (e.g., American Society for the Prevention of Cruelty to Robots). In response, companies and policymakers have started a wider conversation about robot rights, but the controversial ethical issues persist, with strong implications for companies, customers, employees, and policymakers.

Prior research has extensively studied the ethics of robot abuse from a philosophical perspective (Coeckelbergh, 2022), sparking a passionate, necessary debate about robot rights, though typically without offering empirical evidence. Here, we (1) examine whether people morally condemn robot abuse and the impact of robot abuse on moral concern for robots; (2) investigate the moral profile of people who condemn robot abuse; and (3) explore the role of reasoning on moral concern for robots to understand the cognitive underpinnings of this phenomenon. Does reasoning decrease moral concern for robots by diminishing the intuitive emotional empathy bias or does reasoning increase moral concern for robots by making the moral issue of robot abuse more salient, thus expanding the circle of moral concern? If the latter is true, this would be a case against reasoning, as moral concern for non-sentient beings appears irrational.

Study 1 (348 participants; 182 women; $M_{age} = 36$) investigates people's emotional reactions and moral attitudes toward robot abuse in a retail context. Participants were randomly assigned to either a robot abuse condition (a 20-second video showing a robot that gets beaten up) or a control condition (a 20-second video showing the same robot in the same setting, but the robot simply interacts with an employee). Following the video exposure, participants indicated the degree to which they thought that facial expressions of six basic emotions matched how they felt while watching the videos, as well as their moral concern for robots. Linear regression analyses on these outcome variables, with video condition (robot abuse vs. control) as the predictor and optimism toward technology, participant gender, and age as covariates, revealed that participants in the robot abuse (vs. control) condition were significantly more likely to experience negative emotions ($p < .001$) and to express moral condemnation ($p < .001$), moral concern ($p < .001$), and moral feelings for robots over humans ($p = .002$).

Study 2 (775 participants; 425 women; $M_{age} = 45$) tested whether moral concern for abused robots reflects our morality and whether reasoning prevents consumers from feeling moral concern for robots. Deliberative reasoning was measured both at the state level (by experimentally manipulating response times and working memory loads and reporting the comparison of participants' intuitive response with a one response control condition - between-subjects;

Bago et al., 2022), and at the trait level (by measuring cognitive fluidity with a six-item version of the CRT). Participants were then presented with three stimuli in a randomized order: a video showing robot abuse, pictures of robot abuse with a text describing the scenes, and a tweet reporting robot abuse at a restaurant. In the following analyses, we computed an average for the three stimuli. After each argument, participants were randomly exposed to a single statement related to moral condemnation, moral concern, or moral feelings. Moral identity was assessed using three positively framed items from the moral identity scale (Aquino and Reed, 2002). Linear regression analyses on the three outcome variables, with moral identity as the predictor and our usual covariates show that participants who score high on morality are more likely to express moral condemnation ($p = .009$), moral concern ($p < .001$), and moral feelings ($p < .001$) for robots. Another series of linear regression analyses with the type of reasoning (deliberate vs. intuitive response) as the predictor and the same covariates show that participants in the System 2 condition (deliberate thinking) are more likely to express moral condemnation ($p < .001$), moral concern ($p = .002$), and moral feelings ($p = .04$) for robots than participants in the System 1 condition (intuitive thinking). Finally, regression analyses run on the same three dependent variables, with the usual three covariates but with CRT as the independent variable show that cognitive fluidity decreases moral condemnation ($p = .009$), concern ($p = .006$) and love for robots ($p = .005$).

Study 3 (survey; 177 participants; 87 women; $M_{age} = 36$) and **Study 4** (IAT; 97 women; $M_{age} = 35$) show that, *outside* of an abusive context, consumers' moral identity does not predict moral concern for robots (S3: $p = .80$) and negatively predicts moral feelings for robots over humans (S3: $p = .002$; S4: $p = .029$).

We offer the first empirical evidence that feeling bad for abused robots is an indicator of one's own moral standards. We also find that motivated reasoning (i.e., deliberation at the state level) does not prevent people from feeling moral concern for abused robots (on the contrary, deliberation seems to increase moral concern and feelings for abused robots); while reasoning at the trait level (cognitive fluidity) decreases these concerns and feelings.

This research highlights the ethical quandary of robot abuse: exposure to robot abuse increases moral concern for non-sentient machines, and even more when people thoroughly think about the issue; yet outside of an abusive context, this concern is not a reflection of humanity. These results suggest that exposure to robot abuse may shift people's moral concern from humans to robots, and thus probably erode, rather than protect, their concern for living entities.

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Advertising Diversity is Viewed as Pandering

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EXTENDED ABSTRACT

Embracing corporate diversity can bring advantageous and detrimental consequences. Across six studies, we document that advertising diversity (vs. not) elicits less favorable ad attitudes because consumers infer that companies are pandering. This work contributes to research on diversity, advertising, ulterior motive, and to marketing practice.

Diversity, Equity, and Inclusion (DEI) has attracted the attention of practitioners and academicians for decades, especially in Western countries (Anand and Winters 2008; Arsel et al. 2022). Embracing diversity brings not only beneficial outcomes to companies (Khan and Kalra, 2021; Van Knippenberg, Van Ginkel, and Homan 2013), but also negative results (Brown and Jacoby-Senghor 2021; Windscheid et al. 2016). In the current research, we hypothesize that advertising diversity (vs. not) in a business ad elicits less favorable attitudes and pinpoint the ulterior motive to pander (McGraw, Lodge, and Jones 2002) as the underlying mechanism.

Our research makes important contributions. First, we contribute to diversity research. We examine the effect of corporate diversity shown in a business ad and find that this type of advertising may not be well received by the public. Second, we contribute to the literature on ulterior motive and pandering. Specifically, we document that corporate pandering is recognized by consumers and it negates marketing initiatives. Lastly, we contribute to the marketing practice by showing that consumers may be more receptive to corporate DEI communication when it is shared unobtrusively rather than through conspicuous advertising.

STUDY 1A AND 1B: MAIN EFFECT

In Study 1a, two-hundred-nine MTurkers were randomly assigned to one of three conditions (diversity advertising: control vs. homogeneity vs. diversity). In the control condition, participants read a detergent advertisement. We added employee homogeneity/diversity information to create the homogeneity and diversity conditions, respectively. Participants then indicated their attitudes to the ad. A one-way ANOVA revealed a significant effect ($F(2, 205) = 28.55, p < .001$). Participants in control condition ($M = 4.81$) indicated more favorable ad attitude than those in diversity condition ($M = 3.20; p < .001$), which generated more favorable attitudes than the homogeneity condition ($M = 2.64; p = .058$).

Study 1b ($n = 136$; Prolific) replicated the negative advertising diversity effect using a more implicit way to manipulate diversity by adding a diversified employee image to the ad (or not).

STUDY 2: MAIN EFFECT

Three hundred fifty-three Prolific participants were randomly assigned to one of five conditions (diversity advertising: control vs. age vs. gender vs. nationality vs. ethnicity). Participants read an ad featuring different types of diversity. A one-way ANOVA revealed a significant effect ($F(4, 348) = 8.36, p < .001$). Participants in control condition ($M = 4.29$) indicated more favorable ad attitude than those in the ethnicity-diversity ($M = 2.86; p < .001$), age-diversity ($M = 3.79; p = .068$), gender-diversity ($M = 3.32; p < .001$), and nationality-diversity ($M = 3.23; p < .001$).

STUDY 3: MEDIATION BY PANDERING MOTIVE

Two-hundred-ten Prolific participants were randomly assigned to one of three conditions (diversity advertising: control vs. irrelevant information vs. diversity). We added the irrelevant-info condition by

replacing the diversity info to “Plants are located in Louisiana.” Participants also indicated their inferences of the company’s pandering motive. A one-way ANOVA revealed a replication of the main effect ($F(2, 207) = 25.93, p < .001$). A one-way ANOVA on pandering motive revealed the similar patterns ($F(2, 207) = 43.91, p < .001, = .30$). Further, we conducted a mediation analysis using Model 4 (Hayes 2013; X_1 : control = 0, irrelevant-information = 1, diversity = 0; X_2 : control = 0, irrelevant-information = 0, diversity = 1). Results showed (1) that the indirect effect of X_1 on ad attitude was not significant (95% CI [-.28, .04]), and (2) that the indirect effect of X_2 on ad attitude was significant ($b = -.69, SE = .17, 95\% CI [-1.05, -.37]$). Thus, pandering motive mediates the negative effect of advertising diversity on ad attitudes. More importantly, the reason why irrelevant-info condition did not decrease ad attitude compared to control condition is that the former does not elicit greater ulterior motive.

STUDY 4: INFERENCE MAKING AS A MODERATOR

Three hundred seventy-five Prolific participants were randomly assigned to one of four conditions that varied on diversity advertising (control vs. diversity) and inference making (absent vs. present). We manipulated inference making by asking participants to infer the motive of this company mentioning the feature(s) in this ad. A two-way ANOVA revealed a significant interaction effect ($F(1, 371) = 3.86, p = .050$). When inference making was absent, participants in diversity condition ($M = 3.20$) indicated less favorable attitude towards the ad than those in control condition ($M = 3.69; F(1, 371) = 5.61, p = .018$), replicating the prior findings. When inference making was present, however, the negative effect was larger ($M = 2.96$ vs. $M = 4.03; F(1, 371) = 25.70, p < .001$).

STUDY 5: REVERSED-EFFECT CONDITION

Six hundred and eleven Prolific participants were randomly assigned to one of three conditions (diversity-disclosure type: control vs. advertised vs. unadvertised). We manipulated “unadvertised diversity” by informing participants that they found the diversity information on the firm’s official website, not in the ad. A one-way ANOVA revealed a significant difference ($F(2, 608) = 40.51, p < .001$). Contrary to the results in prior studies, participants in unadvertised-diversity condition ($M = 4.20$) indicated more favorable ad attitude than those in control condition ($M = 3.82; p = .008$) and those in advertised-diversity condition ($M = 2.95; p < .001$).

GENERAL DISCUSSION

Studies 1a and 1b provide evidence for the negative advertising diversity effect. Study 2 generalizes this effect to various types of diversity: age, gender, nationality, and ethnicity. Study 3 provides evidence for consumers’ inferences of the company’s pandering motive as the underlying mechanism of the effect while excluding the addition of irrelevant information as the alternative account. Study 4 identifies inference making as one theory-driven effect-strengthening moderator. Study 5 documents a reversed-effect condition. Specifically, when diversity is not advertised but disclosed unobtrusively, consumers will appreciate this company by producing the most favorable attitudes.

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Consumers prefer products with directionally consistent causal chains

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EXTENDED ABSTRACT

The causal steps involved in the action of common products can evoke some directionality (involving steps that either *increase* or *decrease* intermediate outcomes). We find that consumers prefer products with directionally consistent causal chains. This is because they find directionally consistent causal chains to be simpler and, therefore, more effective.

Products often aim to help consumers achieve a desired end state, such as appearing youthful or maintaining high energy. These products tend to rely on dynamic causal chains to elicit intended effects. Further, steps involved in these causal chains often evoke some directionality:

- A face cream *decreases* the breakdown of collagen to *reduce* wrinkles.

- Energy drinks *decrease* adenosine activity, which *increases* firing of neurons, which *increases* energy.

Across 6 preregistered studies, we find that the structure of these causal chains influences product evaluations: consumers prefer products with directionally consistent (i.e., steps evoke consistent directionality) versus inconsistent (i.e., steps evoking contrasting directionalities) causal chains.

Evidence from adjacent fields of learning (Brehmer, 1973) and reasoning (Evans, 1972) suggests that directional consistency between variables enhances simplicity. Separately, people prefer simpler causal explanations (Lombrozo, 2007; Pacer & Lombrozo, 2017). However, prior work on simplicity typically operationalizes the construct as the number of causes invoked in an explanation. In the present research, we suggest that consistency within the steps involved may also relate to perceived simplicity, with consequences for evaluations of efficacy and choice. Hence, we propose that consumers will prefer products with directionally consistent causal chains because they consider such chains simpler and correspondingly more effective.

In Study 1 (N = 304), participants evaluated two supplements designed to either *increase* alertness (energy aids) or *decrease* alertness (sleep aids). One of these worked via an *increasing* mechanism (amping up the production of a hormone), and the other via a *decreasing* mechanism (winding down the production of another hormone). Participants reported the option with directional consistency between mechanism and effect as more effective; $t(303) = 13.43, p < .001$. Study 2 (N = 398) extended these results to longer causal chains. Participants compared two drugs that achieved an unidentified final effect using mechanisms that spanned two steps: The drugs first resulted in glandular changes, which then resulted in hormonal changes in the body. Participants indicated higher efficacy from directional consistency within these steps; $t(397) = 4.27, p < .001$. These results suggest that consumers continue to prefer directional consistency within the intermediate steps of causal chains, even in the absence of information about the direction of the final effect.

Studies 3a and 3b explored practical applications of these findings. Study 3a (N = 601) examined whether 1) perceived efficacy influenced product choice across 4 categories: hair serums, creams, drinks, anti-anxiety aids, and 2) labels describing the same products using consistent or inconsistent chains would lead to the patterns observed above. We described the effect from these products either in *increase*-coded (e.g., increase hair growth) or *decrease*-coded (e.g.,

decrease hair loss) terms. Participants chose between two fictitious products for each category: that either highlighted an *increase*-coded (amp up blood supply to the scalp) or *decrease*-coded (suppress shrinking of follicles) intermediate step from a shared causal chain. A greater proportion of participants chose the directionally consistent product for each category ($\chi^2s \geq 10.88, ps < .001$).

Similarly, Study 3b (N = 313) assessed whether consumers are more likely to choose a product with directional consistency within the intermediate steps of its mechanism. We modeled our stimuli for this study after a supplement that is purported to work by influencing various chemicals in the body in two phases: 1) *increasing* GABA and/or *decreasing* Glutamate in the initial phase, and 2) *increasing* serotonin and/or *decreasing* cortisol in the later phase. Once again, we asked people to choose between two supplements designed for general wellness. In a between-subjects design, we manipulated whether we described the 2nd step in the mode of action of both the supplements as *increasing* serotonin or *decreasing* cortisol. Participants then chose between two options that differed in terms of the description of the 1st step – which was *increasing* GABA for one option and *decreasing* Glutamate for the other. A chi-squared test revealed that participants were more likely to choose the supplement with directional consistency within the two phases; $\chi^2(1) = 5.12, p = .024$.

Finally, Studies 4 and 5 examined the possibility that perceived simplicity of directionally consistent causal chains underlies perceptions of product efficacy. In Study 4 (N = 213), participants made predictions about the efficacy of two drugs: one with a consistent causal chain (4 intermediate steps, all *increasing* the levels of various enzymes), and another with an inconsistent causal chain (steps alternating between *increasing* and *decreasing* the levels). They first predicted the efficacy of these drugs, and then rated them on their simplicity. Participants predicted higher efficacy from the drug with consistent causal chain; $t(213) = 11.73, p < .001$. Crucially, ratings of simplicity mediated this difference (ACME: 95% CI = [7.09, 15]).

In Study 5 (N = 419), we probed the role of simplicity further by exploring whether reducing the simplicity of the directionally consistent chain attenuates its edge in perceived efficacy. Once again, participants rated the efficacy of products with two causal chains. However, in 2 between-subjects conditions, we manipulated whether the consistent chain had the same number of steps as the inconsistent chain (4 vs. 4) or an extra step (5 vs. 4). A pretest confirmed that adding the extra step to the consistent chain reduced its simplicity to be in line with the inconsistent, shorter chain. We found an interaction between consistency and condition, such that the effect of directional consistency was attenuated when the consistent chain was also longer; $F(1, 417) = 4.77, p = .030$.

These preregistered studies provide evidence that consumers prefer products with directionally consistent causal chains. Theoretically, this project advances research in causal efficacy by 1) proposing consistency between steps in a causal chain as a determinant of simplicity of causal explanations, and 2) highlighting the relationship between simplicity and perceived product efficacy. On the applied front, we provide recommendations on crafting maximally effective product labels.

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Why Minimum Purchase Restrictions Work: The Role of Reference Points

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EXTENDED ABSTRACT

A minimum purchase restriction on a coupon (for example, “\$2 off, on a purchase of \$5 or more”) serves as an external reference point that overrides consumers’ internal reference points, changing the perceived magnitude of the discount. This can create a dominance violation, leading consumers to prefer objectively worse coupons.

Consumers frequently encounter coupons with a minimum purchase requirement (such as, “\$2 off, on a purchase of \$5 or more”). However, prior research on such restrictions has been conflicting regarding the effects on consumer behavior. Some research has suggested that these restrictions generate positive consumer reactions (Inman, Peter and Raghubir 1997), while others have demonstrated the opposite (Cheng and Blank 2019; Gneezy 2004; Wierich and Zielke 2014). We seek to resolve these conflicting findings by investigating the process by which minimum purchase restrictions impact cognitive evaluations.

Prior research has established that consumer evaluations of price discounts are often based on an assessment of the discount value relative to a reference point (Thaler 1985). There are two types of reference points: External ones are observed information (Mayhew and Winer 1992), while internal ones are developed from experience and based on memory. In the absence of an external reference point, people tend to use an internal reference point as a default to evaluate a target; however, people adjust their reference point accordingly if an external reference point is available (Biswas and Blair 1991). Building on these findings, we propose that a minimum purchase can serve as an external reference point that overrides consumers’ internal reference point.

In the context of our study, which is focused on retail coupons, we believe a salient internal reference point is the cost of a typical purchase at the store. In a pretest, we asked 100 Prolific participants how much they typically spend at different types of stores and used the median in each category to estimate consumers’ internal reference points. We posit that when a minimum purchase cutoff is lower than consumers’ internal reference point, the restriction enlarges the perceived discount magnitude and boosts coupon redemption intentions. For example, the typical grocery store purchase is £4. In this context, a “£1 off groceries” coupon feels like “25% off”, but a “£1 off any grocery purchase of £2 or more” feels like “50% off”, and is preferred by consumers, thus creating a dominance violation. In contrast, when the cutoff is higher than consumers’ internal reference point, it produces the opposite effect. Five preregistered studies provide converging evidence for our hypotheses.

Field study 1 demonstrates that a minimum purchase can generate positive consumer reactions. We created two coupon ads for a grocery store on Facebook (restricted vs. unrestricted). The unrestricted coupon ad, which read “\$1 off,” generated a higher CTR (1.14%) than the unrestricted ad (0.88%), which read “\$1 off if you spend \$2 or more” ($p < .001$). This was replicated in the lab in study 1B.

In study 2, we varied the minimum purchase cutoff. Participants ($N=300$) were randomly assigned to one of three between-participants conditions: unrestricted, low cutoff (£2 minimum purchase), or high cutoff (£20 minimum purchase). Participants were asked to imagine having found a £1 coupon for a supermarket near their home, and indicate their coupon redemption likelihood (1=very un-

likely, 7=very likely). Participants in the low cutoff condition were more likely to redeem the coupon ($M=6.03$, $SD=1.17$) compared to those in the unrestricted condition ($M=5.22$, $SD=1.71$), $p=.002$, and high cutoff condition ($M=4.03$, $SD=2.02$), $p < .001$. The perceived magnitude of the discount (1=very small, 7=very big) showed the same pattern.

Study 3 provides further evidence for the underlying process through moderation. If the perceived magnitude of the discount drives the effect, then a minimum purchase should not influence redemption intentions when a discount is presented in a percentage format, which makes the magnitude of the discount explicit. Participants ($N=400$) were randomly assigned to one of four conditions in a 2 (percentage vs. absolute format) \times 2 (restricted vs. unrestricted) between-participants design. Participants were asked to imagine they find either a 10% off any purchase or £2 off any purchase coupon for a department store near where they live. The restricted coupon requires a £3 minimum purchase. A 2 \times 2 ANOVA of redemption intention revealed a significant interaction ($p=.003$). The restriction increased redemption intention only when the discount was presented in an absolute format ($p < .001$) but not in a percentage format ($p=.86$). A 2 \times 2 ANOVA of perceived discount magnitude revealed the same pattern (see Figure 1). Moreover, a moderated mediation analysis showed that the discount format moderated the mediation by perceived discount magnitude (95% $CI=[.94, 1.79]$). Perceived discount magnitude mediated the effect when the discount was presented in an absolute format (95% $CI=[1.22, 1.91]$), but not when the discount was presented in a percentage format (95% $CI=[-.05, .47]$).

Study 4 reveals that a product category restriction can also function as a reference point, although it does not provide a precise reference point. Participants ($N=352$) indicated greater intentions to redeem a “\$1 off fruits and vegetables” coupon ($M=4.73$, $SD=2.15$) than a “\$1 off” coupon ($M=3.55$, $SD=2.08$) in a flyer for a supermarket near where they live, $p < .001$. The perceived magnitude of the discount fully mediated the effect (95% $CI=[.47, 1.18]$).

In sum, the present research resolves conflicting results in the literature, enriches our understanding of reference effects, and demonstrates the conditions necessary for a dominance violation.

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Finding Meaning: Loneliness Increases Preference for Art-infused Products

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EXTENDED ABSTRACT

The present research posits that the feelings of loneliness increase preference for art-infused products. This occurs because lonely individuals are more actively seeking meaning in life, which subsequently makes them perceive the art-infused products as more meaningful.

Loneliness refers to the unpleasant feelings of social isolation, which occur when social needs are not adequately met (Peplau and Perlman, 1982). It is associated with poor physical, emotional, and mental health, as well as with the perception that one's life lacks meaning (Stillman et al., 2009).

To experience life as meaningful is a fundamental need for humans (Baumeister, 1991). Since the feelings of loneliness lead to the perception that one's life lacks meaning (Stillman et al., 2009), lonely consumers are more likely to recognize the meaning-based concepts within their consumption-related judgments. This is because individuals selectively pay attention to features of the environment depending on their current motivations (Taylor and Fiske, 1978). Thus, on the one hand, with an increased desire to find meaning in life, lonely individuals will be drawn to features of meaningfulness in a product more so than when they are less lonely.

On the other hand, the consumption of art-infused products can be perceived by consumers as a more meaningful activity. Art infusion refers to the use of artworks within advertising, packaging, or design (Hagtvedt and Patrick, 2008). One pertinent feature of artworks is that they can also be perceived as adding meaning to people's lives (Hagtvedt, 2022). Interdisciplinary scholarship suggests that artworks can enhance meaning by encouraging people to draw their own interpretations (Hagtvedt, 2022). Thus, art-infused products could be perceived by consumers as more meaningful than those that are not art-infused. Importantly, however, we argue that such perceptions are likely to become more accessible for lonely consumers who are more motivated to search for meaning in life. The predictions are as follows:

Hypothesis 1a: Lonely (vs. non-lonely) individuals will exhibit increased preference for art-infused products.

Hypothesis 1b: Product meaningfulness mediates the effect of loneliness on preference for art-infused products.

We conducted five studies to test these predictions.

Study 1 examines whether trait loneliness is associated with an increased preference for art-infused products. Participants (131 MTurkers) were first asked to complete the loneliness scale (Wang et al., 2012). They were then asked to choose between two product options, art vs non-art. Finally, they were asked whether their preference was driven by price considerations, quality considerations, or product meaningfulness. Results showed that lonely participants had an increased preference for art-infused products, and this preference was driven by product meaningfulness and not by other considerations.

Study 2a provides causal evidence of the effect of loneliness on preference for art-infused products and that product meaningfulness would mediate this effect. First, participants (221 MTurkers) were randomly assigned to either the lonely or control condition. Participants in the lonely condition were asked to write about an event that made them feel lonely. Participants in the control condition were asked to write about their daily activities. They were then asked to choose from three sets of options: art vs non-art as the focal dependent vari-

able, and art vs art and non-art vs non-art as filler choices. Next, participants were asked how much their choices were driven by product quality, price, and meaningfulness. Results showed that loneliness led to increased preference for art-infused products, and that the loneliness effect was mediated via product meaningfulness (and not other considerations).

Study 2b rules out luxury as an alternative explanation. The first task used similar procedures and materials to those of Study 2a. Then participants (202 MTurkers) were asked to choose between an art-infused and a luxury product. Results reveal that lonely participants exhibited higher preference for art-infused (vs luxury) products.

Study 2c replicates Studies 2a and b by testing a consequential decision-making context as the dependent variable. Participants (126 students) were randomly assigned to either lonely or control condition, similar to study 2a. As a reward for participation, they were presented with a choice between a café located in the art gallery (art) and a usual café (non-art). Results reveal, the proportion of participants who chose the art café was higher in the lonely condition than in the control condition.

Study 3 demonstrates that loneliness increased preference for art-infused products by employing a 2 (feelings: loneliness, control) X 2 (product: art-infusion, control) experimental design. Participants (406 Prolifics) were randomly assigned to either lonely or control condition and were asked to evaluate statements meant to induce the feeling of loneliness or calmness. Next, participants were asked to evaluate either an art-infused or a non-art-infused product and were asked about their likelihood of buying the product. We then measured product perceived meaningfulness and luxuriousness. Results revealed that the preference for art-infused product was greater among lonely (vs. non-lonely) participants, whereas there was no difference in preference for the non-art-infused product between the two feelings conditions. In the same vein, while the art-infused product was perceived more meaningful by lonely (vs. non-lonely) participants, there was no difference in the perceived meaningfulness for the non-art-infused product. We found a main effect of art-infused product on perceived luxuriousness that did not vary across the feelings condition.

In sum, our research establishes that loneliness increases preference for art-infused products due to perceived meaningfulness.

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Mind Over Body in Games of Chance

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EXTENDED ABSTRACT

The role that gamblers perform systematically affects their outcome expectations. Gambling roles that focus on thinking (mental roles) activate more favorable outcome representations than roles that focus on doing (physical roles). Mental roles promote greater optimism, are preferred over physical roles, and result in greater financial risk-taking when gambling.

The gambling industry contributes over \$700 billion annually to the global economy (StrategyR 2020) but entails a significant cost to society, with over eight million problem gamblers in the U.S. alone and social costs of \$10 billion every year (NCPG 2020). Development of gambling regulations and effective interventions for problem gambling hinges on an understanding of the psychology of gambling. We advance this understanding by showing that the manner in which gamblers interact with games of chance affects the magnitude of the cognitive biases that influence their behavior.

We theorize that the way in which a gambler interacts with a game systematically influences the focus of their cognitive activity, with implications for optimism about the gambling outcome. The cognitive representations associated with one's anticipated role in a game could focus either on doing (i.e., physical actions) or on thinking (i.e., mental actions). Different roles may facilitate one focus versus the other, leading to differences in the extent to which representations of a favorable outcome are activated. We theorize that roles that focus on thinking (mental roles) are more likely to activate favorable outcome representations than roles that focus on doing (physical roles), and thus promote greater optimism about obtaining a favorable outcome. The increased activation of favorable outcome representations in a mental role manifests in a preference for a mental role over a physical role when people are given a choice between them and in greater willingness to take financial risk when gambling. Our theorizing builds on research on mental simulation (Carroll 1978), activation of implementation goals (Gollwitzer 1989), and counterfactual thinking (Markman et al. 1995).

To test our theorizing, we conducted seven pre-registered studies ($N = 4975$) featuring games of chance that do not require any expertise. In the first three studies (1A, 1B, and 1C), participants were introduced to one of three games of chance (coin toss in 1A; wheel of fortune in 1B; sphere game in 1C), and were shown two versions of the game—one in which they would perform the physical role (flipping a coin, spinning a wheel, or operating an air pump) and another in which they would perform the mental role (calling the winning side, letter, or color)—and then indicated which version they would prefer to play for a chance to win \$10. For Study 1C, we constructed a novel game—the sphere game—to avoid tapping into prior experience or knowledge. In all three studies, the majority of participants preferred the mental role over the physical role—74% in 1A, 60% in 1B, and 70% in 1C (all $ps < .001$).

In Study 2, we ruled out temporal distance to the outcome as an explanation for the preference for a mental role by manipulating the order in which the mental and physical roles were initiated in a coin toss game. The majority of participants chose the mental role when it was first (66%) and when it was second (69%; $ps < .001$). In Study 3, we used the sphere game from Study 1C and manipulated knowledge of the probability of winning by informing participants either that the sphere contains two balls or that the number of balls

is unknown. Again, the majority preferred the mental role regardless of whether the probability of winning was known (72%) or unknown (81%; $ps < .001$).

Study 4 sheds light on the underlying psychological mechanism. Participants rated their optimism about winning in the two versions (physical role vs. mental role) of the sphere game and then chose the version of the game they preferred to play. Participants were more optimistic about winning in the mental role ($p < .001$) and more likely to choose it (63%; $p < .001$). Critically, the difference in optimism scores (Mental – Physical) significantly predicts participants' choices ($p < .001$).

Study 5 tested our theorizing in an economically consequential setting. Participants were randomly assigned to either the physical (operating the air pump) or the mental (calling the winning color) role in the sphere game and they reported their optimism about winning. Next, we endowed them with a bonus payment and offered them the opportunity to use this bonus to pay to play the game for a chance to double their bonus. Participants in the mental role were more likely to pay to play ($p < .01$) and more optimistic about winning ($p < .039$) than those in the physical role. Mediation analysis reveals that the mental (versus physical) role increased the tendency to pay to play via greater optimism about winning the game (indirect effect: $\beta = .09$, $SE = .05$, 95% CI : [.003 to .182]).

Extensive prior research suggests that people are motivated to control their environment—reflecting a need for competence, mastery, superiority, or personal causation. This fundamental desire is often satisfied when one is able to produce a tangible change in their physical environment, which has profound implications for unrealistic optimism in gambling. By its very nature, a mental role in a game cannot produce a tangible change in the physical environment. Nevertheless, as shown in the present research, a mental role actually generates greater optimism about the gambling outcome than a physical role, is preferred over a physical role by gamblers, and promotes greater financial risk-taking when gambling.

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Do People Gain Similar Well-Being Benefits from Prosocial Behavior? The Impact of Political Partisanship on Well-Being Benefits Gained from Volunteering versus Donating

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EXTENDED ABSTRACT

We tested the interaction effect of prosocial behavior and political partisanship on well-being. Two studies demonstrated that Republicans perceived more happiness from volunteering than Democrats. Republicans also perceived more happiness from volunteering than donating. Democrats, in contrast, perceived similar levels of benefits from the two prosocial actions.

INTRODUCTION

In 2020, individuals gave around \$324 billion to charities (Giving USA 2021), and approximately 25 percent of U.S. adults volunteered in 2017 (McKeever 2018). Charitable behaviors enhance consumer well-being (e.g., Dunn, Aknin, and Norton 2008). However, to whom these activities are more beneficial is unclear. Because volunteering and donating differ on many dimensions, individuals who value the dimensions differently ought to display differing preferences and experience different levels of happiness. Drawing from literatures on prosocial behavior and well-being, self-determination theory, and political ideology, we argue that volunteering requires more effort than an economically equivalent donation and that this difference impacts the happiness people gain from prosocial behaviors, depending on their political partisanship.

STUDY 1

Study 1 ($n=199$, 65.3% female, $M_{age}=45.68$ years) examined the interaction effect of prosocial behavior and partisanship on happiness in a 2 (volunteering vs. donating) \times 2 (Republican vs. Democrat) between-subjects design. Prosocial behavior was manipulated, and partisanship was measured.

Prolific workers with 95% or higher approval rate participated in the study. Participants were told that we were interested in their opinion about Make-A-Wish, a non-profit organization that helps children diagnosed with life-threatening medical conditions have their wishes fulfilled. Participants were randomly assigned to volunteering versus donating conditions. Depending on the condition, participants were asked to volunteer 20 minutes of their time (or donate 6 dollars of their money) to Make-A-Wish. After spending two minutes imagining their prosocial behaviors, participants indicated perceived happiness when thinking about their behaviors to Make-A-Wish. Happiness was assessed by subtracting negative affect from positive affect (Weinstein and Ryan 2010). Positive affect items include joyful, happy, pleased, and enjoyment ($\alpha=.980$, Diener and Emmons 1984). Negative affect items include worried, depressed, frustrated, angry, and unhappy ($\alpha=.892$, Diener and Emmons 1984). Responding to a 7-point scale (1=not at all true, 7=very true), participants reported their feelings. Participants filled out demographic and partisanship measures (1=Democrat, 2=Republican, 3=Independent, 4=Libertarian, 5=Other) at the end.

Manipulation check measures indicated that the prosocial behavior manipulations worked as intended. Additionally, aligned with our hypotheses, simple effects analyses showed that Republicans perceived more happiness from volunteering than from donating ($M_{vol} = 4.15$, $M_{don} = 3.09$, $p = .046$). In contrast, Democrats did not differ on perceived happiness between volunteering and donating ($p > .54$). Republicans also perceived more happiness from volunteer-

ing than Democrats ($M_{rep} = 4.15$, $M_{dem} = 3.52$, $p = .148$). Although the difference did not reach statistical significance, the results followed the predicted pattern.

Study 1 provided initial evidence that partisanship impacted happiness people perceived from prosocial behaviors. Study 2 replicated Study 1 results and examined the mediating roles of autonomous motivation and need for autonomy.

STUDY 2

Prolific workers with 95% or higher approval rate participated in the study ($n=394$, 55.8% female, $M_{age}=41.19$ years). Study 2 followed the same design and procedures as Study 1, except that before the manipulation, we measured participants' baseline happiness using two items. On a 5-point scale (1=not at all; 5=extremely), participants responded to "do you feel happy right now?" Participants also responded to the item "In general, I consider myself..." on a 5-point scale (1=not a very happy person; 5=a very happy person). Additionally, after filling out happiness measures, participants indicated their autonomous motivation and need for autonomy. Autonomous motivation was measured using six items ($\alpha=.922$, adopted from Weinstein and Ryan 2010, sample item "I volunteered time/donated money... because I thought it was important to act in this way."). Three items ($\alpha=.79$) were used to assess need for autonomy (adapted from La Guardia et al. 2000, sample item "I felt free to be who I am when deciding whether to volunteer my time for Make-A-Wish."). Participants rated these items on a 7-point scale (1=not at all true; 7=very true). Participants then answered the manipulation check question and provided partisanship and demographic information.

Manipulation check measures indicated that the prosocial behavior manipulations worked as intended. A 2-way ANCOVA was conducted to test our hypotheses. Happiness was calculated by subtracting negative affect ($\alpha=.827$) from positive affect ($\alpha=.966$). Pre-happiness was calculated by averaging participants' responses on the two measures (correlation=.67, $p < .001$). The 2-way ANCOVA indicated a significant effect of pre-happiness ($p < .001$). More importantly, simple effects analyses showed that Republicans perceived more happiness from volunteering than Democrats ($M_{rep} = 3.96$, $M_{dem} = 2.68$, $p < .001$). Republicans also perceived more happiness from volunteering than donating ($M_{vol} = 3.96$, $M_{don} = 3.41$, $p = .034$). However, Democrats perceived the same levels of happiness from two behaviors ($p > .78$).

Additionally, we examined the interaction impact on autonomous motivation and need for autonomy. Simple effects analyses showed that Republicans perceived more autonomous motivation from volunteering than Democrats ($M_{rep} = 5.56$, $M_{dem} = 5.03$, $p = .012$). Republicans had more autonomous motivation from volunteering than from donating ($M_{vol} = 5.56$, $M_{don} = 5.10$, $p = .011$). In contrast, Democrats had similar levels of autonomous motivation from the two behaviors ($p > .280$). Similarly, Republicans perceived more need for autonomy from volunteering than Democrats ($M_{rep} = 5.34$, $M_{dem} = 4.76$, $p = .067$). Republicans had more need for autonomy from volunteering than donating ($M_{vol} = 5.34$, $M_{don} = 4.98$, $p = .030$). However, Democrats had similar levels of need for autonomy from the two behaviors ($p > .98$).

Lastly, using PROCESS model 86 (Hayes 2013), we found evidence of the mediating roles of autonomous motivation and need for autonomy. A bootstrap confidence interval for the indirect effect of prosocial behavior and partisanship (Republican) on happiness via autonomous motivation and need for autonomy indicates support for the serial mediation mechanism ($b = .11$, $SE = .05$. 95% CI [.0241, .2216]).

Study 2 supported our arguments that partisanship moderated well-being benefits from volunteering versus donating and illustrated the mediating effects.

GENERAL DISCUSSION

In summary, our research shows that people with different political preferences benefit differently from prosocial behaviors. Our research, therefore, contributes to relevant literatures. Our results can also help marketers promote prosocial campaigns more effectively.

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What Motivates People to Share Commercial Content via Their Social Network? A Cost-Benefit Perspective on Social Promotional Advertising

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EXTENDED ABSTRACT

We introduce a new form influencer marketing strategy that hinges on consumers' social influence on strong ties—social promotional advertising (SPA). We propose an integrated framework that captures the factors that drive and impede consumers' sharing intention in SPA activities.

A common influencer marketing campaign (IMC) involves identifying a set of influential consumers (i.e., bloggers with numerous followers) and then soliciting them to share specific content about products and brands (Libai et al., 2013). Audiences typically have a weak-tie relationship with influencers (i.e., people they do not know well) as opposed to their strong-tie relationships with friends, family members, or other people to whom they are closely tied. Nevertheless, information exchange in strong social ties is more frequent and influential (Aral & Walker, 2014; Haythornthwaite, 2001). In this study, we introduce a new form of influencer marketing that utilizes consumers' strong-tie social networks. We define it as social promotional advertising (SPA), whereby the company first generates digital content and then inspires consumers to share it in their close social circles by offering them various incentives, including, but not limited to, scarce products, price discounts, coupons, and cash rewards.

To shed more light on this marketing practice, our study adopts a cost-benefit perspective to examine consumers' engagement in SPAs. Moreover, based on the level of involvement, we distinguish between informative and interactive SPAs and conduct a multigroup analysis between the two types of SPA activities to compare the differences in what drives consumers to share.

We draw on the literature and the results of the qualitative study to delineate the integrated model that captures the benefit and cost factors that affect consumers' intention to share SPAs on strong-tie social media platforms. Benefit factors—financial reward, reciprocity, sense of self-worth, and socializing—would increase consumers' intention to share SPAs by enhancing perceived value. However, cost factors—time and effort, perceived responsibility, and image concern—would decrease sharing intention by weakening perceived value.

We further contend that the process of consumer engagement differs with different types of SPAs. In informative SPAs, consumers receive a reward if they pass the link to others, and the recipients voluntarily choose to read or watch advertising messages. Conversely, interactive SPAs entail engagement, whereby consumers share messages with their friends and ask them to engage in specific tasks designated by the company. Essentially, these tasks, such as giving a thumbs up, clicking on the link, or visiting the online shop, guide the recipients to view the commercial message. Sharers in interactive SPAs typically invest more effort and time, obtain more financial rewards and increase social interactions with recipients but also bear more risks of being refused and are more likely to feel indebted compared with informative SPAs. It can reasonably be expected that the factors that drive and impede consumer sharing are different in relation to informative and interactive SPAs.

We distributed 600 questionnaires via online and offline channels using convenience sampling. A total of 588 valid questionnaires were obtained for further analysis—294 for informative SPA and

294 for interactive SPA. Participants were randomly assigned to either the informative or the interactive SPA condition. First, they were introduced to the concept and presented with a definition and several examples of each condition. Participants were then asked to report their agreement with the statements measuring all nine variables. Finally, participants responded to two attention-check questions which were followed by demographic questions.

We employed covariance-based structural equation modelling (CB-SEM) for path analyses (Hair et al., 2012). For the informative SPA condition, the results showed that reciprocity ($\beta = 0.196^{**}$), sense of self-worth ($\beta = 0.192^{**}$), and socializing ($\beta = 0.362^{***}$) were drivers of sharing intention. However, time and effort ($\beta = -0.091^*$), perceived responsibility ($\beta = -0.090^*$), and image concern ($\beta = -0.151^{***}$) exerted negative effects on sharing intention. The effect of financial reward on sharing intention was not significant. For the interactive SPA condition, the results showed that financial reward ($\beta = 0.126^{***}$), reciprocity ($\beta = 0.201^{**}$), and socializing ($\beta = 0.342^{***}$) were drivers of sharing intention. However, time and effort ($\beta = -0.124^{**}$) and image concern ($\beta = -0.199^{***}$) exerted negative effects on sharing intention. The effects of sense of self-worth and perceived responsibility on sharing intention were not significant.

Our results suggest that financial reward influences consumers' intention to share interactive SPAs but not informative SPAs. Consumers are more likely to share commercial messages with personal homepages, where all friends would view the message, in informative SPAs than is the case for interactive SPAs. In other words, the audience size for each sharing is typically larger for informative SPAs, and consumers may have a higher impression management motive. Our findings are consistent with the unintended rewards effect, which is most likely to be present in informative SPA activities because the impression concern related to financial reward offsets its economic value.

The results reveal another distinction between the two types of SPAs—sense of self-worth and perceived responsibility drive consumers' intention to share informative SPAs but not interactive SPAs. In informative SPA activities, consumers only need to share the message with friends, whereas in interactive SPA activities, sharers need to ask a favor of recipients. Hence, in interactive SPA activities, it seems unlikely that sharers believe that they are sharing the commercial content out of a desire to help others and sense of self-worth is diminished. In informative SPA activities, consumers focus on the behavior of sharing information and are more likely to be conscious that recipients' decision-making may be influenced by the shared content. However, in interactive activities, the sharers' focus may shift away from sharing information to asking a favor of recipients; thus, they pay less attention to the influence of shared content and experience—perceived responsibility for recipients' decision-making is diminished.

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Evaluating Evidence for the Cashless Premium: A Meta-Analytic Review

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EXTENDED ABSTRACT

Considerable evidence demonstrates a *cashless premium* wherein consumers are likely to spend more when using cashless payments compared to cash. However, some recent studies have failed to replicate this effect. The current work uses a meta-analytic approach to resolve this debate and tests the robustness of key theoretical moderators.

Many countries are moving away from cash towards becoming completely cashless societies. Cash accounts for only 12% of point-of-sale transactions in the USA, and less than 10% in markets such as Australia, Canada, Hong Kong, and Sweden (Worldpay 2021). The COVID-19 pandemic is accelerating this trend due to concerns about disease transmission through physical currency. The World Health Organization (2020) has encouraged the public to use contactless payments. This significant transition draws our attention to how cashless payments impact people's consumption—specifically, their spending behavior.

Most of the extant literature suggests the existence of a *cashless premium*: cashless payments (e.g., debit/credit cards) encourage spending relative to cash (e.g., Feinberg 1986; Hirschman 1979; Soman 2003; Thomas, Desai, and Seenivasan 2011). However, some recent studies have found no effect or even negative effects of cashless payments on spending (Huang et al. 2020; Liu and Dewitte 2021). This pattern suggests the effect may be disappearing over time. Many young people are growing up in a world where purchases are made almost exclusively using cashless payments. Potentially as we adapt to using cashless payments and as payment technologies become more sophisticated (e.g., personal finance apps providing real-time feedback), we become more aware of our spending, thereby mitigating the cashless premium (Huebner, Fleisch, and Ilic 2020).

Furthermore, a (re-)evaluation of the robustness of the cashless premium has important theoretical and practical implications. From a theoretical perspective, the mental accounting literature remains unclear about whether the effect of credit cards in facilitating spending is primarily driven by differences in the type of funds used (i.e., borrowed, as opposed to saved—and consequently, a higher degree of temporal separation between consumption and payment; Prelec and Loewenstein 1998), or differences in the level of 'transparency' of the physical form of the payment method (i.e., the outflow of funds being psychologically less salient compared to cash; Raghuram and Srivastava 2008; Soman 2001; 2003). From a practical perspective, an understanding of the robustness of the cashless premium is needed to inform decisions about the level and type of strategies that may be useful for countering the effect, which in turn may improve consumer financial well-being both in the short- and long-term.

To address these issues, we conduct a meta-analysis of all available published and unpublished studies comparing cash and cashless (card- or smartphone-based) payments on measures of spending behavior in contexts related to day-to-day consumer spending. Our meta-analysis aims to evaluate the cashless premium and to identify the conditions under which it exists.

Studies generally propose that the *pain of paying* is the key process underlying the cashless premium (Zellermayer 1996). However, the adequacy of this explanation has recently been questioned (Banker et al. 2021). Proponents of the pain of paying hypothesis argue that cashless payments are less transparent than cash. Cashless payments are thought

to reduce the pain of parting with money, resulting in a greater propensity to spend. Thus, we evaluate the evidence for associations between different payment methods and the level of pain of paying experienced by consumers.

The significant variation in effects observed in the literature implies the presence of moderating factors in the relationship between payment method and spending behavior. Five key categories were identified. First, payment characteristics may moderate the effect, such as whether the cashless payment is card- or smartphone-based, and whether it is connected to a source of credit (e.g., credit vs. debit card). Second, consumer characteristics relate to individual differences, such as gender, age, and nationality. Third, product characteristics reflect the type of product purchased (e.g., hedonic vs. utilitarian) and the transaction amount. Finally, we account for study (e.g., year of data collection) and publication characteristics.

A systematic search yielded a total of 9,245 unique records for screening. Of the 165 full-text papers assessed, 97 studies from 63 papers met eligibility criteria. Most studies contained multiple measures of the focal effect so we adopted a three-level modeling approach to account for dependency between individual effect sizes nested within studies (Van den Noortgate et al. 2015).

First, we performed a random-effects meta-analysis to estimate the summary effect of payment method (cash vs. cashless) on spending behavior. In support of our preregistered hypothesis, cashless payment had a significant positive association with greater spending ($k = 431$; $g = .19$, $p < .001$, 95% CI [.13, .25]).

We conducted a second random-effects meta-analysis to estimate the impact of payment method (cash vs. cashless) on the pain of paying. In support of our preregistered hypothesis, cashless payment had a significant negative association with greater pain of paying ($k = 85$; $g = -.33$, $p = .002$, 95% CI [-.53, -.13]).

To test for moderators of the cashless premium, we performed a mixed-effects multiple meta-regression ($k = 431$). Contrary to our pre-registered hypotheses, the cashless premium was not influenced by whether the cashless payment was card- or smartphone-based ($p = .273$), whether it was linked to a source of credit ($p = .751$), whether the purchase was hedonic or utilitarian ($p = .378$), or the year of data collection ($p = .217$). The cashless premium was consistent across transaction amounts ($p = .229$), and across study designs and publication types ($ps > .05$).

Age had a significant moderating effect ($p = .002$), such that as people grow older, the cashless premium decreases in magnitude. This result does not appear to be merely a cohort effect as the interaction between the year of data collection and the mean age of the sample was non-significant ($p = .515$). Instead, this result might reflect differences in income, payment volume, and/or money management strategies across the life course.

Overall, our findings support the robustness of the cashless premium, and suggest that it continues to exist (for now, at least). Non-significant differences observed in relation to key theoretical moderators challenge the adequacy of existing attempts to explain the effect. As cashless payments proliferate and become increasingly complex, further work is needed to understand their net impacts on consumer behavior.

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Reflexive Reauthorization: How Consumers Navigate Cultural Appropriation When Consuming Difference

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EXTENDED ABSTRACT

Beyond prevailing theorizations of cultural appropriation as a dialectical inter-group conflict between insiders and outsiders, we investigate how consumers occupying ambiguous cultural positionalities navigate responsabilizing discourses of cultural appropriation. Through four reflexive reauthorization strategies, consumers craft permission to consume difference while configuring who they are in relation to the other.

For the past few decades, a prevailing ideology of neoliberal multiculturalism suited to the demands of transnational capitalism has institutionalized a desire to appreciate cultural difference—the market-mediated creation of desirable contrasts to everyday life and mainstream notions of identity using another culture’s objects, symbols, styles, motifs, and subjects (Young and Brunk 2009; Ziff and Rao 1997)—as a valorized consumer identity project (Coskuner-Balli and Ertimur 2017; Peñaloza 2001; Schroeder 2015; Thompson and Tambyah 1999; Veresiu and Giesler 2018). At the same time, as a result of devaluing (Arsel and Thompson 2011) and moralizing (Luedicke 2015) market discourses, the co-optation of one group’s cultural meanings by members of another group can promote inter-group conflict between cultural insiders and cultural outsiders, provoking tensions that demand consumer adaptation (Arsel and Thompson 2011; Thompson and Coskuner-Balli 2007). More recently, countervailing discourses of cultural appreciation and cultural appropriation are fuelling a tension between the ethnic consumer subject (Veresiu and Giesler 2018), who embraces cultural difference via consumption, and the responsabilized consumer subject (Giesler and Veresiu 2014), tasked with considering the societal impacts of such consumption.

However, interdisciplinary debates have remained silent on how the tension between the ethnic and responsabilized consumer subject shapes the consumption of cultural difference. Further, present theorizations have yet to account for how consumers navigate their complex, often ambiguous, positionalities in global circuits of cultural difference (Cayla and Eckhardt 2008; Kjeldgaard and Askegaard 2006). Given that consumers often occupy multiple and cross-cutting connections to intersecting networks of belonging and exclusion (Calhoun, 2003; Gopaldas and DeRoy 2015), we ask: how do consumers navigate the countervailing discourses of cultural appreciation and cultural appropriation when consuming cultural difference?

Our analysis leverages the concept of reflexivity-in-context. Reflexivity, broadly defined as a reconfiguration of identity projects in the context of changing social structures (Thompson et al., 2018) encompasses “the act of an individual subject directing awareness towards itself, reflecting upon its own practices, preferences and even the process of reflection itself” (Adams and Raisborough, 2008, p. 1168). Originating from the works of Giddens (1991) and Beck (1992), reflexivity is theorized to play a central role in the processes of self-identity construction in late-modern societies. Several studies (Adams 2006; Adams and Raisborough 2008; McNay 1999) emphasize a perspective of reflexivity-in-context that shifts focus toward “specific and localized ways” in which reflexivity unfolds in any given situation. This situated approach should involve querying how reflexive awareness emerges within consumption choices against the backdrop of important aspects of the social context that enable such choices to become reflexively known.

We conducted an extended qualitative investigation of international fans of Korean pop (K-pop), an immersive universe of celebrity-driven music, fashion, and media offerings. International K-pop fans engage in extended conversations about cultural appropriation as it pertains to

what cultural difference they consume in K-pop and *how* they consume cultural difference. This is because, on one hand, K-pop is a cultural melange which relies on commodifying musical, aesthetic, and cultural expressions (e.g. hip hop) derived from other cultures (Garza, 2021), and on the other hand, K-pop is tightly territorialized as a *Korean* cultural product, and situated within a long history of stereotypical and subordinated Asian representation (Jung, 2013; Oh, 2014). Further, international K-pop fans occupy multiple and ambiguous positionalities in relation to the consumed other: as cultural outsiders, members of the consumed other, and more commonly, somewhere in between. Our dataset, collected over a six-year period, comprises depth interviews with 38 non-Korean consumers of K-pop living in a large Australian city and three waves of netnographic observation in the English-speaking K-pop fandom, resulting in 54 Quora and 206 Reddit discussion threads about cultural appropriation in K-pop.

Our analysis accounts for four distinct pathways to reflexive reauthorization, where consumers constitute diverse subject positions in relation to the tension between the ethnic and responsabilized consumer subject that authorize them to consume cultural difference. When consumers’ identity projects are confronted by an identity-relevant tension between cultural appreciation and cultural appropriation, consumers navigate the identity threats that arise through four reauthorization strategies—recruiting, recontextualizing, restraining, and rationalizing. These four reauthorization strategies represent creative recombinations of countervailing discourses and individual identity resources. Each advances a distinct subject position aimed at amplifying, soothing, avoiding, or denying the tension between cultural appreciation and cultural appropriation as it applies to the consumer’s engagement with cultural difference. Taken together, reauthorization strategies illustrate diverse pathways through which consumers craft permission to consume cultural difference by configuring who they are in relation to the other.

This paper makes three contributions to the consumer research literature. First, while prior research shows that the marketization of the cultural other often fuels the depoliticization of cultural difference (Veresiu and Giesler 2018), reauthorization represents a mechanism through which cultural otherness is becoming repoliticized. Via reauthorization, cultural dislocation does not only become a valued market resource but becomes recentred as the primary reference point for configuring consumer subject positions. Second, reauthorization represents a different relationship between threat-inducing market discourses and consumer identity work than previously theorized. Prior research has shown how consumers respond to devaluing market discourses by deploying counternarratives that preserve and replenish the value of their identity projects (Arsel and Thompson 2011; Luedicke et al. 2010). Extending this literature, we show that consumers do not only revalue or defend a threatened identity project, but also engage in a reflexive reconfiguration of the self in relation to the other. Third, we show how reauthorization is reconfiguring how cultural difference is animated as a valued market resource. If we adopt the perspective of cultural consumption as a constellation of ever-shifting competences (Demangeot et al. 2013) which involve a “skillful, contextualized and self-aware deployment of cross-cultural symbols” (Kendall et al. 2009, 112), reauthorization can be seen as an emerging set of consumer competences that demarcate skilful engagements with cultural difference. Overall, our work advances understanding of how consumers are navigating the repoliticization of market-mediated diversity in an era of woke capitalism (Kanai and Gill 2020).

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Where Organizations Take a Stance Matters: The Role of Social Media Channels on Consumer Attributions of Firm Commitment

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EXTENDED ABSTRACT

When firms take public stances on polarizing sociopolitical issues via more temporary (vs. permanent) social media channels, consumers infer that this communication reflects weaker firm commitment to the cause, in turn impacting various downstream consequences. Notably, this effect is especially pronounced among consumers who find the issue less self-relevant.

Firms are increasingly expected to take public stances on polarizing sociopolitical issues (Hydock et al. 2020). These conversations often play out on popular social media platforms like Facebook and Instagram (Statusbrew 2021), where firms can take a stance either through a grid post intended to permanently stay on their profile, or a story post that disappears after 24 hours have elapsed.

Prior work has examined the financial impact of taking public stances on sociopolitical issues (Hydock et al. 2020; Mirzaei et al. 2022). Building on this work, we investigate whether consumers infer that companies are less genuinely concerned about a given social issue when they take a stance on a more ephemeral medium (e.g., stories) versus a more permanent medium (e.g., grid posts), attributions that could, in turn, have negative downstream consequences.

We base our predictions on ELM (Petty and Cacioppo 1986). We contend that the ephemerality of the post is a peripheral cue used to form inferences about the company's commitment to the focal cause, independent of argument strength. When digital media is permanent, it leaves behind a record that can later be viewed (Berger 2013), and as such, is harder to remove. On the other hand, temporary communications, due to their ephemeral nature, are perceived to have fewer lasting consequences (Hofstetter et al. 2017). Consequently, when a firm takes a stance via a story, consumers will use its placement to infer that this communication reflects lower perceived accountability for the posted content, diminishing perceived firm commitment to the focal cause.

According to ELM, personal relevance is a key moderator of the route to attitude change, such that attitudes will primarily be impacted by peripheral cues under low relevance (Petty and Cacioppo 1986). Extending this reasoning, we predict that when a given issue is less relevant, people will use stance placement as a peripheral cue to inform their judgments about the firm's investment in the cause, whereas when a given issue is more relevant, due to egocentric anchoring (Naylor et al. 2011), they will infer that the firm is highly invested in the cause regardless of stance placement.

In study 1 (story vs. grid; $N=286$), participants encountered a story (vs. grid) post expressing solidarity for Black lives. Participants then rated attributions of organizational investment and perceived firm accountability. A one-way ANOVA revealed that participants attributed lower organizational investment when they encountered a story post ($p=.004$). The same analysis on perceived accountability revealed that the company was perceived to be less accountable when participants encountered a story ($p<.001$). Finally, mediation analysis (model 4, Hayes 2017) revealed that perceived accountability mediated attributions of organizational investment ($CI_{95} [.0684, .2921]$).

Study 2 (story vs. grid vs. story + accountability; $N=461$), provides further process support for firm accountability. In the story and grid conditions, the message encouraged Americans to demand action against the rise of dangerous misinformation, whereas in the story + accountability condition, the message encouraged viewers to join the company

as they demand action. Participants then rated attributions of organizational investment. A one-way ANOVA revealed a significant main effect ($p=.004$). Simple effects revealed that participants attributed lower organizational investment when they encountered a story (vs. grid) post ($p=.011$). However, attributions were higher for the story post when it explicitly signaled (vs. did not signal) accountability ($p=.002$). Finally, attributions did not differ between the grid and story + accountability conditions ($F<1$).

Study 3 (story vs. grid; $N=404$) measured the personal relevance of post as an individual difference variable. Participants encountered a company story (vs. grid) post demanding that people "Stop Asian Hate." Participants then rated attributions of organizational investment, company evaluations, and sharing intentions before rating the personal relevance of the post, which was unaffected by the manipulation ($p>.30$).

Regression analysis revealed a significant effect of placement ($p<.001$); participants ascribed lower organizational investment to the story (vs. grid) post. There was also a significant interaction with personal relevance ($p=.040$). A floodlight analysis revealed that the impact of placement on organizational investment attributions is stronger among people for whom the focal issue is less relevant. The same analysis on company evaluations revealed a comparable simple effect of placement ($p=.003$) and an interaction ($p=.002$), such that company evaluations were more negative when participants encountered a story. Finally, the same analysis on sharing intentions revealed an interaction ($p=.003$) where the floodlight analysis revealed that low-relevance participants were less likely to share the issue with others when they encountered a story post. Finally, moderated mediation analysis (model 8, Hayes 2017) revealed that attributions mediated company evaluations ($CI_{95} [.1812, .7284]$) and sharing intentions ($CI_{95} [.1471, .6059]$), but only at low relevance.

Finally, study 4 (story vs. grid; $N=351$) measured personal relevance as an individual difference variable and examined real behaviors. Participants viewed an actual Instagram post from Bumble criticizing the anti-abortion measures in Texas. After rating attributions of organizational investment, participants were given the opportunity to sign an actual pledge to protect abortion access. Finally, participants rated the personal relevance of the post, which was unaffected by the manipulation ($F<1$).

Regression analysis revealed a significant effect of placement ($p=.007$), such that participants attributed lower organizational investment to the story post, and a marginally significant interaction ($p=.066$). A floodlight analysis revealed that for lower personal relevance values, participants attributed lower organizational investment when they encountered a story (vs. grid) post. A logistic regression analysis revealed a marginally significant effect of placement ($p=.086$) such that participants were less likely to sign the pledge when they encountered a story (vs. grid) post; as well as a directional interaction ($p=.155$). Finally, a moderated mediation analysis (model 8, Hayes 2017) revealed a marginal index of moderated mediation ($CI_{90} [-.1022, -.0011]$), such that attributions of organizational importance mediated pledge signing at low ($CI_{90} [.0518, .4467]$), but not high relevance.

This research demonstrates that consumers form judgments of firm commitment to sociopolitical issues depending on where it takes a stance on social media. Such stance placement has important ramifications for consumer judgments, intentions to engage with the issue, firm evaluations, and behaviors that benefit the focal cause.

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Lexical complexity and crowdfunders behaviour on Equity Crowdfunding Platforms

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EXTENDED ABSTRACT

Drawing on processing fluency theory and language expectancy theory we contend that lexically complex venture descriptions signal venture distinctiveness and will mainly affect small and less experienced crowdfunders. We test our predictions using crowdfunder level panel data comprising of 78,141 investments made by 26,965 crowdfunders, from an equity crowdfunding platform.

Entrepreneurs are advised to keep their funding pitches concise and simple such “that even a kid can understand it” (e.g., CP, 2018, para. 5). However, for crowdfunded ventures, explaining advanced ideas may require technological details warranting the use of complex language, while others may use complex language to signal expertise (Tolochko & Boomgaarden, 2018; Thiebach et al., 2015). For example, an e-vehicle venture seeking funds on a crowdfunding platform may be described as “to disrupt the unhandy and pricey market by making vehicles cool, fun, and affordable” or “to revolutionize the discontented and expensive marketplace through making vehicles fashionable, pleasurable and reasonably-priced”. While the two versions of the venture description have the same meaning and sentence structure, the two descriptions differ in their use of longer and complex words (i.e., lexical complexity). This raises the question of which venture description is likely to be more effective in garnering support from crowdfunders.

We theorize that the effort exerted in reading a lexically complex venture would likely indicate entrepreneurs effort in preparation for the campaign and enhance perceptions of uniqueness, originality, and novelty (Cho, 2013; Labroo & Pocheptsova, 2016). Therefore, compared to less lexically complex venture descriptions, more lexically complex venture descriptions attract more funding. Since heterogeneous experiences, social norms or personal preferences inform investor expectations from language and perceptions (Averbeck & Miller, 2014) we expect a greater positive impact of lexical complexity on ordinary crowdfunders compared to sophisticated crowdfunders. Finally, the use of language signifying innovativeness would appear to be consistent with some aspects of lexical complexity (e.g., unfamiliarity and novelty), and nuanced crowdfunders are likely to appreciate multiple complementary signals of innovativeness. Hence, we hypothesize that venture descriptions which use language signifying innovativeness have a positive impact of lexical complexity on funding decisions of sophisticated crowd funders.

To show the link between lexical complexity and crowdfunding outcomes, we collected funding data and campaign descriptions on 886 campaigns listed on a leading equity crowdfunding platform during the period of July 2012 and September 2017. Our individual-investor-level panel dataset allowed us to observe the investment frequency and campaign choices of each of the 78,141 investments for 26,965 crowdfunders. The platform attracts diverse crowdfunders, ranging from ordinary (inexperienced crowdfunders and crowdfunders who make small investments) to sophisticated (high-net-worth and experienced) crowdfunders. We use customized and generic dictionaries from Linguistic Inquiry and Word Count software (LIWC, Pennebaker et al., 2015) to analyze the venture descriptions. We note that the venture descriptions differed greatly in linguistic characteristics such as length and complexity. We supplemented this data set with data on entrepreneurs’ educational and professional qualifications from LinkedIn.

Our dependent variable is the log normal of total amount invested in campaign j by crowdfunder i at a given investment occasion t .

Our independent variable is the proportion of complex words in the venture description (*Complexity*). We categorize words with more than six letters as complex words. In doing so we focus on the replicable and most universally common unit of analysis (Averbeck, 2010; Averbeck & Hemple 2008). Our moderator measure is based on crowdfunders self-certification as high-net-worth, experienced sophisticated crowdfunders, or ordinary crowdfunders. We included investor type dummy (*Sophisticated*) with a value of 1 (0 otherwise) when the crowdfunders reported themselves as high-net-worth and/or experienced crowdfunders. In the platform we study, we find that 21,241 crowdfunders certify themselves as ordinary crowd crowdfunders and 5,724 certify as sophisticated experienced or high net worth crowdfunders. The numerous ordinary crowd crowdfunders make 44, 615 investments whereas the few sophisticated and high net worth crowdfunders made 33,526 investments.

We estimated a mixed effects log normal specification of amount invested by crowdfunder i , in campaign j , at time t on lexical complexity and control variables.

Firstly, we observe that the impact of lexical complexity on amount invested at any given investment occasion by an individual crowdfunder is positive and significant. Furthermore, ordinary crowdfunders have a greater preference for lexical complexity compared to sophisticated crowdfunders. We further divide the sample by investor type and included the interaction between *Complexity* and *Innovative* language for each sample. We find that for sophisticated crowdfunders complex language serves as a positive signal only when the campaign description simultaneously highlights the innovativeness of the venture, otherwise the use of complex language may appear inauthentic.

We show that on digital crowdfunding platforms entrepreneurs can improve the effectiveness of their messages by tuning the complexity of the message to the audience. As such, our findings are consistent with previous studies that show the ordinary and sophisticated crowdfunders may perceive linguistic signals differently (e.g., Johan, & Zhang, 2020). Based on our findings, entrepreneurs can strategically use language to better engage with early-stage crowdfunders. For ventures with innovative language in their description, longer words are more acceptable as they reinforce perceptions of novelty. Our results also suggest that entrepreneurs can attract sophisticated crowdfunders, by using other complementary linguistic features such as innovative language.

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Biases in Resource Competition

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EXTENDED ABSTRACT

Leveraging the pool-choice dilemma, we document an overshooting bias in market choices: people are more likely to choose the larger market than the normative prediction, thus compromising their earnings. We attribute the bias to lacking strategic thinking, finding that facilitating people with perspective-taking (through prompting and framing) moderates the effect.

Resource competition is ubiquitous. This research studies an important yet overlooked resource-competition dilemma, in which two or more resource-seekers decide independently whether to seek resources from a larger pool or a smaller pool, knowing that the resources in each pool will be divided equally among its choosers. Dubbed the *Pool-Choice Dilemma (PCD)*, this problem mimics many real-world problems, ranging from marketers deciding whether to enter a market with more customers or one with fewer consumers, and consumers deciding whether to seek scarce goods from a market with more such goods or one with fewer such goods. Despite its ecological relevance, the PCD has been overlooked, except for a recent paper by Hsee and colleagues (2021).

This research significantly qualifies and extends the initial paper: While Hsee et al. found an *undershooting bias* (fewer people choosing the larger pool than normatively warranted), we are the first to document an *overshooting bias*, and show it is suboptimal. More importantly, we theorize and demonstrate that whether people undershoot or overshoot depends on how they construe the dilemma, which can be manipulated by framing.

Participants in Study 1 ($N=200$) imagined competing with four other independent ice cream vendors to sell ice cream at one of two outdoor events, one with more total profits and one with less. We spelled out the payoff structure in a 2×4 matrix and asked participants to make their choices. Results showed a significant overshooting bias: the proportion of participants choosing to go to the larger market was 70.6%, significantly higher than the normative benchmark and random ($p < .001$). We replicated this overshooting bias when there were two, five, or a hundred resource seekers.

We proposed that the overshooting bias occurred because participants predominantly adopted level-1 thinking (i.e., non-strategic) when exposed to a two-dimensional matrix description of payoff structure. Specifically, in payoff matrixes, one dimension (e.g., rows) denotes the choices of one player (e.g., “you”), and the other dimension (e.g., columns) denotes the choices of the other player(s). We refer to this type of description as the orthogonal frame because it separates the choices of the competing parties into two orthogonal dimensions.

In contrast, Hsee et al. described the outcomes of the PCD in terms of the relationship between the N of people choosing a certain pool and the N of resources each chooser will receive. Specifically, they tell participants that the resources in each pool will be divided equally among its choosers, so that the more people choose a certain account, the fewer resources each chooser will receive, and vice versa. We refer to this type of description as the relational frame, because it highlights the relationship of the choices of the competing parties and thus leads people to think strategically (predicting the choices of others) and respond accordingly, which means, as sug-

gested in prior research, to think at level-2 (naïvely strategic) and undershoot.

To test this theory, Study 2 directly manipulated the framing of a PCD, and measured participants’ choice as well as their reason behind the choice. Participants ($N=400$) were randomly assigned to either an orthogonal or a relational framing condition, imagined competing with four other sellers in a bottle-water seller context. In the orthogonal framing condition, we described the outcomes in a matrix; while in the relational-framing condition, we described the outcomes in as similar a way as Hsee et al. described the outcomes of the PCD in their original studies (“...the more vendors go to a certain event, the fewer buyers each vendor who goes there will have...”). Participants made their choices and explained their rationale afterward and we inferred their thinking levels based on these rationales.

As predicted, we found a significant framing effect: fewer participants chose event L in the relational-framing (42.5%, undershooting) than in the orthogonal-framing condition (66.5%, overshooting, $p < .001$). These results reconciled the apparent contradiction between the present research and the original research, and support our theory that the same decision problem could lead to opposite responses depending on how the problem is framed. In addition, more participants in the orthogonal-framing condition than in the relational-framing condition thought at level 1 (51.9% vs. 19.0%, $p < .001$). Conversely, more participants in the relational-framing condition than in the orthogonal-framing condition thought at level 2 (45.0% vs. 26.0%, $p < .001$). Because level 1 corresponds to choosing the larger pool, and level 2 corresponds to choosing the smaller pool, these thinking-level results elucidate why people in the orthogonal frame would overshoot, while people in the relational frame would undershoot.

In sum, this research contributed to the literature on level-k thinking, behavioral game theory, and framing in general. Our work also carries important practical and managerial implications in communicating and making strategic choices.

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How Traditional Production Shapes Perceptions of Artisanal Product Quality

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EXTENDED ABSTRACT

The research shows that consumers view brands that use traditional production methods as good for society, which has a halo effect on perceived product quality. This effect is attenuated when consumers are low in moral attentiveness and when the brand is owned by a corporation.

Artisanal products are frequently defined as products made using a traditional process. Artisanal products have experienced significant growth in numerous product categories in recent years. Although there are numerous reasons why artisanal products are popular, one of the most frequently stated is consumers perceive the products to be higher in quality than non-artisanal products. Yet, few studies have examined the factors that shape artisanal product quality perceptions. This research attempts to address this issue by examining how knowing that a product was made using a traditional process influences quality judgements.

We demonstrate that when consumers learn that a product is made using a traditional process, they perceive the product to be higher in quality and are more likely to purchase the product, compared to when the product is not made using a traditional method. We propose that this occurs because consumers view brands that use traditional methods as moral actors that are good for society because they invest in human capital. The moral undertone of these activities has then a halo effect on consumers' judgments of product quality. In 7 studies, 5 of which were preregistered, we manipulated the description of the production method for various products including wine, chocolates, bread or beddings. For example, participants in Study 1a were asked to evaluate a wine that was made with a traditional fermentation method in a clay pot atop blocks of ice in the traditional condition, while participants in the not traditional condition were told that the wine was made with a standard fermentation method in a steel tank with cooling rings. Overall the studies show that people perceive products made with a traditional method of higher in quality, which in turn increases their purchase intent (study 1) and willingness to pay using an incentive-compatible measure (study 2). This mediation remained significant even controlling for the effect of traditional method on perceived authenticity.

To show the mechanism related to the good for society halo effect, studies 4a and 4b followed a causal chain design. Specifically, in the first stage of the cause chain (Study 4a), we manipulated the production method to show that it impacts the mediator ("good for society"). We then manipulated the mediator (Study 4b) to show that this influences the dependent variable ("perceived quality"). Consistent with our theory, we also show the effect of traditional production on perceived quality is attenuated when consumers are unlikely to view the brand in a moral light. Specifically, we demonstrate that artisanal products are not judged to be higher in quality when consumers are low in moral attentiveness (Study 5). Relative to those higher in moral attentiveness, people with low moral attentiveness tend to be insensitive to recognizing moral cues. Our theory thus argues that if the halo effect of traditional production on product quality is driven by the moral undertones of a brand acting in a socially beneficial manner, then these effects should be mitigated when consumers are low in moral attentiveness. We observe a moderated mediation where the indirect effect of traditional method on perceived quality is only significant for people with higher moral attentiveness. Study

6 provides additional evidence for the 'good for society' mechanism by showing that the effect of traditional production is attenuated when the brand is owned by a corporation. Consumers believe indeed that a brand owned by a corporation is less likely to engage in ethical business practices benefitting society, even if the brand uses a traditional production method.

The studies also show that the good for society halo effect on quality is distinct from other alternative mechanisms. Special efforts were put in ruling out the possibility that the findings are due to people equating a traditional method with being handmade. The handmade effect describes how consumers evaluate handmade products more favorably because they perceive such products as being imbued with love. However, respondents also judged machine made products to be relatively high in quality when they were told that the products were traditionally made (study 3); furthermore, even when accounting for the effect of traditional method on the "made with love" perception, good for society mediates the effect of production method on perceived quality (study 6). Alternative explanations such as the effort heuristic, perceived uniqueness and authenticity were also accounted for. While the same halo effect emanating from the belief that a traditional method is good for society increases perceived authenticity, the core effect on quality remains significant even when controlling for perceived authenticity.

In summary, these results support our theory that a traditional method enhances perceived quality of artisanal products because consumers infer from the traditional production that the brand is doing something good for society. This research contributes to previous work on the impact of viewing a brand as a moral actor. Several studies have indeed documented a liability effect on product evaluation such that consumers hold compensatory beliefs leading them to expect a lesser performance when brands tout some ethical positioning for their products such as sustainability or social responsibility. In contrast, the positive halo effect associated with a traditional production method is most likely related to the belief that traditional methods necessitate high level of expertise and preserve human capital.

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Consumers' Responses to Human-like vs. Cartoon-Like Designed Virtual Models: The Role of Psychological Distance and Message Focus

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EXTENDED ABSTRACT

Virtual models – fictive computer-generated personalities – have found their way into Marketing. A first study shows that while a human-like virtual model raises trustworthiness, a cartoon-like model generates higher novelty. In a second study we analyze psychological distance as the underlying mechanism and the moderating influence of message focus.

Marketers use computer-generated images to create virtual identities – virtual models – according to a desired image. In comparative studies, consumers still prefer “real” people to virtual counterparts (Franke & Gröppel-Klein, 2021). However, virtual models offer many advantages, e.g., “flawless” brand representatives unlikely to be involved in scandals (Moustakas et al. 2020). Consequently, many brands use virtual models to promote new product lines, such as Lil' Miquela which is hardly distinguishable from an actual human being. Noonouuri, another famous model, is also strongly anthropomorphized but with exaggerated features (“cartoon-like”), clearly identifying her as a non-human entity.

Research on consumers' responses to virtual models is scarce, usually focusing on comparison of human and virtual models. In our studies, we do not compare virtual vs. real models, but rather focus on the different design possibilities of virtual models to determine whether and under which conditions more realistic or more cartoon-like models exhibit higher advertising effectiveness. In a first study, we investigate differences in the evaluation of trustworthiness and novelty of human-like and cartoon-like virtual models. This question is relevant because very human-like virtual figures are often associated with suspicion (uncanny valley hypothesis). However, the recipients might identify more strongly with a human-like and thus, more similar virtual model appearance. In a second study, we are interested in the underlying psychological processes, assuming psychological distance (PD) as a potential explanatory variable. We further examine message focus on feasibility vs. desirability aspects, which might moderate the effects of PD towards the model and attitude towards the ad (aad).

THEORETICAL BACKGROUND

How virtual characters need to be “designed” to elicit positive responses is widely discussed in literature. There is much debate as to whether virtual figures should look equivocally similar to humans or humanized but immediately identifiable as virtual. We propose, that while a human-like virtual model elicits higher trustworthiness, a cartoon-like virtual model will generate higher novelty perception.

In study 1 we chose two existing virtual models (Lil' Miquela vs. Noonouuri) and showed an advertisement of the models promoting an attractiveness-relevant lifestyle product. $N = 149$ respondents ($M_{age} = 30.66 \pm 12.638$) were randomly exposed to one of the models. The groups did not differ regarding socio-economic variables, technological affinity and product involvement. In both studies we excluded respondents who thought the model was a human being. Our results (Process, Hayes 2018, model 4) show that the human-like model demonstrates a significant increase in trustworthiness, but the cartoon-like virtual model is perceived more novel. Trustworthiness and novelty both increase aad (both indirect effects are significant).

Next, we investigate the underlying mechanism of these effects. According to Nowak (2013) individuals identify more with similar-looking avatars. Perceived similarity can also be considered a form of

social dimension of psychological distance (PD) (Liviatan et al. 2008). PD generally represents the subjective experience that someone/something is close to or distant from the self (Trope and Liberman 2010). For example, individuals perceive higher PD towards strangers compared to close friends (Liberman and Trope 2014). Entities similar to oneself are perceived as socially closer than dissimilar ones because the feeling of distance is reduced (Trope et al. 2007). Thus, we assume, that a cartoon-like model will trigger a higher PD. The heightened social distance further might negatively influence consumers' trust perception since individuals may use similarity as a cue for uncertainty reduction. However, we assume that distance in terms of dissimilarity between individual and virtual figure might also lead to higher perceived novelty. For instance, Talukdar & Yu (2021) found the use of virtual reality could increase novelty perception of objects, but only when PD to the object was high.

We further assume a connection between PD and mental abstraction of consumers. Construal Level Theory (CLT) proposes that individuals use concrete, low-level construals for psychologically near targets, while distant targets are construed on a high level (Trope et al. 2007) which has been tested in the advertising context. Depending on the distance perception, different advertising messages are advisable. The importance of desirability-focused messages increases with greater distance, whereas the importance of feasibility considerations decreases (Eyal et al. 2004). We propose message focus as moderator in the sense that a feasibility-focused appeal will weaken the negative effect of high PD on trustworthiness, whereas a desirability-focused appeal will emphasize the positive effect of high PD on novelty:

In study 2, $n = 212$ respondents ($M_{age} = 28.27 \pm 9.102$) were randomly assigned to one condition in a 2×2 between-subjects with type of model and message focus as ivs. We used the same models as before and a lifestyle product (smart watch) and added a description on either how to use the product (e.g., “Connect the watch to your smartphone”) or why to use it (e.g., “To train like a professional”).

Results of two moderated serial mediations (Process, Hayes 2018, model 91) show that PD is higher for the cartoon-like than the human-like model. PD in turn negatively influences trustworthiness which consecutively increases aad. The indirect effect of model type over PD and trustworthiness on aad was significant in the feasibility condition and the desirability condition but we did not find an interaction effect. When calculating the model with novelty as secondary mediator, we found that PD significantly raises novelty, in turn increasing aad. This time we also found the proposed interaction effect. The indirect effect of model type over PD and novelty on aad was significantly higher in the desirability condition than in the feasibility condition. The difference between the conditional indirect effects is significant.

Our results demonstrate that both human-like and cartoon-like virtual models offer specific advantages. PD explains these effects. The human-like model reduces the feeling of social distance. Higher PD reduces trustworthiness but increases novelty. While we proposed that both indirect effects are moderated by message focus we could only find an interaction for novelty, showing that desirability-focused messages strengthen the indirect effect. Managerially, we conclude that cartoon-like models should be used for novelty-focusing messages highlighting reasons for using a product (vs. how).

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Children's Purchasing Self-Control in a Computer-Based Simulated Supermarket

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EXTENDED ABSTRACT

Children's self-control was investigated as an important subdomain of their purchasing literacy using a computer-based supermarket simulation. Behavioral indicators of self-control were extracted from the log data and confirmed by factor analysis. Self-control was significantly correlated with task success, distrust of advertising, and monitoring at the point of sale.

Market demands with their multitude of stimuli and information can be particularly overwhelming for children, whose cognitive abilities and skills are not yet fully developed and who lack market experience and knowledge (Mau, Schramm-Klein, and Reisch 2014). Purchasing literacy refers to the skill to cope with problem situations that occur during the purchasing process and to successfully implement a (self-)set purchasing intention (Schuhen et al., 2017). Self-control represents an important part of purchasing literacy, as it is a key attribute for consumers, especially in the context of impulse buying and purchase decisions (Baumeister 2002). Consumers with high self-control and appropriate self-regulatory strategies tend to make less impulsive purchases than consumers with low self-control and inappropriate self-regulatory strategies (Youn and Faber 2000). Self-controlled implementation of action goals is characterized by three components: (1) setting a goal; (2) performing actions that lead to the achievement of that goal; and (3) monitoring progress toward the goal (Vohs, Baumeister, and Tice 2008). Current research shows that children fail to successfully implement these steps at the point of sale by behaving differently than they expected and had previously undertaken: In a study by Mau et al. (2016), children indicated that they primarily focus on the lowest price when making purchasing decisions. For a subsequent actual shopping situation in a computer-based simulated supermarket, they were given the task of always buying the cheapest product with a limited budget. When shopping, however, price had little influence on the products children actually purchased. Instead, children chose products primarily on the basis of brand and packaging design. To capture children's self-control at the point of sale and to investigate the impact it has on children's purchasing literacy, we developed a computer-based supermarket simulation. In the computer-based shopping simulation, children were asked to complete a shopping task. The supermarket simulation was purposefully designed to include some content elements that are not required for this performance task. These include irrelevant shelves and products, as well as products that in themselves (e.g., toys) or in their presentation (e.g., packaging design) are intended to be particularly appealing to children. Due to their distracting potential, these irrelevant and appealing objects pose a challenge to children's inhibitory self-control (De Ridder et al., 2011) while solving the task. These items were intentionally placed in the simulation to capture children's self-control at the point of sale as key aspect of purchasing literacy. Students' interactions during testing were recorded in log files, consisting of time-stamped sequences of events and enabling the retrospective tracing of the solution path. After shopping, the children were asked how sure they were that they had bought all the products on the shopping list and estimated how much they had spent. We were interested in whether covariance among behavioral indicators hypothesized to capture self-control (e.g., engaging in task-irrelevant products) can be explained by a single common factor and how this factor relates to task success, monitoring of task-fulfillment and spending. A sample of 117 elementary school children was given a shopping list and

a maximum budget. To extract behavioral indicators from log data we used the finite-state machine approach (Kröhne and Goldhammer 2018). A unidimensional confirmatory factor analysis (CFA) with all assumed indicators was analyzed. The final model for self-control included four variables: The amount of time children paid attention to irrelevant shelves (S1) or products (S2) and the frequency with which they purchased irrelevant products that were not on the shopping list (S3) or visited irrelevant shelves (S4). The model showed a very good fit ($\chi^2(4) = 0.762, p = 0.683, RMSEA < 0.000, CFI = 1.000, TLI = 1.000, SRMR = 0.014$). Task success was estimated using the partial credit model. The significant correlation between task success (weighted maximum likelihood estimates) and the factor for self-control ($r(113) = .39, p < .001$) indicates that self-control plays an important role in the purchasing process. Our results also show that children who monitored their spending (inaccuracy of estimates, $r(108) = -.26, p < .001$) and task performance ($r(111) = .38, p < .001$) more carefully tended to show a greater self-control during task performance. Our research illustrates how theory-based factors can be extracted from log data of computer-based tasks and their diagnostic potential, which can be used to improve the quality and richness of psychological assessments and consumer research.

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Endorsed By the Own Face – Confronting Consumers With Their Own Face in Advertising

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EXTENDED ABSTRACT

Using a new methodological approach of confronting consumers with their own face in advertising, we provide first valuable insights into a more profound form of personalized advertising. Across multiple studies and methodologies, we explore the positive effect of own-face advertising on purchase likelihood, including identifying key mediators and moderators.

Using a new methodological approach of confronting consumers with their own face in advertising, we provide first valuable insights into a more profound form of personalized advertising. Across multiple studies and methodologies, we explore the positive effect of own-face advertising on purchase likelihood, including identifying key mediators and moderators.

Many academic studies have shown that the use of endorsers positively impacts the effectiveness of advertising (Amos, Holmes, and Strutton 2008; Erdogan 1999). However, the existing literature only focuses on public endorsers, such as celebrities (Amos, Holmes, and Strutton 2008; Erdogan 1999; Winterich, Gangwar, and Grewal 2018) or influencers (Breves et al. 2019; Rosengren and Campbell 2021; Schouten, Janssen, and Verspaget 2020), but not on the consumers themselves. The importance of including consumers in marketing activities will be inevitable calling for research, especially concerning Meta's recent announcements regarding the metaverse, which connects physical and virtual worlds (Kim 2021) and where the consumers are increasingly moving into the focus of attention.

Examining the evolution of endorser advertising, a shift from traditional celebrities over influencers to consumers themselves can be observed. Traditional celebrities represent an ideal picture through their gained public recognition, but they are unreachable to consumers (Winterich, Gangwar, and Grewal 2018). Influencers, showing their ostensibly true selves, are more similar and approachable to consumers. Thus, consumers can better identify with influencers than celebrities (Schouten, Janssen, and Verspaget 2020). Marketers increasingly involve consumers in marketing activities to enable them to identify even further with the advertising.

With the help of emerging technologies, companies can implement the consumer's face (e.g., based on social networks) in personalized advertising images and videos (Suwajanakorn, Seitz, and Kemelmacher-Shlizerman 2017). Promoting a product by using this innovative phenomenon of own-face advertising could, therefore, present a valuable advertising opportunity in the near future. Expanding the existing research scope, our study investigates the effects as well as essential boundary conditions of own-face advertising.

Our study contributes to the existing literature by providing a new form of endorser advertising by connecting the already established main models with a new methodological approach. To our knowledge, consumers have never before been confronted with their own face in advertising. As consumers' involvement in marketing activities has played an increasingly important role in recent years, our study is relevant to academe and practice. Study 1 shows that the usage of own-face advertising positively influences purchase likelihood over different product categories. Study 2 verifies this result and demonstrates that factors relating the endorser and advertising

have a meditative role, whereby the knowledge of the brand has a moderative effect.

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Meet Robbie: Consequences of Nicknaming Autonomous Products

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EXTENDED ABSTRACT

A key adoption barrier of autonomous products is consumers' lack of perceived control. This research suggests that nicknaming can counter this barrier. Field and experimental evidence shows that nicknaming increases perceived control and product valuations of autonomous (vs. conventional) products.

Artificial intelligence and robotics advancements enable today's products to become increasingly autonomous, taking over various consumer tasks and making decisions on their own. Robotic vacuum cleaners, for example, keep the house clean and robotic kitchens prepare various recipes for consumers. Despite their advantages, such as time savings and convenience, consumers do not universally adopt them. The perception of losing control as products take over tasks and decisions has been identified as a key adoption barrier in the academic literature. Understanding how consumers can regain perceived control when using autonomous products is thus crucial for scholars and firms alike. In our research, we argue that supporting nicknaming acts as a means of regaining control, drawing on research in psychology on nicknaming as well as consumer research on new technologies. As a result, we expect that increased perceived control results in positive downstream consequences such as higher product valuations. Importantly, we anticipate that this effect will be mitigated for conventional products.

Based on Zhang and Patrick's (2018) definition of brand nicknames, we conceptualize product nicknames as consumer-created substitutes for formal product names, such as "Robbie" for a robotic vacuum cleaner. Earlier work on nicknames in a social context concludes that nicknaming can be a verbal act for mechanisms of identification or classification as well as express social solidarity and affiliation (Adams 2009; Bell and Healey 1992). Building on congruency and social response theory, we assume that consumers transfer their knowledge from interpersonal nicknaming practices to nicknames for autonomous products (Fiske and Linville 1980; Nass et al. 1995). According to social response theory, people spontaneously apply the same social heuristics used in human interactions to technologies because they possess similar characteristics. Furthermore, we predict nicknaming practices to be congruent with autonomous products based on congruency theory and the characteristics of autonomous products, such as their ability to operate to a large extent autonomously. Consequently, we expect that, similar to a social context, there should be a positive association between nicknaming autonomous products and product valuations. More specially, we argue that nicknaming autonomous products results in an increase in perceived control as it highlights the relationship between owners and autonomous products. In social contexts, close relationships are associated with mitigated uncertainties and the perception of a collective responsibility that should lead to an increase in perceived control. Importantly, we expect that this effect is diminished for conventional products as they are less congruent with nicknaming practices. We argue that higher levels of control lead to more positive product valuations and in sum, hypothesize a moderated mediation model.

We tested our predictions across five studies. First, we conducted two studies in the field. Study 1 used a large-scale survey with actual customers of a smart kitchen device and provided support that customers that use a nickname for their autonomous product also value it more favorably. For study 2, we scraped and analyzed reviews on a popular robotic vacuum cleaner as a proxy for real-world behavior. Customers who use nicknames give the product a higher star rating, which supports our hypothesis. Next, we conducted three controlled experimental on-

line studies to examine whether nicknaming can actually cause product responses. Studies 3a, 3b, and 4 provided supporting evidence for the proposed moderated mediation model by experimentally manipulating the degree of product autonomy and nicknaming using 2 (nicknaming: yes vs. no) x 2 (degree of autonomy: low vs. high) between-participant designs. Critically, study 3a demonstrated that nicknaming does not increase the perceived human likeness of a product distinguishing the effects from mere anthropomorphization. While studies 3a and 3b investigated a very common nickname category, that is, human nicknames, study 4 extended the findings using a broader definition of nicknaming. In addition, study 4 investigated psychological ownership and trust as further potential alternative accounts. The three experimental studies enriched the findings from the two field studies by showing that nicknaming does, in fact, increase perceived control and product valuations for autonomous products. Taken together, the five studies of our research provide support for our hypotheses across different product categories (i.e., vacuum cleaners, kitchen machines, lawn mowers) and samples from different populations (i.e., customers of a smart kitchen device, customers of a robotic vacuum cleaner, online samples, student sample).

The current research demonstrates that nicknaming autonomous products can offer a counter to the feeling of losing control which is commonly triggered by product autonomy (de Bellis and Johar 2020; Jörling et al. 2019; Puntoni et al. 2021). Overall, our studies show that using nicknames for autonomous products leads to an increase in perceived control, which in turn increases the valuation of the product. Importantly, we demonstrate that this effect is mitigated for conventional products. We conclude that depending on product category (as some products may be perceived as more or less autonomous in general) and context, encouraging the use of nicknames can be a valuable measure for practitioners.

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It must be great; it rose through the ranks: Studying the effect of dynamic ranks on consumer judgments

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EXTENDED ABSTRACT

Firm ranks are dynamic in nature. Across five studies, we show that consumers reward (vs. penalize) firms that move up (vs. down) these lists. This effect is stronger when the firm is viewed as mutable and is moderated by the current rank and magnitude of rank change of the firm.

Ranked lists are ubiquitous and such lists are often updated with entities changing ranks. Past research indicates that consumers rely on the present rank of the firm to evaluate the status of a ranked entity. In this research, we demonstrate that consumer evaluations of a firm are based on a firm's current as well as past rank.

Different predictions are possible on how rank change may impact consumer perception. However, the evidence from literature on reference-dependence and missing information-based inference-making support the direction of change proposition, i.e. the direction of rank change influences the evaluation.

Hypothesis 1: Consumers' evaluation of a ranked entity is based on the direction of rank change such that a rise in rank will result in better evaluations of the ranked entity than a fall in rank.

Extant literature indicates that people rely on past performance as an indicator of future outcomes. When estimating changes in the future, individuals are less likely to look for underlying causes and more likely to use past data in making forecasts. Formally:

Hypothesis 2: The effect of direction of rank change on evaluation is mediated by consumers' perception of the past performance of the ranked entity.

Psychological momentum serves as a state of mind in which initial success or failure influences the subsequent outcome and a large change in past is seen as a predictor of a large change in future. Hence,

Hypothesis 3: The effect of the direction of rank change on consumers' evaluation of the entity is moderated by the magnitude of rank change.

Further, based on Weber-Fechner Law we hypothesize that the changes in ranks will be examined relative to the magnitude of the original rank.

Hypothesis 4: For the same absolute numerical rank change, the effect on evaluations will be smaller if the current rank is numerically larger than (vs. numerically smaller).

Entities may differ in their degree of mutability. We believe that the perceptions for mutable entities are likely to be impacted by rank change information but not so for immutable entities.

Hypothesis 5: The effect of direction of rank change on consumers is moderated by the perceived mutability of the entity such that the effect is stronger (vs.

weaker for offerings perceived to be more (vs. less) mutable.

Study 1: Incentive compatible study

Graduate students (N=134, 27% females) were randomly assigned to one of two between-subjects incentive conditions ((Rise 60@40/Drop 20@40). After reading a report on a fictitious startup, participants indicated their evaluation of the startup and also whether they would choose 1000 units in Local currency or the money equivalent to the current (unknown) valuation of the ESOP. A one-way ANOVA indicated a significant effect of direction of rank change ($p < .001$). A binary logistic regression revealed that in the fall (vs. rise) condition, more (vs. less) participants chose the fixed sum rather than money equivalent to the value of ESOP. This indicated a support for the hypothesized effects.

Study 2: Mediation

The study examined the underlying mechanism (perceptions of past performance) of the 'direction of rank change' effect. US residents (N=104, 40% females, Prolific) were randomly assigned to one of two conditions (Rise 90th @50th vs. fall 10th @50th) pertaining to a fictitious hotel. The respondents indicated their perception of past performance and their likelihood for selecting the hotel for their stay.

An ANOVA showed a significant effect of direction of rank change on likelihood of selection of hotel ($p = .002$). Next, a mediation analysis using Hayes (2017) PROCESS (model 6) showed the indirect effect of serial mediation (direction of rank change @consumer perception of the past performance of the hotel @evaluation of the hotel @likelihood of selection of the hotel) was significant, while the direct effect was not significant.

Study 3: Moderation by Magnitude of Rank Change

This study examined the moderation effect of the magnitude of rank change. Graduate respondents (N=132, 42% females) participated in the study about a fictitious restaurant. The experimental design was a 2 (Fall/Rise) X 2 (Magnitude: large- 40/small- 5) between subjects. Participants indicated their likelihood of selecting the restaurant. An ANOVA revealed significant effects of direction of rank change ($p < 0.001$), magnitude of rank change ($p = .025$) and a significant interaction ($p < 0.001$).

The results indicated that the likelihood of selection was significantly higher when the restaurant rose in rank (vs. fall in rank). However, for small rank change, there was no significant difference between the two conditions.

Study 4: Moderation by Current Rank

This study investigated the impact of the rank attained by the firm after the rank change (i.e., current rank). US adults (N=295, 44.2% female, Prolific) evaluated a player for drafting in their fantasy team based on their ranks in the top 250 list of players. The experiment design was 2 (Fall/Rise) X 2 (Current rank: High- 40th/ Low- 200th) between subjects. Respondents indicated their likelihood of selecting the player. ANOVA indicated significant effects of current rank ($p < 0.001$), direction of rank change ($p < 0.001$), and their interaction

($p=.042$). The results indicated that the player's difference in selection between the rise vs. fall in rank conditions was significantly higher in the numerically small (vs. numerically large) current rank condition.

Study 5: Effect of Firm Mutability

In study 5, we demonstrate that the direction of rank change is moderated by the nature of the entity.

U.S. adults recruited through Prolific (N=416, 41% female) participated in the evaluation of a restaurant in a 2 (Direction: rise, 15th to 9th vs. fall, 3rd to 9th) X 2 (Nature of entity: Immutable/Mutable) between subjects design. The mutability/immutability priming was done by informing the participants that the ownership of the restaurant had changed/not changed recently.

A 2x2 ANOVA with evaluation as the dependent variable indicated a significant main effect of direction of rank change ($p<0.001$), mutability ($p<0.001$) and significant interaction effect ($p<0.001$). The finding indicate that an immutable entity is not impacted by a rise or fall in rank as much as a mutable entity.

This research is one of the initial studies on dynamic ranks. The research provides suggestions on how firms can manage their communication about rank change to get more positive evaluations from consumers.

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Being conservative with AI: how AI adoption influences consumers risk tolerance in financial decisions

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EXTENDED ABSTRACT

This research examines how the adoption of AI influences consumers' risk preferences in financial decisions. Through 6 studies, we show that consumers reveal a lower risk tolerance to an AI (vs. human) financial advisor. This happens because consumers believe AI is less flexible in adjusting decisions in domains involving risk.

Recent years have witnessed a rapid growth of Artificial Intelligence (AI) in various fields, including personal recommendation, health care, investment, etc. (Longoni & Cian, 2022; Zhang, Pentina, & Fan, 2021). Extant research has investigated consumers' adoption of AI. Some research finds that consumers exhibit a general "algorithm aversion". For example, people have a lower tolerance for AI making mistakes (Dietvorst, Simmons, & Massey, 2015) and they distrust AI's ability to take into account individual differences in medical decisions and product recommendations (Longoni, Bonezzi, & Morewedge, 2019; Longoni & Cian, 2022). By contrast, other work finds that consumers are more likely to choose AI for tasks that are highly objective (Kim & Duhachek, 2020; Logg, Minson, & Moore, 2019), and when they are allowed to modify an AI's forecasts (Dietvorst, Simmons, & Massey, 2018).

While prior research mainly focuses on people's *adoption* of AI, little attention has been paid to consumers' *input* to the AI system *after they have adopted it*. In the current research, we suggest that consumers would reveal a lower risk tolerance to an AI (versus a human) financial advisor. First, compared to humans, AI runs in strict accordance with the mathematical formula (Johnson & Verdicchio, 2017). This results in AI making more stable but less flexible decisions (Dietvorst & Bharti, 2020). Second, AI is less likely to empathize with humans for their concerns for uncertainty in decision domains involving risks. Humans are averse to uncertainty in situations that involve risks (Robinson, Wilkowski, & Meier, 2008), such as in gambling (Tversky & Kahneman, 1981, 1992) and product choices (Robinson et al., 2008). By comparison, AI does not share with humans their emotions, intentions, and autonomy (Ward, Olsen, & Wegner, 2013). Thus, consumers should feel less secure relying on an AI (vs. human) to make decisions that involve high risk and flexibility, such as making investment decisions in the stock market. As a result, we predict that they would reveal a lower risk tolerance when outsourcing their decisions to AI. We test our proposition in six studies.

Study 1 employed a 2-cell (financial advisor: AI vs. human) between-subject design. Participants imagined having 100,000 Chinese Yuan either managed by an AI or a human. Participants indicated their risk tolerance on a 100-point slider scale (1=very conservative; 100=very risk-seeking). The results revealed that consumers indicated a lower risk tolerance when having AI (vs. human) as their financial advisor ($M_{AI}=33.42$, $M_{human}=39.44$, $t(1, 197)=-2.18$, $p=0.031$).

Study 2 replicated Study 1 with U.S. samples with an identical design. Again, the results showed that the risk tolerance offered by participants in the AI condition was significantly lower than those in the human condition ($M_{AI}=42.56$, $M_{human}=47.92$, $t(1, 295)=-2.05$, $p=0.041$).

Study 3 provided initial process evidence through mediation. The study design was identical to study 2, except that we also measured the extent to which consumers believe their financial advisor (AI vs. human) can flexibly adjust decisions under risk. We replicated our main effect ($M_{AI}=32.01$, $M_{human}=38.34$, $t(1, 180)=-2.14$, $p=0.034$). Im-

portantly, participants believed that AI was less able to adjust the risk level of the investment based on market conditions ($M_{AI}=3.43$, $M_{human}=4.15$, $t(1, 180)=-4.42$, $p<0.001$), which mediated the effect of AI (vs. human) advisors on consumers risk tolerance ($b=1.74$, $SE=1.26$, 90% CI:[0.14, 4.23]).

Study 4 demonstrated the underlying process of our effect by directly manipulating the ability of AI. Participants were randomly assigned to one of three conditions (human vs. AI vs. AI-flexible). In the AI-flexible condition, participants were told that AI can make flexible adjustments to the investment when the market condition changes. An ANOVA confirmed a significant main effect ($F(1, 355)=3.21$, $p=0.042$). Specifically, participants were less risk-tolerant in AI than human conditions ($M_{AI}=35.72$, $M_{human}=41.39$, $t(1, 237)=2.42$, $p=0.016$). However, such difference was attenuated in AI-flexible condition ($M_{AI-flexible}=40.72$, $t(1, 237)=-0.258$, n.s.).

Study 5 demonstrated a boundary condition of our effect. We argue that when the financial market situation is good, AI's ability to flexibly handle the potential risks would be less important, resulting in the attenuation of our effect. The study employed a 2 (financial advisor: AI vs. human) X 2 (market situation: good vs. bad) between-subjects design. Participants either had their investment managed by an AI or humans. Orthogonally, we described the investment market to be good vs. bad. An ANOVA revealed a marginally significant interaction on consumer risk tolerance ($F(1, 393)=2.818$, $p=0.094$). Specifically, for participants in the bad market condition, an AI (vs. human) advisor led to lower risk tolerance ($M_{AI}=31.31$, $M_{human}=37.87$, $t(1,197)=2.637$, $p=0.009$). By comparison, when the market condition was good, there was no difference between AI and human conditions ($M_{AI}=39.06$, $M_{human}=39.59$, $t(1, 196)=0.204$, n.s.). Furthermore, the perceived flexibility of the financial advisor mediated the effect of AI (vs. human) on participants' risk tolerance in bad market situations ($b=-0.80$, $SE=0.65$, 90% CI: [-2.26, -0.02]), but not in good market situations, resulting in a moderated mediation ($b=-1.48$, $SE=1.02$, 90% CI: [-3.77, -0.25]).

Finally, in study 6, we measured people's expected performance of the two types of financial advisors to test people's general trust in AI vs. humans. We adopted a single factor (AI vs. human) within-subject design. Participants imagined having \$1000 managed either by a human or an AI. We measured participants' performance expectancy for both advisors (Zhang et al., 2021). The results of paired t-tests showed that participants believe AI and humans were equally likely to bring them positive investment outcomes ($M_{AI}=4.89$, $M_{human}=5.07$, n.s.). The expected best and worst performance also did not differ between AI and human advisors ($M_{AI-best}=1513.48$, $M_{human-best}=1477.77$, n.s.; $M_{AI-worst}=393.61$, $M_{human-worst}=418.80$, n.s.). Thus, our effect is less likely driven by consumers' distrust of AI in general.

In conclusion, our research showed that consumers reveal lower risk tolerance towards an AI than a human financial advisor. Our findings shed light on novel consequences of consumers adopting AI for their financial investment. Managers could use these insights to nudge consumers to build more healthy financial plans. Our findings also provided potential guidance on how to promote consumers' acceptance of AI advisors - by demonstrating AI's ability to make flexible decisions.

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Choice Mindset and Risk Taking

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EXTENDED ABSTRACT

This research shows that a subjective perception of choice, termed a choice mindset, can increase risk seeking, when the risk is instrumental to achieving a reward. This effect is driven by a desire to seize good opportunities. These documented effects of a choice mindset are eliminated for disinhibited risk taking.

Choice is an integral part of people's lives. Much research has focused on how the act of choosing impacts decision making. While traditionally choices have been viewed as choosing between different options people have (Luce 1998), recent research suggests that people could perceive that they have a choice even when they really don't have any options or might perceive that they do not have a choice, even in the presence of multiple options (Savani et al., 2011).

This subjective perception of having a choice, in the absence of making an active choice, is termed as a choice mindset (Savani et al., 2011; Ma et al. 2019). Consumers are constantly exposed to reminders, which makes such a choice mindset salient. For example, insurance brand Geico's advertisements emphasize that the choice is customers. Despite such marketing appeals, little is known about how a choice mindset activated by such reminders impacts decision making. The current research fills this gap by examining the impact of choice mindset on risky decision making.

Research has explored the impact of choice mindset in social contexts. For example, research shows that when the choice mindset was activated by asking people to think of all the mundane choices they had made on the previous day, they were more likely to blame the victims for their plight and feel less empathetic toward disadvantaged others in a subsequent task (Savani et al., 2011). Moreover, the choice mindset negatively impacts how people access welfare related policies; when a choice mindset is activated, people are less disturbed with high levels of income inequality in society (Savani & Rattan, 2012). This is primarily because when a choice mindset is activated people view their own as well as other people's actions through a lens of choice.

While research exploring the impact of choice mindset has documented its negative impact on social judgments, it is not clear if a choice mindset could impact risky decision making.

We argue that a choice mindset should increase willingness to take risky decisions, which are instrumental in attaining a reward. Why might that be the case? Research in sociology suggests that people view choice to have instrumentality value—that is, having a choice is perceived as instrumental to achieving rewarding outcomes (Gustafsson 2019). Moreover, research shows that when the concept of choice is made salient, people report a higher belief in free will, regardless of their personal circumstances (Feldman, Baumeister and Wong 2015).

Other research shows that anticipating an opportunity to choose can activate areas of the brain that are involved in motivation and reward processing (Leotti and Delgado 2011). Drawing upon a synthesis of these perspectives, we argue that people see choice as an instrumental tool, which can help get rewards. Thus, when a choice mindset is activated, people would want to seize the opportunities they see, thereby increasing their willingness to take risks that are instrumental to achieving rewarding outcomes. More formally,

Hypothesis 1A: Choice mindset will increase risk seeking when the risk is instrumental to attaining a reward.

Hypothesis 1B: Desire to seize a good opportunity should mediate the effect of choice mindset on instrumental risk seeking behaviors.

We further argue that if a choice mindset leads to a desire to seize a good opportunity, it should not increase willingness to take risks, which are primarily taken for the purpose of sensation seeking and do not present a rewarding opportunity. More formally,

Hypothesis 2: Type of risk will moderate the effect of choice mindset on risk seeking behaviors, such that when the risk is not associated with a rewarding opportunity, any effect of choice mindset on risk taking should get eliminated.

We report four studies to examine these hypotheses. All experiments, preregistered on OSF, were conducted on Amazon Mturk. We used VPN checks to identify if participants were taking the survey were outside the US. Accounts flagged by the VPN check procedure were directly moved to the end of the survey; no data for these participants were collected.

STUDY 1

Study 1 examines the hypothesis 1 in an investment context. Three hundred and twenty- one participants (mean age=36.5 years, 34% female) were randomly assigned to one of the two (Choice Mindset: Activated vs. Not Activated) conditions.

We manipulated mindset by asking participants to design a wall-art for their room. Participants could select one of the five quotes they wanted to go on their wall-art. In the choice mindset-not activated condition, participants were presented with five neutral quotes (e.g., "Don't Ask, Act"). Those in the choice mindset-activated were presented with five quotes emphasizing the importance of choice in life (e.g., "We have the power of choice"). All participants were then shown the final wall-art and asked to explain why they believe in the quote they selected.

Subsequently, participants were presented with an investment decision, in which they decided how much of their \$5000 savings (between \$0 and \$5000) they would invest in a high potential start-up. Finally, participants responded to various demographics.

Results

Thirteen participants wrote meaningless response to the open-ended question asking them to explain the reason for their quote, thus leaving us with a total sample of 308 participants. A one-way ANOVA on the amount invested in the start-up revealed that participants in the choice mindset-activated condition ($M=\$1860$) were willing to invest more of their savings in the startup business than those in the choice mindset-not activated condition ($M=\$1527$; $F(1, 306)=4.84, p=.028$). The findings of this study provide preliminary support for our hypothesis that when a choice mindset is activated, people are more willing to take an investment risk.

STUDY 2:

This study examines whether, as hypothesized, a desire to seize an opportunity mediates the effect of choice mindset on risk taking (H1A).

Method

Four hundred and twenty-nine participants were randomly assigned to one of the two (Choice Mindset: Activated vs Not) conditions. For mindset manipulation, we used the quote task used in Study 1.

Next, participants were presented with the investment survey we used in Study 1.

Participants then responded to three seven-point items (e.g., Investing in my future) tapping into how much they thought of opportunity seizing when making the decision. Participants also responded to two seven-point items (e.g., Investing is a risky proposition) tapping to the degree they thought about the negative consequences of investing.

Results

Investment amount. After removing those who wrote meaningless responses, we were left with a sample of 409 participants. Replicating the findings of Study 1, a one-way ANOVA on the amount invested in the business idea revealed that participants invested more of their savings in the choice mindset-activated ($M = \$1606$) than in the choice mindset-not activated ($M = \$1213$; $F(1, 407) = 10.68, p = .001$) condition.

Mediation. A one-way ANOVA on the composite opportunity seizing score ($\alpha = .72$) showed that participants reported a higher desire to seize opportunities in the choice mindset-activated ($M = 5.12$), compared with in the choice mindset-not activated ($M = 4.87$; $F(1, 407) = 4.69, p = .031$) condition. Thoughts on the negative consequences of the risk did not differ across conditions ($p = .14$).

A mediation analysis using process model 4 (Hayes 2012) with mindset (0=choice mindset-not activated, 1=choice mindset-activated) as the independent variable, investment amount as the dependent variable, and opportunity seizing score as the mediator revealed that the indirect effect of choice mindset through desire to seize opportunities was significant ($a_1b_1 = 98.48, SE = 45.97, 95\% \text{ CI } [0.01, .015]$, Figure 1). Same analysis with thoughts on the negative consequences revealed insignificant effect ($95\% \text{ CI } [-0.01, .011]$).

These findings provide stronger support for our underlying mechanism that a choice mindset leads to an enhanced desire to seize opportunities, which thereby increases risk-taking. One might argue that a choice mindset could increase confidence that one won't lose money.

However, our results show that participants in both the conditions were equally likely to think about the negative consequences of investing and thoughts about negative consequences did not mediate the effect.

STUDY 3

We argue that when the choice mindset is activated, people are more likely to seize opportunities presented by risky prospects. That is, people are more likely to take risks that are perceived as instrumental (Zaleskiewicz, 2001). However, when the risk is primarily for sensation seeking (such as gambling), effect of choice mindset on risk-taking should be eliminated.

Method

Three hundred ninety-two participants (mean age = 41.1 years, 44% female) were randomly assigned to one of four conditions in a 2 (Choice Mindset: Activated vs. Not) x 2 (Type of risk: Investing vs. Gambling) between-subjects design. We manipulated choice mindset using the quote sign task used in the previous studies. In the investment condition, participants were asked to indicate how much of their \$5000 would they be willing to invest in a high potential

investment project. In the gambling condition, participants considered how much of their \$5000 savings would they bet in an online betting game.

Results

After removing those who wrote meaningless responses, we were left with a sample of 356. An ANOVA on the amount allocated from savings revealed a significant main effect of risk type ($F(1, 352) = 45.77, p < .001$). Participants in the betting condition allocated a lower amount of their savings, compared to those in the investment condition ($M_{\text{betting}} = \$902.18$ vs. $M_{\text{investment}} = \1796.77). This effect was qualified by a significant two-way interaction between risk type and mindset ($F(1, 352) = 9.32, p = .002$). Participants in the choice mindset-activated condition allocated more of their savings to investment ($M = \$2001.13$), compared to those in the choice mindset-not activated condition ($M = \$1609.27, p = .032$). However, in the gambling condition, participants in the choice mindset-not activated condition ($M = \$1119.19$) allocated higher amounts to live betting, compared to participants in the choice mindset-activated condition ($M = \$704.67; p = .031$).

These findings further support our conceptualization related to opportunity seizing. When the risk presented an opportunity to achieve rewarding outcomes, a choice mindset increased risk-taking. However, when risk was merely for sensation seeking and not perceived as instrumental to achieve a reward, the effect of choice mindset on risk-taking was reversed.

Study 4

In the next study using a big data set we explore the real-world consequences of choice salience. Specifically, we test whether a belief in choice is associated with entrepreneurial ventures and taking loans to achieve their outcomes. We examine this hypothesis using a big data set, World Value Survey (WVS) (Inglehart et al. 2014).

Method

Although, the WVS includes a myriad of variables, of particular importance to current research, is the measure of people's belief in choice. Specifically, in the survey, people are asked to rate their belief in choice by indicating the degree to which they feel they have completely free choice in their lives (1 means «no choice at all» and 10 means «a great deal of choice»).

The WVS also measures various life outcomes and decisions including entrepreneurial initiatives and loan usage. Entrepreneurial initiatives are measured with the question "Do you own a business or have taken tangible steps to start a business during the past twelve months (either by yourself or with others)?, 1-No steps, 2- Have taken steps, 3-Already have an established business". The usage of loans is measured with the question "During the last year did your family", (1-Save money, 2-Just get by, 3- Spent some savings, 4- Spent savings and borrowed money). For the participants who indicated that they borrowed money, two other questions measured whether they mention "Starting or growing a business" or "Household purchases" among the reasons why they borrowed money. We predict that a choice mindset will be positively associated with borrowing money for entrepreneurial purposes, but not for regular household purposes. Specifically, those who have a high belief in choice would seize a risky opportunity of taking a loan for bettering their future, but not for general household purchases.

In the following analyses, we controlled for different socio-demographic characteristics (age, gender, education, income) and citizenship (being a citizen of the country or not).

Moreover, to control for the heterogeneity due to country-level cultural and societal differences, all the estimations include dummies based on socioeconomic grouping employed by the World Bank¹.

¹<https://data.worldbank.org/country>

Results

Choice and Entrepreneurial Initiatives. We examined the relationship between the choice mindset and entrepreneurial attempts. A regression analysis revealed a main effect of belief in choice, such that the more they believe they have a choice in life, the more likely they are to own a business or taken steps to establish one ($\beta = .034$ (standardized), $t = 2.44$, $p = .015$).

Choice and Usage of Credit. The logistic regression model with belief in choice as the predictor and borrowing for entrepreneurial purposes as the outcome was statistically significant ($\chi^2(13) = 122.4$, $N = 1846$, $p < .001$). The model explained 13.9% (Nagelkerke R²) of the variance and correctly classified 90.6% of cases. As predicted, amongst participants who indicated that they borrowed money, high belief in choice is associated with a higher likelihood to borrow money for establishing or growing a business (Exp (β) = 1.97, Wald- $\chi^2(1) = 4.41$, $p = .036$).

Additionally, we found no significant association between choice mindset and borrowing for household purchases ($p = .6$).

These findings present stronger evidence that a choice mindset leads people to take instrumental risks. Specifically, controlling for other factors people who have a stronger belief in choice were more likely to undertake entrepreneurial projects and more likely to take loans for such projects.

DISCUSSION

Much research has focused on how actively choosing between options can impact motivation and satisfaction. Recent research suggests that even in the absence of making an active choice, one could have a subjective perception of having a choice, which is referred to as a

choice mindset. In fact, such a choice mindset could be activated by merely exposing people to simple choice related cues. The current research examines if activating a choice can impact risky decision making. Across four studies, we show that a choice mindset enhances the tendency to seize opportunities, which in turn increases instrumental risk-taking. While a choice mindset increases risk taking behaviors instrumental to achieve a rewarding outcomes, a choice mindset decreases disinhibited risk taking.

The current research has important theoretical and managerial contributions. First, to the best of our knowledge, this is the first research to examine the impact of a choice mindset on risk-taking. To elaborate, while past work has shown the consequences of actively choosing tasks or products on motivation (Cordova & Lepper, 1996; Iyengar & Lepper, 1999) and satisfaction (Langer & Rodin, 1976; Taylor & Brown, 1988) no work has hitherto examined how mere salience of choice – without making an actual choice impacts risky decision making.

Second, our research contributes to the limited literature on risk taking by providing support for two different types of risk taking, findings of this research show that while a choice mindset increases risk taking, aimed at seizing an opportunity, it reduces disinhibited risk taking.

Finally, the current research makes important policy making implications. These findings show that a simple nudge, activating a choice mindset, could enhance consumer welfare by activating a tendency to seize opportunities that lead to positive outcomes in the long run.

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The Advantage of Trustworthiness or the Drawback of Being Outdated? How Brand Anthropomorphism Shapes the Effects of Brand Age Cues

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EXTENDED ABSTRACT

Whereas old brands are typically perceived as trustworthy and evaluated positively, older people are often associated with negative age stereotypes. A series of studies show that brand anthropomorphism moderates the effects of communicating a brand's age by using brand age cues, such as "Since..." or "Established..."

Many brands communicate their year of establishment (e.g., "established 1869," Heinz). Different strands of research on brand heritage, antiquity, or business longevity investigated the effects associated with an old brand age. However, literature is limited and scattered without consistent terminology.

We use the term "brand age cue" and focus on the effects of depicting age as a cue in contrast with not depicting it. This rather neutral conceptualization allows for the inclusion of a young age (unlike concepts such as antiquity or heritage). Moreover, a parallel can be drawn between the brand's age and an individual's age.

While an old brand age is predominantly associated with positive effects such as increased quality perceptions or greater brand trust (e.g., Pecot and Merchant 2022), an old person is often linked to negative age stereotypes. Research on stereotyping has found perceptions of old people as incompetent or less effective (e.g., Rosencranz and McNevin 1969). In the context of technology and innovation adoption, older people have been described as resistant to change or lacking technological skills (e.g., Chiu et al. 2001).

There are a variety of circumstances under which brands are perceived as similar to human beings. For example, brands are often intentionally anthropomorphized by their owners; that is, provided with human-like features by using visual cues or by letting the brand speak in the first person (Puzakova and Aggarwal 2018).

Based on the contrast between the predominantly positive effects of a brand's age and the negative effects of a person's age, we predicted that brand anthropomorphism moderates the effects of brand age cues and expect a negative or null effect on consumer evaluations when combined with an old age cue. In addition, we assumed that age stereotypes and brand trust would play mediating roles. We focused on the context of new products, where brand age might play an important role due to the risk for consumers (Desai, Kalra, and Murthi 2008), and because negative age stereotypes may be relevant in innovation adoption contexts.

We examined the expected effects in three empirical studies using a 2 (brand age cue: absent, present) \times 2 (mascot or brand anthropomorphism: absent, present) between-subjects design.

Study 1 aimed to establish the effect of brand age cues on product evaluation and the mediating role of brand trust. Moreover, it investigated the moderating role of brand anthropomorphism using the mascot of a real brand. In an online survey, 214 consumers interested in cars were shown an advertisement for a new sustainable tire of the Michelin brand. In the brand age cue-present condition, the brand's founding year was depicted by stating "since 1889" (Zhang, Kashmiri, and Cinelli 2019). In the mascot-present condition, the "Michelin Man" was shown. Participants reported their attitude toward the product, their purchase intention, and their trust in the brand. The results showed that in the mascot-absent condition, the brand age cue increased brand trust, resulting in a more positive attitude and higher purchase intentions. These effects did not appear in the mascot-present condition, indicating that anthropomorphizing a brand hinders the positive effects of a brand age cue.

Study 2 replicated these findings based on 200 young consumers. We used a fictitious brand, a foldable smartphone, and a more explicit

manipulation of brand anthropomorphism. A letter in the brand name was designed like a human stick figure, speech bubbles were integrated, and the first-person singular was used (Puzakova, Kwak, and Rocereto 2013). The results confirmed the indirect effect of a brand age cue on attitude via increased brand trust in the anthropomorphism-absent condition. In the anthropomorphism-present condition, the effect of the brand age cue on brand trust was reversed.

Study 3 aimed to provide further process evidence by investigating the activation of age stereotypes (Hummert et al. 2018). A sample of 255 consumers was shown advertisements for virtual reality glasses. As expected, in the anthropomorphism-absent condition, there were no differences in activated age stereotypes between the brand age cue conditions. However, when the brand was anthropomorphized, the depiction of a brand age cue led to more negative age stereotypes and decreased brand trust.

Our results reveal brand anthropomorphism as a boundary condition for the positive, trust-enhancing effect of brand age cues. When a brand is anthropomorphized, depicting an old age leads to more negative age stereotypes, resulting in decreased brand trust. Future research could investigate whether these effects hold for products other than new products. Moreover, it would be worth investigating young brand age cues and the role of consumers' age. Finally, practitioners should consider these findings if they intend to communicate their brand's age while simultaneously humanizing their brand.

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Breaking the Pact: Resisting Consumer Responsibilization Through Political Comedy

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EXTENDED ABSTRACT

This ethno(netno)graphy of a political comedy podcast community explicates how a grotesquely realist ‘structure of feeling’ fosters resistance to consumer financial responsibilization and inspires the push for collective economic protections from markets. In doing so, it makes original contributions to literature concerned with affective dynamics of consumer responsibilization and financialization.

INTRODUCTION

(Fisher 2009, 2) identifies ‘capitalist realism’, or “the widespread sense that not only is capitalism the only viable political and economic system, but also that it is now impossible to even *imagine* a coherent alternative to it,” as the affective condition of the neoliberal zeitgeist. Consistent with this, consumer research has largely focused on affective dynamics that create responsible, neoliberal consumer subjects (Bajde and Rojas-Gaviria 2021) while overlooking affective conditions that might disrupt neoliberal subjectivity. By theorizing affective dynamics that disrupt consumer responsibilization and inspire consumers to push for collective market protections, this paper sheds light on how to move past the the ‘incurable optimism’ of American neoliberal myth making (Peñaloza and Barnhart 2011) and the mainstream consumer belief that systemic economic overhaul is unrealistic, even if desirable (Henry 2010). To do so, we outline how a particular ‘structure of feeling’ (Williams 1977) debases and degrades the neoliberal, aspirational, responsible consumer discourse while also evoking a sense of impermanence and change. The effect is that consumers resist injunctions to become neoliberal responsible consumer subjects and instead push for collective initiatives to reduce economic precarity through unions, mutual aid funds, and public policy.

Consumer Financial Responsibilization

Extant research describes how the responsible consumer is constituted through neoliberal governmentality (Giesler and Veresiu 2014) and affective mediation (Bajde and Rojas-Gaviria 2021). Yet, it falls short of asking what affective conditions hinder financial responsibilization, how consumers organize to resist financial responsibilization, or what political alternatives consumers develop.

Given the decline in collective consumer protections under neoliberalism, “financially literate workers qua consumers are assumed to manage their increasingly individualized economic risk” (Arthur 2012, xi). In this light, the responsibilized financial literacy discourse is portrayed as empowering by helping consumers grapple with increasing precarity through thrifty consumption, investment, and economic resiliency (Clarke 2015). As a morally heroic, (Coskuner-Balli 2020) “good consumer” who “keeps the economy afloat,” (Peñaloza and Barnhart 2011, 758), the financially literate consumer is constructed through moral condemnation of the feckless consumer (Bradshaw and Östberg 2019; Giesler and Veresiu 2014). However, empirical research finds financial literacy initiatives are ineffective (Clarke 2015; Fernandes et al. 2014; Ward and Lynch 2019). Instead, researchers argue they serve an ideological function by distracting attention from the dismantling of welfare programs and industry deregulation (Arthur 2012; Clarke 2015; Willis 2008).

THEORY

For Bakhtin (1984), the ‘grotesque realism’ of carnival humor marks a “privileged form of cognition...[which] grasps the world [...] in its ceaseless growth, decay, fertility, mutability, rebirth and renewal, and [...] undercuts the spuriously eternal schemas of official ideology” (Eagleton 2019, 33). Grotesque realism should thus be thought of as antithetical to capitalist realism (Fisher 2009), which stifles the political imaginary and affects a sense of political permanence, immutability, and lack of alternatives. We draw from the Bakhtinian theoretical vocabulary to analyze the ‘structure of feeling’ (Williams 1977) of a political community organized around a comedy podcast that resists capitalist realism, critiques the financially responsible consumer discourse, and imagines an alternative, post-responsibilized consumer subjectivity.

METHODOLOGY

Analysis is based on a 4+ year ethno(netno)graphy of Street Fight Radio (SFR), a political comedy podcast associated with the ‘dirtbag left’. We follow in CCT’s hermeneutic tradition to analyze data from podcast episodes, fan interviews, social media posts, fan written SFR magazine entries, and participant observations from live shows and fan organized parties.

FINDINGS

Findings are structured in two parts. In part one, we characterize SFR’s subversive ‘structure of feeling,’ which creates the affective conditions that counter financial responsibilization. Specifically, we show how SFR’s structure of feeling disaffects aspirational neoliberalism and bourgeoisie civility while affecting radical scepticism of expertism and a sense of impermanence and change. In part two, we show how this structure of feeling disrupts attempts to shape Street Fighters (SFs) as financially literate, responsible consumers. This disruption leads to resistance and the development of collective economic risk reducing initiatives. Specifically, we show how SFs ridicule individualized, moral framing of economic issues, mobilize shared collective experience to evoke systemic political analysis, develop alternative collective economic protections from market predation, and, foster a post-responsibilized consumer subjectivity.

Contributions

First, we highlight affective dynamics that disrupt capitalist realism and consumer financial responsibilization, while simultaneously motivating collective economic protections from market predations. In doing so, we demonstrate the importance of grotesque degradation of American economic myths’ incurable optimism by wallowing in consumers’ shared precarity. Second, we demonstrate why consumer researchers ought to take the consumption of political comedy seriously. SFR consumers use humour for political criticism, to draw out the systemic causality behind economic precarity, to mock the prescriptions of supposed ‘experts’, to invert market-mediated morality, and to advocate for substantial political reorganization. Finally, we show how alternative new media can function as conduits for progressive political organizing grounded in economic populism.

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The Role of Emotional State in Receiving Consumer Engagement

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EXTENDED ABSTRACT

The current paper focuses on the role of consumers' emotional state in receiving consumer engagement for the brand-generated social media content. This study highlights the importance of context for receiving consumer engagement. It offers insights into the congruency between the emotional characteristics of the brand-generated content and consumers' states.

Imagine a war breaking in one of the neighboring countries of a nation and the members of the society are expressing *fear* and *sadness* on social media platforms. In the meantime, consider a brand planning to release its newest social media advertising campaign, filled with *excitement*, hoping to receive engagement. Should the brand manager go with the campaign that evokes *excitement* when the society is *fearful* and *sad*? Or should the brand manager pick another emotion in the campaign? If so, which emotions would be more likely to receive more engagement when the society is feeling fearful and sad? This paper examines the interplay between the emotional state of the consumers and the emotional content of the brand-generated posts (i.e., the match or mismatch defined over a multidimensional space of emotions), and how they come together to influence consumer engagement with social media content.

Brands invest significant resources to create social media content (BGC hereafter) that receives engagement which is valuable for firms; it can increase financial performance and sales (e.g., de Oliveira Santini et al. 2020). Extant work seeking to understand the characteristics of BGC that drives engagement (e.g., Akpinar and Berger 2017) has identified the use of emotions as a critical driver. Though research has made significant headway in offering insights as to which specific emotions in BGC lead to greater engagement and why (e.g., Berger and Milkman 2012) little is known about how consumers would engage with the emotional content given their emotional state. This study aims to fill this gap.

We advance the current understanding of the role emotions play in consumer engagement with BGC in two ways. First, we extend the literature by studying the role of context, specifically the collective emotional state of a social media network. As social media content is not consumed in an emotional vacuum and the emotional state of consumers defined at a collective level has been shown to predict important real-life phenomena (e.g. Bollen et al. 2011), we propose the emotional state of the consumers as a critical yet overlooked contextual factor in this setting. Second, we extend the literature by exploring a wider range of emotions and underlying dimensions. The existing body of research exploring the effectiveness of emotions in BGC has focused on a limited set of discrete emotions and a few underlying characteristics of emotions, such as valence and arousal. However, the world of emotions is complex, especially considering the emotional state of the consumers and not necessarily two-dimensional (Fontaine et al. 2007). Therefore, we study twenty-four emotions and nine dimensions.

Using feelings-as-information theory (Schwarz 1990), consistency effects model (Kamins et al. 1991), and contrast effects (Meyers-Levy and Tybout 1997), we predict that the emotional state of the consumers will directly and indirectly impact their engagement with BGC. We put together a unique data set. First, we obtained BGC and consumer engagement data from a digital agency. The data set contains detailed information on 103,436 brand-generated posts on Twitter, posted between January 1, 2017 and March 31, 2018 and by 359 fast-moving consumer goods brands. To calculate the emotional state of the network, we ob-

tained a second data set containing 2,895,103 tweets posted in the same period, sampled randomly and daily using a location-based API, retrieved by a marketing research agency. To extract the emotions elicited in both data sets, we adopt a lexicon-based approach to automated text analysis and created twenty-four corpus-based emotion lexica. Finally, we conducted a survey to measure the underlying dimensions of the emotions. Factor analysis revealed three higher-order dimensions: valence (composed of valence, time, effort, attention, motivational state), arousal, and dominance (composed of dominance, certainty, agency).

The results from zero-inflated negative binomial regressions for the number of likes and the number of shares show that posting BGC with a negatively-valenced emotion or a high-arousal emotion increases engagement in general, consistent with extant literature. New to the literature, we show that BGC featuring emotions scoring high in dominance enjoy greater levels of engagement. Moreover, we find that engagement increases with the arousal level of the social network independent of the emotions in BGC. Considering the effects of the content and the context together, we find that posts with lower levels of valence and higher levels of arousal than that of the consumers' emotional states receive more likes and shares. As to the role of dominance in the interplay between emotional content and context, we find that posts featuring emotions with higher levels of dominance than that of the consumers' emotional state receive more likes but not shares. By establishing the relationship between the emotional state of a social network and the effectiveness of BGC emotions, our research shows that firms can tailor their social media campaigns and enjoy greater engagement by monitoring, predicting, and tapping into the zeitgeist.

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The Impact of Tightness-Looseness on Consumer's Impulsive Consumption Tendency

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EXTENDED ABSTRACT

Four studies examine the effect of consumers' tightness-looseness orientation on impulsive consumption tendency. The findings show that consumers' degree of tightness orientation (but not their looseness orientation) increases impulsive consumption. Fixed mindset is a key mechanism underlying these effects.

Existing literature seems to suggest that individuals in a tight (vs. loose) culture are less likely to consume impulsively. Individuals in a tight culture tend to be more cautious and dutiful, and have higher self-regulatory strength (Gelfand et al. 2011), which in turn, has been shown to reduce impulsive consumption (Baumeister 2002). In contrast to the prediction above, we propose that consumers' tightness orientation, but not their looseness orientation, is associated with a stronger fixed mindset, which in turn, increases impulsive consumption.

Tightness orientation reflects individuals' endorsement of norms, values, and behaviors in society. For tight individuals, tolerance for deviation is minimal. In contrast, looseness orientation is characterized by the belief that heterogeneity is more typical as there is ample latitude in what is considered appropriate behavior, and deviations in judgments, choice, and behavior are more tolerated (Li, Gordon, and Gelfand 2017). We expect individuals with a tightness orientation to engender a fixed mindset, because those with a fixed mindset are more likely to adhere to and endorse the existing norms (Mathur, Chun, and Maheswaran 2016). Consistent with our reasoning, Chinese children in Beijing (high in tightness orientation) tend to be higher in fixed mindset compared to their immigrant counterparts in Los Angeles (high in looseness orientation; Kim et al. 2017). Similarly, tight (vs. loose) consumers tend to have stable preferences and are thus more brand loyal (Li, Gordon, and Gelfand 2017).

As for the link between fixed mindset and impulsive consumption, research suggests that consumers with a fixed mindset perceive self-control as an inherent strength or trait that is not under one's voluntary control (James 2021). Therefore, when facing product choices that do not have well-established norms to guide their behavior, consumers tend to exhibit a greater impulsive consumption tendency. Indeed, consumers primed with a stronger fixed mindset consume more unhealthy food, such as adding more toppings on ice-cream and getting more fries with a burger (James 2021).

We tested these predictions in three studies, including a field study. Study 1 ($N=406$, MTurk workers) provided initial evidence for the relationship between tightness-looseness orientation and impulsive consumption tendency, using chronic measures. Tightness-looseness orientation ($\alpha=.73$) was measured by a six-item scale adapted from Gelfand et al. (2011) to the individual level. Impulsive consumption tendency ($\alpha=.89$) was measured with a five-item scale (Rook and Fisher 1995). A regression analysis on impulsive consumption, using tightness-looseness orientation as the independent variable, revealed a positive effect of tightness-looseness orientation ($\beta=.30$, $t=3.70$, $p<.001$), supporting our prediction that tightness orientation enhances individuals' impulsive buying tendency.

Study 2 ($N=144$, Prolific workers) was designed to test the mediating role of fixed mindset. Tightness-looseness orientation ($\alpha=.71$) was measured as in study 1. Participants were then asked to rate eight questions assessing their state (rather than chronic) fixed mindset ($\alpha=.94$) using a seven-point scale adapted from Kwon and Nayakankuppam (2015). Thereafter, respondents participated in an impulsive buying task adapted from Zhang, Winterich, and Mittal (2010) and were told that in

addition to the remuneration for participating in the study, they will be entered in a lottery for a gift certificate worth \$10 that can be spent on a list of items consisting of four vice products (a Snickers Bar, a serving of Oreo cookies, a bag of potato chips, and a piece of chocolate cupcake) and four virtue items (a Granola Bar, a serving of carrots, a bowl of salad, and one apple). We used the total amount spent on vice items as an indicator of impulsive consumption tendency, which served as our dependent variable. We also added the total amount spent on virtue items. A regression analysis on impulsive consumption tendency, using tightness-looseness orientation as the independent variable, revealed a positive effect of tightness-looseness orientation on vice products ($\beta=.18$, $t=2.14$, $p=.03$), but not virtue products ($\beta=-.11$, $t=-1.31$, $p=.19$). Also, fixed mindset mediated the relationship between tightness-looseness orientation and impulsive consumption tendency (.19; 95%CI=[.01, .51]).

Study 3 ($N=114$, actual shoppers in a store) investigated a behavioral consequence of tightness-looseness orientation and impulsive consumption in a real choice task. In the context of choosing complimentary popcorn from four different size options (i.e., snack, small, medium and large), we expected tight (vs. loose) individuals to be more likely to choose the large size and this effect would be mediated by a fixed mindset. Respondents were shoppers of a popcorn store in a southern U.S. state. Consumers were approached as they entered the store and were given a brochure that encouraged either a "Having Clear Expectations" (tight condition) or a "Having No Clear Expectations" (loose condition) on how people should behave. Next, participants were instructed that the study involved a brief survey on cultural awareness. They then rated the state fixed mindset questions ($\alpha=.87$) as in study 2. At the end of the survey, participants were asked to choose from the four popcorn size options from "snack" to "large" as compensation for their participation. As expected, a one-way ANOVA showed a significant effect of tightness-looseness on impulsive consumption tendency ($F(1,112)=7.33$, $p<.01$). Participants in the tight condition ($M=3.11$) choose larger size of the popcorn than those in the loose condition ($M=2.62$). Further, fixed mindset mediated the relationship (.10; 95%CI=[.02, .25]).

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The Below-Average Effect in Consumption: When and Why Consumers Think They Buy Products Less Than Other Consumers Do

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EXTENDED ABSTRACT

People typically consider themselves above-average in many domains, but we find that the reverse holds for purchasing: consumers think they buy products less frequently than the average consumer does. We explore the mechanism behind this below-average effect, identify moderators, and show how it affects responses to loyalty programs.

When people evaluate themselves compared to other people, research typically finds an *above-average effect*. People for example think they are better car drivers than others (Svenson 1981), which demonstrates bias because not everyone can be above-average. Although in most cases people tend to evaluate themselves more favorably than others (Alicke 1985), there are also domains that exhibit *below-average effects*. For instance, most people rank themselves below-average for difficult abilities like juggling (Kruger 1999). Past research demonstrated the robustness and importance of these biases for judgments of one's abilities, but limited research investigated these comparative evaluation biases for consumer behavior (e.g., Frederick 2012; Polman 2021). Surprisingly, there is no research that investigates these biases in relation to how often people buy products. Do people typically see themselves as above- or below-average in how often they buy products? Do these perceptions depend on the type of product in question, and do they impact consumers' behavior?

We present five studies (two preregistered, total $N=3429$) that explore these questions. We find that consumers typically think they buy products less often than average consumers and this, in turn, influences their responses and actual choices regarding loyalty programs for these products. We also investigate two classes of potential mechanisms (i.e., motivated reasoning and non-motivated egocentric reasoning) and four potential moderators of these below-average effects in purchasing. Our findings support the non-motivated egocentric mechanism; consumers think they buy products infrequently but fail to realize that others do so as well. We find that below-average effect in purchase frequency is especially pronounced for 1) infrequently bought goods and 2) for individual products or narrow product categories. Furthermore, 3) purchases are not perceived negatively by consumers in general, but the below-average effect is stronger for more negatively perceived products.

Study 1 ($N=401$) finds that participants rated their subjective rank percentile in how often they buy 1) vacations, 2) books, 3) clothes, and 4) restaurant dinners as below-average (i.e., below the 50th percentile) compared to others, one-sample t 's ≥ 5.79 , p 's $\leq .001$.

In Study 2 ($N=212$), participants rated how many packages of bread (a frequently bought product) and detergent (an infrequently bought product) they thought they would buy from their grocery store and their subjective rank in how often they buy it compared to others. Participants on average rated their subjective rank below-average ($M=41.43$, $p<.001$) and this was stronger for detergent ($M_{detergent}=36.10$, $M_{bread}=46.75$, $t(209)=-5.65$, $p<.001$). The lower subjective rank for detergent was related to a reduced liking of loyalty programs.

In Study 3, we examined below-average effects in purchasing and its impact on the responses to rewards programs for 100 grocery products. Three separate samples rated products on different mea-

asures. 100 participants rated how often people buy each product in general, 105 participants estimated their subjective rank in buying these products compared to others, and 104 participants evaluated how they would like a sweepstakes program if it was applied for each product. Participants rated their subjective rank below-average across products ($M=39.86$, $p<.001$). For 60 out of 100 products, the average percentile rank was significantly below-average, for only 11 it was above-average. We aggregated responses for each of the 100 products to perform product-level analysis. Participants perceived their subjective rank higher for commonly bought products, and in turn, liked rewards programs for those products more ($b=.20$, 95%CI [.11,.31]).

Study 4 ($N=2205$, representative Dutch sample) used three broad categories of grocery products (e.g., "coffee and tea") and three specific ones within these broad categories (e.g., "black tea"). Participants rated how often they buy products from their assigned category and their subjective rank in buying the products. Then, they evaluated their likelihood of participating in a sweepstakes program for the product category. Participants on average rated their subjective rank below-average ($M=36.95$, $p<.001$), which was especially true for specific categories ($M_{specific}=26.39$, $M_{broad}=47.59$, $F(1,2180)=412.50$, $p<.001$). Perceived higher subjective rank for broader categories mediated a higher participation intention in the rewards programs for these categories. Furthermore, we varied categories in valence and found smaller below-average effects for more positive (i.e., healthy) products. However, a) products were generally seen as positive, and b) even for positive products the below-average effect still existed, excluding valence as the main driver of the effect.

Study 5 ($N=200$) tested the impact of subjective rank on responses to the loyalty programs with incentive-compatible behavior. MTurkers indicated their preference between two lottery options that rewarded completed HITs for either a short-time frame (current week) or a long-time frame (past 7 weeks). They also rated their subjective rank by indicating how many hits they thought they completed compared to others, as well as their actual number of approved HITs in the time periods. Participants rated their subjective rank as average for completing the HITs for both time frames ($M_{current\ week}=47.91$, $M_{last\ 7\ weeks}=51.54$, $p \geq .239$); importantly, subjective rank was significantly lower for the current week than for the last 7 weeks ($t(182)=-2.78$, $p=.006$). 67% of participants preferred the lottery option which rewards completing HITs in the last 7 weeks than the current week, which was predicted by higher perceived subjective rank.

In sum, this research shows that people typically *underestimate* their purchase frequency relative to others, especially for narrow product categories and infrequently purchased products. It shows and explains a new and consequential consumer bias, and is among the first research to explore self-evaluation biases based on the frequency of performing a behavior (e.g., purchase). It also carries important practical implications for designing more attractive loyalty programs.

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When is Cherished Memory Contaminated?

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EXTENDED ABSTRACT

The current research investigates how consumers modify their positive memory of an artist and his art upon discovering the artist's immorality. We reveal selective contamination in memory; consumers accurately recall their memory of the art while simultaneously tarnishing the memory of the artist. Conversely, consumers' current judgements are uniformly contaminated.

The current research investigates how consumers maintain their memories of a cherished past upon a revelation of negative information. Specifically, we examine the effect of discovering an artist's immoral behavior on consumers' memories of and their contemporary attitudes towards the artist and the artist's creation. Though consumers actively strive to protect their memories (Zauberman et al. 2009), memories are not exact replicas of the past (Levine 1997). Across three studies, we find that consumers, on average, engage in *selective memory contamination*, accurately recalling their memories of the art while negatively tainting the memory of the artist. In contrast to such partitioning of art and artist in memory, consumers' current attitudes about the art and the artist are both tainted in the face of novel negative information.

Study 1 (N = 1094) examined how consumers modify their cherished memory of the art and the artist upon discovering an artist's immorality. The experiment involved four phases across two time points. In the first phase (*PRE*), all participants were presented with five paintings and were asked to indicate their favorite. They privately reflected on three questions about their initial reactions towards their favorite painting. Pertaining to the art, participants ruminated on how much they like the painting and how they perceive the overall quality of the painting. Pertaining to the artist, they reflected on how much they respect the artist of the painting. Next, all participants were randomly assigned to see one of two versions of the artist's biography: (1) Immoral or (2) Control. Both versions described the artist's aspirations to study fine arts and become a professional artist. In an otherwise identical biography, the participants in the Immoral condition were told (truthfully) that the artist is an active Nazi, while those in the Control condition were told that the artist is a member of the French Army. A week later, participants were invited to complete a follow-up survey. In this third phase (*RECALL*), they recalled and indicated their initial reaction to the art and the artist that they ruminated on at *PRE*. Finally, participants indicated their current judgements of the art and the artist, using the same three questions (*CURRENT*).

Given random assignment, any significant differences in *RECALL* across conditions should represent changes in consumers' initial memory (*PRE*) due to a revelation of negative information. Participants who read an immoral artist biography and those who read a neutral one did not differ significantly in their recalled liking for the art ($M_{\text{Immoral}} = 4.36$ vs. $M_{\text{Control}} = 4.09$, $p = .13$) and their recalled perception of the art's quality ($M_{\text{Immoral}} = 4.51$ vs. $M_{\text{Control}} = 4.61$, $p = .61$). In contrast, compared to those who read a neutral biography, participants who read an immoral artist's biography negatively biased their initial memory of respect towards the artist ($M_{\text{Immoral}} = 3.14$ vs. $M_{\text{Control}} = 4.49$, $p < .001$). Our results provide preliminary evidence for selective memory contamination; consumers accurately recalled the memory of the art while failing to recall the positive memory of the artist upon discovering the artist's immorality.

Despite such partitioning in memory, consumers' current attitudes about the art and the artist are collectively tainted. Compared to the control, participants who learned about the artist's immoral behaviors reported decreased liking of the painting ($M_{\text{Immoral}} = 2.22$ vs. $M_{\text{Control}} = 4.84$, $p < .001$), lower quality perceptions ($M_{\text{Immoral}} = 3.45$ vs. $M_{\text{Control}} = 5.15$, $p < .001$), and decreased respect for the artist ($M_{\text{Immoral}} = -5.21$ vs. $M_{\text{Control}} = 5.14$, $p < .001$).

Study 2 (N = 1100) aimed to address a potential alternative explanation that the differences in *RECALL* across conditions arise due to pre-existing differences in their initial reactions to the art and the artist (*PRE*). Study 2 largely replicates Study 1's design, but we directly captured and tested for differences in *PRE*. We do not find any significant differences between subjects in their baseline judgements of the art and the artist prior to realizing the artist's background (p 's $> .34$). Supporting the findings from Study 1, participants' recall of the art is not significantly different across condition (p 's $> .45$) while the recall of the artist is significantly more negative after reading an immoral artist's biography (p 's $< .07$). We again observe that the consumers' current attitudes about the art and the artist are collectively tainted in the face of novel negative information. Compared to the control, participants who discovered the artist's immorality reported decreased evaluations of the art (p 's $< .001$) and of the artist (p 's $\leq .001$).

Study 3 (N = 1202) replicated our findings using a different stimulus about a musician and his music. Consistently, our results support selective memory contamination. After learning about the musician's immoral behavior, participants' recall of his music is not significantly different from their initial reactions (p 's $> .41$) while their recall of the musician is significantly more negative than their initial reactions (p 's $< .04$). Consumers dissociate their memory of the art from the artist, contaminating the latter while preserving the former. Again, we observe that selective contamination fails to manifest in current ratings. Consumers' current attitudes towards the art and the artist are collectively tainted in the face of novel negative information. Compared to the control, participants who discovered that the musician is immoral reported decreased evaluations of his music (p 's $< .001$) and of the musician (p 's $< .001$).

Taken together, this research illustrates selective memory contamination. Upon a revelation of an artist's immoral behavior, consumers accurately recall the memory of the art while failing to recall the positive memory of the artist. Despite the selective contamination of art and the artist in memory, consumers uniformly tarnish their current judgements about the art and the artist.

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Repeating Number Digits in Price Bundling!

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EXTENDED ABSTRACT

Price bundling has been extensively used by retailers, but research has yet to examine the influence of repeating number digits in bundling. We propose that repeating the number digits in price bundling will increase consumers' purchase intentions because of the ease of unit price calculation.

Research on product bundling and price bundling is exuberant (Girju, Prasad, and Ratchford 2013; Koukova, Kannan, and Ratchford 2008; Soman and Gourville 2001; Stremersch and Tellis 2002). However, to our knowledge, scant research has focused on the influence of repeating number digits in bundling. Will consumers perceive a deal that repeated number digits (e.g., 2 for \$2.22) differently than one does not (e.g., 2 for \$2.19)?

We propose that consumers would have higher intentions to purchase bundle products when number digits are all repeated than not, such as 2 bottles for \$2.22, and 2 days for \$222.22. We argue that when the bundle number and price number are all repeated, consumers would feel easy to calculate the unit price for each bundled product. Following the metacognitive theory (Schwarz 2004), when consumers feel easy to process and calculate the unit price information, consumers should feel more positive about the sale price. Once the positive attitude toward the sale price information is formed, consumers will be more likely to purchase the promoted products (Coulter and Roggeveen 2014).

Study 1 was conducted to explore our main effect. Ninety-three participants from a large online panel ($N = 93$, 50.5% female, $M_{\text{age}} = 39.75$) completed the study for a small compensation. The study used a single factor between-subjects design (number: repeated vs. unrepeated). Participants were shown a promotion for a bundle of juice advertised as "For our customer! 2 for (\$2.22 vs. \$2.12)!" After evaluating the promotion, participants indicated their intentions to purchase the bundle on a three-item scale (Bhatt et al. 2021). An independent samples t-test revealed a significant difference between the two prices of the bundle on purchase intentions ($t(91) = 2.10, p = .04, M_{\text{repeated}} = 5.19, SD = 1.55, M_{\text{unrepeated}} = 4.40, SD = 2.00$).

Study 2 was designed to test our theoretical argument that use of repeating number digits leads to greater ease of calculation of unit price. Similar to study 1, this study used a single factor between-subjects design. One hundred and ninety-eight participants ($N = 198$, 51.5% female, $M_{\text{age}} = 42.96$) from a large online panel completed the study for a small compensation. Participants were shown a promotion for a bundle of shampoo advertised as "2 for (\$22.22 vs. \$21.49)!" After evaluating the promotion, participants indicated perceived ease of unit price calculation on a single item scale (I think the unit price for each shampoo is easy to calculate, 1 = "Strongly disagree, 7 = "Strongly agree"). An independent samples t-test revealed a significant difference between the two prices of the bundle on perceived ease of unit price calculation ($t(196) = 4.61, p < .001, M_{\text{repeated}} = 6.43, SD = 1.02, M_{\text{unrepeated}} = 5.54, SD = 1.65$).

We conducted study 3 to test the mediating role of ease of unit price calculation in driving the positive impact of repeated number digits on consumers' liking of the price. Eighty-five undergraduate students ($N = 85$, 42.4% female, $M_{\text{age}} = 20.05$) from an east-coast university completed the study for partial course credit. Participants were asked to imagine a movie night with 3 friends and wanted to purchase movie tickets online. In the repeated (vs. unrepeated) con-

dition, the price was advertised as "4 for \$44.44 (vs. 43.59)!" Participants evaluated the promotion and indicated their liking for the price of the bundle (Looking at the promotion above, how much do you like the package sale price? 1 = "Not at all", 7 = "Very much") and their perceived ease of unit price calculation. An independent sample t-test revealed a directional difference between the two bundles prices on liking of the price and a significant difference between the two bundles prices on perceived ease of unit price calculation. We then conducted a mediation analysis (Hayes, 2017; PROCESS model 4 with 5,000 bootstrapped samples). The analysis revealed that perceived ease of unit price calculation mediated the effect of repeated pricing of bundle on liking of the bundle price ($b = .14, SE = .08, 90\% \text{ CI } [.0191, .2787]$).

While findings from the first three studies support our conceptualization, we designed the fourth study to test the complete theoretical framework. Two-hundred and two participants ($N = 202$, 54.5% female, $M_{\text{age}} = 42.00$) from a large online panel completed the study for a small compensation. Participants were asked to imagine that they were planning a trip to Florida and wanted to spend 2 days at Disney World. Next, they were presented with a bundle of 2-day entry to the park. In the repeated (vs. unrepeated) condition, the price was advertised as "2 days for \$222.22 (vs. 217.49)!" Participants evaluated the promotion and indicated their intentions to purchase the bundle, their liking for the price of the bundle, and perceived ease of unit price calculation. An independent sample t-test revealed a significant difference between the two bundles prices on purchase intentions ($t(200) = 2.67, p = .008$), perceived ease of unit price calculation ($t(200) = 5.03, p < .001$), and liking of the price ($t(200) = 2.03, p = .04$). We conducted a mediation analysis (Hayes, 2017; PROCESS model 6) with 5,000 bootstrapped samples). The analysis revealed that ease of unit price calculation and liking of the bundle price (serially) mediated the effect of bundle price on purchase intentions ($b = .08; SE = .03, 95\% \text{ CI } [.0250, .1430]$).

Together, this research inquiries into a unique price bundling strategy that matching the bundle number and the price number will increase consumers' intentions to purchase the bundle products. Such effect is driven by consumers' positive attitudes towards the bundle price which emerges from the ease of unit price calculation. Our research is practically related to marketers and retailers as simply repeating number digits in bundles may increase sales and revenue, even if the bundle prices are higher. However, more research should be done to uncover the robustness of the proposed effect between tangible goods and intangible goods.

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Food Delivery Failures and Consumer Responses: Covid-19 Pandemic and Disruptions of Food Consumption

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EXTENDED ABSTRACT

This research investigates the disruption of food consumption due to the Covid-19 pandemic and how it affected the experiences of consumers. This paper contributes to the conceptualization of aesthetic failure in food consumption by identifying emotional and practical responses to food delivery related failures.

Due to the disruption that COVID-19 pandemic has caused, even the most sophisticated food services have switched to delivery services. While indoor dining has dropped significantly during the pandemic due to restrictions, food delivery has grown considerably. In the USA, the food delivery market has more than doubled during the COVID-19 pandemic, following healthy historical growth of 8 percent (Ahuja et al. 2021). Accordingly, the food industry at large has been investing in food delivery services to mimic restaurant dining as much as possible. Yet, the delivery food experience is still very different than restaurant due to the perishable and easily destructible state of plating. In this research, we explore delivery food experience of consumers in relation to delivery failures and the emotional and practical responses to delivery failures.

The literature on product and service failures focuses on offering solutions for the brands in the situation of failure because it is almost inevitable. Consumers would like to see options in any given product or service but when it failed, they may experience regret (Steffel and Williams 2018), so that they prefer to walk away from the responsibility. On the brand's side, it is essential to respond to the failure in a timely manner to not to lose their consumers who are regretting on their decision already. Prior studies indicate that the brands fare best when their response is timed immediately after the failure to save the brand from negative brand evaluations (Roehm and Brady 2007). Unlike product failures, service failures involve a series of exchange between the service provider and its customer. During the exchange, brand has an opportunity to meet, exceed or fall below the customer's expectations by utilizing patterns of distributions (Sivakumar et al., 2014). Another important aspect of the response for the brand to decide the content of the communication (You et al. 2020). The initial recovery efforts would decide whether the brand would be able to restore the consumer satisfaction (You et al. 2020). Even tough companies spend considerable resources in addressing the complaints after failure to initiate recovery efforts, the complaints engender loyalty (Umashankar et al., 2017). In that case, the loyalty is majorly by the strength of social ties between customers and brands (Umashankar et al., 2017). As prior studies indicate, the service failure has severe consequences for the companies and there are potential ways to recover the trust and maintain the loyalty. Yet, the severity of the service failure in the context of aesthetic failure has not been fully explored. Even though, any product and service failure carry potential harm to the brand image, this industry may carry more importance than other industries due to unique symbolic aspect food carries. In this study, we aim to extend the literature on service failures by shedding light into the nature of aesthetic failure of delivery food.

In this research, we utilize user-generated reviews from publicly available Yelp dataset. Within the Yelp dataset, we have randomly selected 200 reviews among the restaurant reviews with a 1 rating (lowest rating in Yelp) posted after March 2020 in order to capture the increased delivery services in the restaurant business. In our net-

nographic analysis of Yelp reviews, the primary source of data collection was the extraction of user generated reviews (Kozinets, 2020).

In our analysis, we found two main emerging themes: consumer perception of food delivery failures (i.e., service, product and aesthetic failure) and responses (i.e., emotional and practical response). For *service failures*, consumers consider late delivery and misplaced orders as the main source of failure which is due to the 3rd party reliance of the restaurants. Therefore, it is important to have an understanding of who will be in charge to deal with the dissatisfied customers. In our second category, we found consumer perceptions of *product failure* due to restaurants and how they deal with complaints, spoiled food, incorrect selection of meals. Third, we identify *aesthetic failures* due to lack of plating element, nature of delivery service, decreased satisfaction and enjoyment from the meal, and the lack of immediate compensation due to the nature of delivery. These failures lead to emotional and practical consumer responses.

Emotional responses are usually reflected with frustration, anger and disappointment. In most cases, the disappointment is tied to product or aesthetic failures and are very difficult to resolve. For practical responses, consumers utilize requesting another delivery, cancelling the order, and asking for some compensation. Many reviews include strong negative emotions related to delivery failures but they are usually resolved by good customer service management.

This paper contributes to the conceptualization of aesthetic failure in food consumption by identifying emotional and practical responses of consumers to food delivery related failures. This research provides practical insights for businesses and brands to manage product, service and aesthetic failures related to food delivery. Our paper opens up venues for discussion that is essential for restaurant businesses to deliver the best consumer experience possible.

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Faire Corps avec les Autres: Cultural trauma and consumer solidarity in the aftermath of violent marketplace attacks

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EXTENDED ABSTRACT

Using qualitative inquiry, this research investigates consumer solidarity and resiliency following the collective trauma of November 2015 Paris terrorist attacks. Drawing on Durkheim and cultural trauma, we provide insight into how consumers respond to trauma from violence in order to build solidarity for themselves, their communal marketplaces, and their communities.

Violent, hateful acts carried out in public spaces and consumption venues profoundly impact the individuals and families directly involved, and more broadly attack the collective. Marketplace violence can threaten consumers' collective identity and shared sense of security while instilling sudden shock, loss, and lingering trauma. This research addresses how consumers collectively attempt to reconcile the trauma and threat to collective identity that is experienced following violent marketplace acts, and in so doing reveal transformative aspects of solidarity. This manifestation of solidarity becomes a basis for healing and community growth, even after unspeakable trauma.

Extant consumer research has examined several aspects of consumption when an existential threat strikes and trauma ensues. For example, scholars have explored shared consumption experiences after natural disasters (Baker et al. 2007), adaptation following personal health crises (Pavia and Mason 2004) and the challenges for marketplaces following the violence of war (Barrios et al. 2016, Schultz et al. 2005). Such literature suggests that consumers are thrust into uncertainty and liminality which significantly affects their marketplace interaction and consumption with the potential for transformation.

Current research investigates consumer solidarity and resiliency in a community that experienced the November 2015 Paris terrorist attacks. This paper explores how consumers responded in the aftermath of the marketplace attacks with specific attention to shifting consumption patterns, memorials, and collective marketplace behavior as well as the evolution of consumer behaviors and sensemaking over time. We provide insight into how consumers respond to such trauma from violence in order to build solidarity for themselves, their communal marketplaces, and their communities.

Specifically, we extend cultural trauma theory (Alexander 2013) by focusing on how individual responses in the moment, prior to group processing and understanding of an event, and individuals' attempts at sensemaking pull them towards collective consumption activities. Building on existing research and classic theory (Durkheim [1893] 2014), we define consumer solidarity as unity of consumer action and sentiment among individuals in a consumption context, in a virtuous cycle of interdependence and cohesion. A deeper understanding of solidarity provides powerful insights for how consumer collectively move forward in the aftermath of marketplace violence.

METHODOLOGY

Using qualitative inquiry, we reviewed articles and documentaries, examined the Paris memorial archives, interviewed a café owner of an attacked site, and conducted 28 semi-structured depth interviews with individuals consuming and living in the neighborhood. Informants were both female and male, ranged in age from mid-twenties to early seventies, represented a variety of professions,

and were both lifelong residents of Paris and expatriates. All the respondents were in Paris during the evening of the attacks; many were witnesses to the event.

FINDINGS

Drawing on the archival data and 28 informant interviews, we identify three distinct stages of consumer, which consumers undertake collectively to grieve, resist, and rebuild: Shock and Depth of Trauma, Micro Level Solidarity, Macro Level Solidarity – that through acts and emotions pull consumers collectively toward each other, their shared identity, and the public marketplace.

Felt closeness to the event leads to the depth of trauma and literal shock. Then unpremeditated micro level solidarity in terms of behaviors, emotions, and sentiments (Laitinen and Pessi 2014; Durkheim [1893] 2014) proceeds through initially a reactive stage and subsequently through an integrative stage. Next, showing solidarity individually and highlighting the “we” to rebuild collective identity coalesce into macro solidarity as a response to cultural trauma.

DISCUSSION AND CONTRIBUTIONS

Durkheim ([1893] 2014) explains the source of solidarity in modern societies; solidarity is based not on the roles dictated by hierarchy but develops from interdependency due to specialization and individual choice. Durkheim's understanding of solidarity provides a theoretical lens to understand what holds communities together before they are shattered by violence (Alexander 2013). More explicitly, it is through Durkheim's ([1893] 2014) insights on what binds us together that we find lessons for how to rebuild connections after a trauma: individual actions that form a cohesive whole.

Meaning is created through the actions, some of which do not have a priori symbolic meaning. As evinced codes from our interviews, participating in concrete actions generates meaning for the individual and solidarity for the community. The development of individual consumer and marketplace solidarity is highly relevant in today's world, although not expansively covered in marketing literature, particularly when marketplaces are the target of violent actions.

Extending cultural trauma theory (Alexander 2013) and applying lessons from classic solidarity theory (Durkheim [1893] 2014), we propose that to heal from marketplace trauma, individuals and communities must recognize and integrate the trauma into themselves through lived behaviors, emotions, and sentiments, leading to a community mosaic of solidarity.

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Virtual Influencers as Non-human Objects in Consumption Assemblages

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EXTENDED ABSTRACT

Our paper investigates how do virtual influencers participate in consumption assemblages with human and non-human actors on social media. Using archival and Instagram data, we demonstrate that, through stabilizing of identity, reterritorializing of brand endorsements and deterritorializing of assemblages, virtual influencers express their agentic and communal capabilities in online interactions.

Influencer marketing is a growing area of interest for both practitioners and academics (Abidin 2016; Drenten et al. 2020; Ki and Kim 2019; Martínez-López et al. 2020; Ouvrein et al. 2021; Smith and Fischer 2021; Veresiu and Parmentier 2020). Operating within the attention economy, influencers strive to gather attention through creating a persona exhibiting attributes of credibility (Sokolova and Kefi 2020), authenticity (Audrezet, de Kerviler, and Moulard 2020), trustworthiness (Kim and Kim 2021) and expertise (Bakshy et al. 2011). Within the influencer economy, there emerges an under-explored phenomenon involving Virtual Influencers (VIs), which are the non-human counterparts to the human influencers. One of the most popular VIs is Lil Miquela who has more than 3.1 million followers on Instagram. Like Miquela, there are other VIs such as Shudu that is also a computer-generated figure who celebrates woman of colour, has garnered likes and comments from other black celebrities including Michael B. Jordan, Alicia Keys and Naomi Campbell (Jackson 2018).

Given the rising popularity of VIs, it is likely that this phenomenon will affect marketing practices as well as consumer cultures. In foreshadowing the future of social media marketing, Appel, Greal, Hadi and Stephen (2020) anticipate that, with more innovative artificial algorithms, VIs will become more prominent as they can be better controlled by brands, while being able to engage with followers anytime, without the need to rest or sleep. Focusing on Lil Miquela, Robinson (2020) argues that, Miquela is perceived as “real” as other human influencers on Instagram. However, because there are no clear distinctions between the identities of virtual and human influencers, it raises concerns on the ethicality in the *construction* of the “self” online which can raise doubts towards the trustworthiness of influencers and social media platforms (Robinson 2020). Therefore, this study aims to extend this enquiry to investigate VIs’ interactions with other human and non-human actors.

Consumer researchers have employed the assemblage lens to theorize a range of phenomena (Canniford and Shankar 2013; Huff, Humphreys, and Wilner 2021; Parmentier and Fischer 2015). More recently, Carrington and Ozanne (2022) investigate the dynamic relations between consumers and social media, conceptualizing four faces of celebrity-proximate assemblages. We draw specifically from Hoffman and Novak’s (2017) construct of *object experience assemblage* which argues that such experience can be accessed through a nonhuman-centric approach to evaluate the expressive roles played by these objects. However, unlike the everyday smart objects considered by Hoffman and Novak (2018) that have physical presence in the real world, VIs are created and exist in the digital realm. To investigate this form of consumer-object interactions, we ask: how do VIs participate in consumption assemblages with other human and non-human actors through social media?

We explore this question through qualitative dataset that include archival data, visual and textual data collected from Instagram. We focus on three VIs: Lil Miquela, Noonooori and bee_influencer as case studies. We collected media publications on these three VIs and their

Instagram feed posts which were downloaded using Apify. We focused our analysis on the contents posted on these influencers’ profiles which include the images, texts (e.g., captions and hashtags), external links and interactive affordances including likes and comments. The posts were analyzed across the influencers to identify themes and patterns on how they interact with other actors as part of the consumption assemblages.

Our findings show that through *stabilizing of identity, reterritorializing of brand endorsements and deterritorializing of the assemblages*, VIs express their agentic and communal capabilities in their interactions with other human and non-human influencers, brands, and followers. Firstly, these VIs demonstrate their agentic capabilities in establishing an identity on social media as they curate a narrative of their lives by including images of them taking their own selfies, socializing with other individuals, and partaking in events. More importantly, they also express their communal roles by aligning themselves with social movements such as Black Lives Matter and other social causes. In one of Noonooori’s Instagram posts, she calls out to her followers to take actions to sign the declaration to #EndTheTrade which received 3255 likes from her followers. VIs leverage on the affordances and technical features of the social media platforms (i.e., hashtags, tagging, comments, and likes) to materialize and stabilize culturally accessible identities within their interactions with other followers and influencers.

Second, one of the main reasons VIs came into existence is to endorse certain brand values. To connect with the younger generations and facilitate higher engagements, many brands turn to VIs to execute brand campaigns (Travers 2020). For instance, Noonooori was designed to endorse high fashion brands, collaborating with Kim Kardashian, Balenciaga and Tommy Hilfiger. Similarly, Samsung appointed Lil Miquela for their global #TeamGalaxy campaign. By establishing these brand partnerships and collaborations, VIs transform the way brands execute their campaigns by expanding the opportunities to connect with different groups of consumers. In comparison to their human counterparts, VIs allow brands to exert more control to enable better influencer-brand fit, which could positively affect its credibility and persuasiveness (Breves, Liebers, Abt and Kunze 2019).

Lastly, VIs can also constrain the assemblage by removing components or limiting their capacities. One potent example is Bee in which her death was announced on her Instagram page. In other instances, VIs are also restricted by other actors in the assemblage. Particularly, Lil Miquela was hacked by another VI @BermudaIsBae. Interruptions like these affect the VIs and its followers, causing chaos and confusion, deterritorializing the assemblage.

Our study on VIs explores the object experience assemblages that involve both human and non-human actors. Through stabilizing of identity, reterritorializing of brand endorsements and deterritorializing of the assemblages, VIs express their agentic and communal capabilities in interacting with other influencers, brands, and followers. Particularly, we extend the existing works that examine various aspects of technology consumption by capturing the experiences of nonhuman objects as consumers and how they interact with consumption systems (Kozinets 2019). In terms of practical implications, our study highlights the potential of engaging VIs in social media campaigns while acknowledging their constraints and interruptions from other actors.

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Exclusion in Moral Markets

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EXTENDED ABSTRACT

This paper explores exclusion in shaping moral markets. Through the lens of legitimacy, interviews with social media influencers in the sustainable fashion market were conducted. This study contributes to the legitimacy literature by focusing on what it means to be a legitimate market shaper at the individual level.

Influencer marketing is rapidly growing with the global market set to be worth \$16.4 billion in 2022 (Geysler 2022). Tasked with promoting products to the masses, social media influencers are often seen as the bane of existence for sustainable consumption & production (SC&P). However, there are individuals on social media, sustainable fashion (SF) influencers, who have taken up the charge to bring SF to the people and challenge the traditional fashion industry. Research on the role of influencers in consumer research and market transformation is increasing (McQuarrie, Miller, and Phillips 2013; Scaraboto and Fischer 2013; Dolbec and Fischer 2015; McKeown and Shearer 2019). There are many difficulties present in such an endeavour, not least of which is being accepted as a legitimate market shaper, or someone whose voice commands attention. Although legitimacy is well understood at the market level (Humphreys and Latour, 2013; Huff, Humphreys, and Wilner, 2021; Mimon, Trujillo-Torres, and Sobande. 2022), legitimacy is receiving increased interest at the micro level (Coskuner-Balli and Thompson, 2013; McQuarrie et al., 2013; Valor, Lloveras, and Papaioikonomou, 2021). There have been increasing calls for research on how diversity, inclusion, and exclusion intersect with markets (Ghaffari et al. 2019; Grier et al., 2019; Saren et al., 2019, Arsel, Crockett, and Scott., 2022) and the role this can play in an individuals' perceived legitimacy.

Drawing on intersectionality and legitimacy this study advances knowledge by asking, which market actors are seen as legitimate market shapers, what are the implications of market delegitimacy, and how do those with less legitimacy in the dominant social paradigm resist their delegitimization? The market of SF often considered to be a moral market, or a market that aims to have a positive social impact, is a pertinent context to explore such questions due to inherent assumptions of it being moral.

Semi structured interviews were used to gain insight into the experiences of SF influencers. 26 SF Instagram-based social media influencers from different backgrounds in terms of size, race, ethnicity, and nationality, were interviewed and observed on social media. 116 media articles were collected to contextualise the data. We qualitatively analysed the data to identify who is excluded and thus delegitimised in the market, on what basis, the practical implications of it, and how they resist exclusion.

Our findings describe a complex and dynamic market where influencers face three main forms of exclusion in the market which renders some actors being seen as less legitimate market actors and consequently receiving less of the "perks" of influencing, such as monetary opportunities. Three bases of exclusion, or dimensions that would render someone to be less included in the mainstream SF conversation, were identified: personal characteristics, knowledge, and location. The first basis is that of personal characteristics. SF influencers who are Black, POC, and/or plus-sized experience exclusion

from the movement by brands and the media in terms of being recognised as members of the SF movement and being represented in marketing materials/ product sizes. The lack of size inclusion echoes findings in Scaraboto and Fischer (2013), where influencers were trying to expand the market to include more sizes and representation. The second is based on knowledge. SF influencers may be excluded from the movement based on having certain types of expertise. Cultural and experiential knowledge which is excluded from the SF conversation or repackaged as something new. SF influencers may also face exclusion based on location; those who are in countries other than Europe and North America experience exclusion from the SF conversation as this is where many SF influencers are visible and where many SF conversations are taking place, such as the Copenhagen Fashion Summit. This results in reduced access to SF for marginalised influencers and consumers. However, like the influencers in Scaraboto and Fischer (2013) and Dolbec and Fischer (2015), these influencers adopt resistive strategies to adapt and overcome the barriers levied against them.

In conclusion, our work contributes to the discussion of market transformation through the intervention of social media influencers (Scaraboto and Fischer, 2013; Dolbec and Fischer, 2015). The findings of this study illustrate how research regarding race, ethnicity, and the body cannot be bracketed, rather they overlap and intersect (Arsel et al. 2022). Through the lens of intersectionality and legitimacy we show that at the individual level, legitimacy is structurally apportioned to those with the "right" types of social and cultural capital which constricts who is able to transform the market based a variety of characteristics that often intersect and overlap. Yet those who are delegitimized resist and endeavor to take up their rightful place in the market.

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Paying Twice to Have It Your Way? The Backfiring Effect of Unique Product Configurations on a Product's Resale Value

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EXTENDED ABSTRACT

Across industries, mass customization has been hailed a winning strategy. In this research, we highlight a so-far hidden downside of this strategy. While self-designers' valuations (willingness to pay and accept) increase with the product's uniqueness, second-hand market customers' willingness to pay decreases the more unique the creation is.

Customers are increasingly offered the possibility to self-customize products according to their unique preferences—ranging from cars to sneakers, from apparel to kitchens, from bikes to skis, and from backpacks to furniture (Dellaert and Stremersch 2005; Franke, Schreier, and Kaiser 2010; Moreau and Herd 2010).

This research points to a hidden and so-far neglected downside of mass customization: customers might be paying twice to have it their way; once when customizing the product and once again when selling it. Ironically, this effect may be fueled by marketers' attempt to sell the idea of self-customization in the first place. For example, Nike markets its customized sneakers with the slogan "Nike by You," inviting customers to "create something uniquely your own" (<https://www.nike.com/nike-by-you>; retrieved September 11, 2020). Similarly, BMW advertises its cars as "being as unique as their drivers" (<https://www.press.bmwgroup.com/deutschland/article/detail/T0302492DE/der-bmw-ist-so-individuell-wie-sein-fahrer?language=de>; retrieved September 18, 2020). The likelihood that this unique design will also be appealing to other customers on the second-hand market (possibly several years later), however, is arguably much lower compared to a more mainstream design.

Although this second-hand market argument has not been raised so far, it seems an important one. Selling and buying products such as cars, apparel, and household goods on second-hand markets is becoming increasingly popular; in some cases, second-hand markets even exceed the markets for the respective new products in terms of size. For example, in 2019, the American second-hand car market was more than twice the size of the new car market: 40.8 million used cars were sold compared to 17 million new cars (<https://www.statista.com/statistics/183713/value-of-us-passenger-car-sales-and-leases-since-1990/>; retrieved October 26, 2020). Moreover, while used car sales have increased by +9.4% since 2015, new car sales decreased by 2.9%.

We report two studies that aim at testing this so-far neglected downside of mass customization and, taken together, offer important contributions to the literature. Foremost, we caution the interested reader about the so-far mostly positive picture drawn by the extant literature on mass customization. The "win-win" for customers and firms might not hold up against a more holistic product life cycle perspective.

Study 1: >500,000 Cars Offered on the Second-Hand Market

Study 1 aims to provide an initial test of our primary hypothesis: the more unique the self-customized product to the respective consumer-designer, the lower its appeal to potential customers on the second-hand market. We collected data from more than five hundred thousand advertisements for used cars ($n = 529,038$) posted on one of the leading German online car resale platforms between September and November 2019. Our data captured the 15 most sold brands

in Germany and covered cars that were initially registered between 2005 and 2019, that is, during the past 15 years.

We find that the more unique a car's color is at the time of self-customization, the lower its asking price once it is offered on the second-hand market ($g = -572.26$, $t = 6.59$, $p < .001$). This effect unfolds even after controlling for a host of significant predictors of a car's resale value. Consistent with our theorizing, we further find that this effect depends on the type of seller ($g = -4,925.07$, $t = 30.26$, $p < .001$). The effect fully reverses and turns positive for individual sellers ($g = 3,395.01$, $t = 21.6$, $p < .001$), presumably those who have originally self-customized and paid for the car at hand. A limitation of Study 1 is that the evidence is correlational and hence not causal. We hence proceed by presenting a controlled follow-up experiment.

Study 2: A Sneakers Experiment

In Study 2, we aim to extend the findings obtained in Study 1 in several major ways. By devising an internally valid experiment, we assess our primary prediction that the more unique the self-customized product to the respective consumer-designer, the lower its appeal to potential customers on the second-hand market. In terms of dependent variable, we ask the consumer-designer to either indicate one's willingness to pay (WTP) or, alternatively, one's willingness to accept (WTA) for one's self-customized product. Furthermore, we expose the products self-customized by the consumer-designers to a sample of other consumers. Their WTP provides the second-hand market valuation of the self-customized products.

We find that consumer-designers' WTP ($b = 5.88$, $t(268) = 5.69$, $p < .001$) and WTA ($b = 3.02$, $t(230) = 2.75$, $p < .01$) for their self-customized sneakers are *positively* affected by the extent to which they perceive their products to be unique. In stark contrast to consumer-designers, and in line with our Study 1 findings and theorizing, we find that second-hand market WTP is *negatively* affected by a product's uniqueness ($g = -.62$, $t = 3.87$, $p < .001$). Thus, the more unique the self-customized product appears to the respective consumer-designer, the lower its appeal to potential customers on the second-hand market.

GENERAL DISCUSSION

Mass customization is considered a winning strategy across industries because customers are willing to pay substantially more to purchase a unique product customized to their individual preferences. In this research, we point to a hidden and so-far neglected downside of mass customization: customers might be paying twice for their efforts—first, when buying their self-customized product, and second, when selling it on the second-hand market. Two studies reported in this manuscript provide support for this idea and, taken together, offer a number of important contributions to the literature and practice of mass customization.

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The Interplay Between Financial Monitoring, Wealth, and Well-Being

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EXTENDED ABSTRACT

What's in your bank account? Although consumers are typically advised to frequently monitor their finances, we find the benefits of checking depend on liquid wealth. Across five studies, we document a significant interaction: Financial monitoring is associated with *lower* (higher) financial well-being when one's liquid wealth is low (vs. high).

Financial institutions and advisors encourage people to monitor their bank account balances regularly, proclaiming that people can *never* check too frequently (Aldrich 2019; Atlantic Financial Federal Credit Union 2022; Jung 2021; Lake 2021). Research on self-regulation suggests that the value of information derived from monitoring should boost successful self-regulation (Baumeister and Heatherton 1996), helping people to achieve their goals (Bandura and Cervone 1983; Renn and Fedor 2001; Schunk 1983) which should in turn enhance their well-being. Furthermore, the rise in mobile apps aimed at helping people track their finances means engaging in financial monitoring has never been easier.

While the benefits of frequent bank account monitoring suggest it could be a tool to boost financial well-being, we argue that the relationship between the two is more complex and, importantly, that it depends on one's current level of liquid wealth. When people are unable to meet their economic needs, it results in emotional distress (Conger et al. 1990, 1999). In addition, when individuals experience resource scarcity, they focus their attention on the scarce resource (i.e., money) and ignore other important information (Fernbach, Kan, and Lynch 2015; Mullainathan and Shafir 2013). Thus, for the financially constrained, money should already be top of mind, meaning that those with low wealth may not receive the same benefit from monitoring as those with high wealth. We thus hypothesize an interactive relationship between bank account monitoring and FWB, such that high monitoring will be positively associated with FWB when liquid wealth is high but negatively associated with FWB when liquid wealth is low.

S1: Financial Conduct Authority Survey. S1 utilized a nationally representative survey (N = 3,461) of adults living in the U.K. In this and subsequent studies, participants were asked how often they normally check how much money is in their bank account (answers ranged from "every day" to "less than once a month") and how accurately they know the account balance. For FWB, we used several measures (e.g., "keeping up with bills is stressful").

We found a significant interaction ($b_{interaction} = .026, SE = .005, t = 4.81, p < .001$) between bank account monitoring and liquid wealth (i.e., the amount one has in checking and savings). For those with low levels of wealth, we found a negative relationship between bank account monitoring and FWB. In contrast, we observed a reversal for individuals with high levels of wealth: they display higher FWB the more frequently they monitor their account balances.

S2: British Broadcasting Corporation Survey. S2 used a large-scale (N = 109,472), survey dataset of adults living in the UK. The results showed a significant interaction between bank account monitoring and liquid wealth (i.e., value of savings) ($b_{interaction} = .033, SE = .001, t = 26.28, p < .001$). Individuals display lower FWB the more frequently they monitor their account balances at low levels of wealth, whereas they display higher FWB the more frequently they monitor their account balances at high levels of wealth.

S3: Wealth and Assets Survey. S3 uses a longitudinal survey conducted in the U.K. that asks participants (N = 6,905) detailed questions about their finances. It also measures FWB, financial monitoring and liquid wealth at three timepoints, providing stronger causal inferences by leveraging the longitudinal nature of this data.

In a multilevel regression model, where each participant is provided their own intercept, we find results consistent with those found previously: a significant interaction ($b_{interaction} = .011, SE = .002, t = 4.83, p < .001$) between one's frequency of bank account monitoring and liquid wealth on FWB. Furthermore, we find a significant interaction ($b_{interaction} = .007, SE = .003, t = 2.56, p = .010$) after running a fixed-effects regression model that models only *within-person change*, allowing us to rule-out time invariant alternative explanations.

S4: Barclay's Bank Data. Although S1-3 provide robust support for our hypothesis, we acknowledge that a shortcoming is reliance on participants' *self-reported* bank account monitoring. Thus, we collected data in collaboration with a U.K.-based multinational bank to obtain a more objective measure of the frequency with which participants monitor their bank account: how often they visited the ATM or checked their account balance online.

Bank customers were invited via email to participate in a survey and consented (N = 912) to their responses being matched with the objective account data held by the bank from the previous 12 months. Replicating our prior results, we find a significant interaction between bank account monitoring and liquid wealth ($b_{interaction} = .025, SE = .008, t = 2.96, p = .003$). Monitoring is negatively associated with FWB when one's wealth is low. However, we do not see a cross-over at high levels of wealth.

S5: Experiment on Prolific Academic. Lastly, we manipulate when participants are asked to monitor their primary bank accounts. Participants (N = 2100) were asked to check the balance of their primary checking and savings accounts either *before* we assessed FWB or *after*. We found a significant interaction ($b_{interaction} = .003, SE = .0006, t = 5.99, p < .001$). Those who checked the balance of their bank account before (vs. after) we assessed FWB experienced higher FWB if their liquid wealth was high, but lower FWB if their liquid wealth was low.

Across five mixed-method studies, we provide evidence that, for consumers with lower liquid wealth, monitoring personal finances may not be as beneficial as prior research (and common advice) suggests. Although previous research on bank account monitoring has focused primarily on its *antecedents* (Bachas, Gertler, Higgins, and Seira 2021; Chang, Webb, Benn, and Reynolds 2017; Olafsson and Pagel 2017; Webb et al. 2013), we focus on its consequences for financial well-being. Understanding the consequences of bank account monitoring—particularly the *psychological* consequences—is more important now than ever given the proliferation of digital technologies aimed at helping consumers more easily check their balances (Kutzbach, Lloro, Weinstein, and Chu 2020).

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Brand Iconicity

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EXTENDED ABSTRACT

Marketers often highlight the importance of building “iconic” brands, yet the literature has not explicitly defined or validated this important construct. This research offers a theoretically grounded conceptualization of brand iconicity, empirically finds dimensions that comprehensively capture its meaning, and develops a validated scale that measures this higher-order construct.

What are iconic brands? Marketers often highlight the importance of building iconic brands as a part of their brand-building strategy. The world’s most successful brands, such as Apple, Coca-Cola, and Nike, are just a few examples of brands that are often called “iconic.” Yet, despite the frequent usage of the term ‘iconic brand’ or ‘brand iconicity’ in the literature and popular press, research that precisely defines and then validates this construct is surprisingly scant. To address this gap, the present research develops a theoretically grounded and empirically validated construct of brand iconicity using both qualitative and quantitative methodologies.

Books and articles on brand iconicity have emphasized symbolism as its primary attribute. For instance, Holt (2004, p. 4) defines iconic brands as “consensus expressions of particular values held dear by some members of a society.” Similarly, Torelli and colleagues (2009, p. 108) define brand iconicity as “the degree to which a brand symbolizes the values, needs, and aspirations of the members of a particular cultural group.”

While there is little doubt as to whether being a symbolic brand is a necessary condition for becoming an iconic brand, we question whether it is also a sufficient condition. Driven by the idea that many brands are symbolic, but only a few are iconic (Testa et al. 2017), we aim to identify what distinguishes iconic brands from merely symbolic brands. By identifying instant recognizability and trust as two additional dimensions, we seek to offer a more complete definition of brand iconicity that is empirically validated, which would aid marketers in formulating and implementing more effective iconic brand strategies. Five studies have identified dimensions of brand iconicity and validated its measure through construct and scale validation procedures (Bagozzi 2011), which ultimately revealed a hierarchical, third-order factor structure of brand iconicity.

Study 1 (N=32) identified possible components of brand iconicity using a grounded theory approach (Glaser and Strauss 1967). Six themes of brand iconicity emerged from participant essays on iconic and non-iconic brands. These themes can be categorized into three higher-order dimensions, resulting in a hierarchical model of brand iconicity. The first two themes identified from participant responses were cultural symbolism and brand clarity, which we hypothesized as constituting the higher ‘symbolism’ dimension of brand iconicity. Another component of brand iconicity that we identified was ‘instant recognizability’ (Eisingerich et al. 2009; Ries and Trout 2001), which consists of prototypicality, familiarity, and visual recognizability. The last theme that we identified was ‘trust’ (Hollis 2011; Testa et al. 2007).

We proceeded to empirically test whether the dimensions we had identified from qualitative data constitute brand iconicity. We began by examining the nonhierarchical (first-order) measurement model (studies 2 and 3) and then validated the hierarchical model of brand iconicity that encompasses all three dimensions with six underlying themes (study 4). In all studies, participants evaluated both iconic and non-iconic brands in a counterbalanced order on Likert scales.

Study 2 (N=398). Six underlying factors with eigenvalues over 1 were extracted via exploratory factor analyses, consistent with our

hypothesized subdimensions. All items loaded well onto their respective factors (loadings ranged from .58-.96) without any cross-loadings, except for two items which were subsequently dropped, leaving us the final 25-item scale. Each factor (all α 's > .83) and the full iconicity scale (α = .92) showed high reliabilities. The mean values for each factor and the full scale were also higher for iconic than non-iconic brands (all p 's < .001).

Study 3 (N=391). The 25-item, six-factor measurement model of brand iconicity was validated using confirmatory factor analyses. We ran nonhierarchical, first-order confirmatory factor analyses on the six factors that emerged in study 2. The CFA model fit was excellent (Hu and Bentler 1999; RMSEA = .061, NNFI = .99, CFI = .99, SRMR = .038) with high loadings (ranged from .81-.96) and factor correlations (ranged from .43-.77). Our scale passed Fornell and Larcker’s (1981) criterion for testing discriminant validity.

Study 4 (N=584) sought to validate the multidimensional, higher-order structure of brand iconicity by specifying brand iconicity as a higher-order factor for the six subdimensions. We tested the third-order factor structure of brand iconicity, the one that was uncovered from our qualitative analyses, in which cultural symbolism and brand clarity loaded onto the second-order factor of symbolism, and prototypicality, familiarity, and visual recognizability loaded onto the second-order factor of instant recognizability, while symbolism, instant recognizability, and trust loaded onto the third-order factor of brand iconicity. This third-order factor model fitted the data well (RMSEA = .068, NNFI = .98, CFI = .99, SRMR = .050).

Study 4 also examined nomological validity between the third-order representation of brand iconicity and related constructs. While latent factor correlations between those constructs and the third-order brand iconicity were high, displaying convergent validity, all 95% confidence intervals for the correlations did not include 1.0 (Bagozzi and Yi 2012), demonstrating discriminant validity among the constructs. We then tested a nomological network model in which brand quality and brand authenticity are antecedents of brand iconicity, and attitudes, brand love, self-brand connections, brand loyalty, resistance to negative information, and willingness to pay a price premium are consequences of brand iconicity. This model again fitted our data well (RMSEA = .061, NNFI = .99, CFI = .99, SRMR = .087).

Study 5 (N=590) aimed to test whether manipulating the levels of each component of brand iconicity affects consumer perceptions of iconicity. Participants were assigned to one of six conditions (symbolism: high, low; instant recognizability: high vs. low; trust: high vs. low) and read a description of a fictitious brand (adapted from Warren et al. (2019)). Brand descriptions were constructed to either display or lack the component of brand iconicity. Supporting our hypotheses, participants perceived the brand to be more iconic when it was described as symbolic (M_{High} = 4.95 vs. M_{Low} = 2.11), instantly recognizable (M_{High} = 5.22 vs. M_{Low} = 2.14), and trustworthy (M_{High} = 4.72 vs. M_{Low} = 2.07) than when it was not.

In sum, this research proposes a much-needed, novel theoretical framework for brand iconicity, which consists of six themes categorized into three dimensions of symbolism, instant recognizability, and trust. By identifying a multidimensional and hierarchical representation of brand iconicity, we expand the understanding of iconic brands, which contributes to the branding literature and builds a foundation for further academic research.

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Does Scheduling Mean Superior? Effects of the Scheduled = High Quality Lay Theory

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EXTENDED ABSTRACT

This research identifies the presence of a scheduled = high quality lay theory. Nine studies demonstrate that this lay theory leads consumers to infer that scheduled events offer superior quality, prefer to schedule when their goal is to maximize quality, and evaluate the actual quality of scheduled experiences more positively.

Scheduling is ubiquitous, from adding events to one's calendar to making dinner reservations and service appointments. Yet relatively little is known about the effect of scheduling on consumer outcomes. In this research, we propose that consumers hold the lay theory that scheduled service encounters are higher quality, systematically influencing their pre-consumption inferences, choice to schedule or not, and post-consumption quality evaluations.

Belief in a scheduled = high quality lay theory likely stems from sociocultural messages and personal experience. Marketing messages, such as those encouraging consumers to "book now" to ensure access to high quality events, commonly reinforce an association between scheduling and quality. Further, the everyday use of scheduling as a tool for ensuring task completion (Kaufman-Scarborough and Lindquist 2003) suggests that consumers may learn from their own past experiences that activities expected to be worthwhile ought to be scheduled in advance. Finally, like other lay beliefs (e.g., price-quality heuristic; Gneezy et al. 2014), the proposed scheduled = high quality lay theory may describe an association that is true in some contexts but that consumers over-apply. At times, scheduling may facilitate quality, such as when scheduling provides the opportunity to customize the service encounter. However, it is not always the case that scheduling increases objective quality. In the current research, we propose that consumers infer the same service encounter will be higher quality merely as the result of scheduling.

As an initial test of the scheduled = high quality lay theory, we examined a pilot dataset of 1,592 Yelp.com reviews. Using making a reservation as a proxy for scheduling, we found that consumers who scheduled gave a higher star rating ($M = 4.05$) than those who did not schedule ($M = 3.85$, $p = .001$), providing initial evidence in a naturalistic setting that scheduling may increase perceived quality. In the remaining studies, we experimentally manipulate scheduling.

Studies 1a-1c tested whether a variety of scheduling cues lead consumers to infer greater quality. We found that participants inferred that an auto repair shop was higher quality when it allowed scheduling through appointment reservations ($M = 76.11$) than when it did not ($M = 63.95$, $p < .001$; study 1a), that a free outdoor concert was higher quality if prior attendees tended to schedule going to the concert ($M = 52.51$) versus not ($M = 41.79$, $p < .001$; study 1b), and that a coffee shop was higher quality if the participants, themselves, had scheduled on their calendar ($M = 75.37$) versus not ($M = 70.47$, $p = .015$; study 1c). Thus, scheduling cues systematically increased inferred quality.

Studies 2a and 2b tested theoretical moderators. In both studies, participants rated the quality of a restaurant that either allowed scheduling by offering reservations or did not. Building on prior research indicating that the effects of lay theories are stronger when consumers explicitly endorse the lay theory (Raghunathan et al. 2006), participants in study 2a indicated their endorsement of the lay theory: "When it comes to experiences, 'If I scheduled it, then it must be high quality.'" Replicating prior studies, there was a significant main effect of scheduling condition ($p = .005$). This was

qualified by the predicted interaction with endorsement of the lay belief ($p = .005$), such that the more participants endorsed the lay theory, the more scheduling increased inferred quality.

Because lay theory-driven effects tend to be stronger when information is missing or ambiguous prior to consumption (Haws et al. 2017; Luchs et al. 2010), study 2b manipulated the presence of unambiguously negative quality information. Analyses once more revealed a significant main effect of scheduling ($p < .001$) that was qualified by the predicted interaction with quality cue ($p = .049$). As expected, scheduling increased inferred quality in the absence of an unambiguous quality cue, but participants no longer relied on the lay theory when presented with unambiguous quality information.

Next, study 3 tested the consequences of the scheduled = high quality lay theory for consumers' choice of whether to schedule. Consistent with past work exploring how lay theories shape consumption choices (Raghunathan et al. 2006), we found that when participants had the goal to maximize quality, they preferred to schedule a target activity ($M = 6.04$) more than when participants had the goal to maximize enjoyment ($M = 5.06$, $p = .03$) or excitement ($M = 4.86$, $p = .009$). Thus, a quality goal increased preference for scheduling relative to hedonic goals for the experience.

In study 4, we tested whether consumers evaluate a scheduled (vs. unscheduled) service encounter more positively post-consumption due to increased inferred quality pre-consumption. As such, participants first indicated inferred quality pre-consumption of a restaurant that allowed scheduling versus not, then read they had eaten at the restaurant and had a mixed experience (i.e., good food, but uncomfortable atmosphere), and finally indicated how they would rate quality post-consumption. We found that participants inferred greater quality pre-consumption when the restaurant allowed scheduling ($M = 78.07$) than when it did not ($M = 67.71$, $p < .001$) and also rated quality more positively post-consumption when the restaurant allowed scheduling ($M = 45.06$) versus not ($M = 41.07$, $p < .001$), conceptually replicating the correlational field evidence in the pilot study. Pre-consumption inferences mediated the effect on post-consumption evaluations of quality.

In the final study, we experimentally tested whether scheduling increases quality evaluations for an actually experienced activity. Participants completed an educational activity about marine life. Participants either allocated time in advance to various parts of the activity (scheduled) or moved through the activity at their own pace (control). A pretest confirmed this manipulation successfully made the activity feel more versus less scheduled. Conceptually replicating prior results, those who scheduled the activity rated it as higher quality ($M = 78.31$) than those who did not ($M = 74.54$, $p = .056$).

Across nine studies, the present research establishes that consumers hold the lay theory that scheduled = high quality. The results suggest that encouraging consumers to schedule can lead to more favorable pre-consumption inferences and post-consumption evaluations of quality.

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Backup plans: The impact of timing of disclosure on perceptions of competence

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EXTENDED ABSTRACT

We show that consumers view a service provider as more competent when they disclose a backup plan before rather than after an initial failure. Early disclosure however can backfire in the absence of failure by indicating lower confidence.

Imagine that you want to lose weight and decide to seek the help of a nutritionist. After two weeks on a new diet, you see little change. You talk to your nutritionist and she puts you on an alternative diet. Consider instead that before starting the first diet, your nutritionist had informed you about the alternative diet to be used in case the first one did not work. That is, the nutritionist disclosed a backup plan in advance. Would this have had any impact?

Judgments of expertise are quite relevant in many industries as they dictate the choice of a service provider. Consumers however rarely have objective information in order to evaluate the expertise of such providers and often resort to heuristics to make such judgments (Brown and Reingen 1987; Spassova, Palmeira and Andrade 2018). We investigate how disclosure of a backup plan influences perceptions of competence. In particular, we look at timing of disclosure. We hypothesize that when an initial plan fails, a professional is viewed as more competent if they had disclosed a backup plan before rather than after failure. We reason and show that consumers infer that earlier disclosure signals greater planfulness, which in turn signals greater competence. Given that a professional is likely to always be able to offer an alternative plan, it is somewhat surprising that consumers consider someone less prepared when they do not explicitly anticipate their backup plan.

Study 1

We asked participants to judge a professional that had provided a second solution after an initial one had failed. Critically, we manipulated whether the second solution was provided before or after the initial failure. We also tested preparedness as a mediator.

METHOD

Participants were 298 members of Mechanical Turk ($M_{age} = 39.18$, 52% women, https://aspredicted.org/WCB_6V7). They were randomly assigned to one of two conditions (before vs. after). They all read that they had consulted a nutritionist to lose a few pounds and that the nutritionist had prescribed “diet G”. In the before condition, the nutritionist added that if it did not work, they would switch to “diet T”. Participants in the after condition only learned about the second diet after the first one had failed. Participants rated their competence and preparedness.

RESULTS

The professional was considered more competent ($M_{before} = 5.09$ vs. $M_{after} = 4.63$, $t(296) = 2.96$, $p = .003$) and prepared when they disclosed the backup plan before failure ($M_{before} = 5.47$ vs. $M_{after} = 4.79$, $t(296) = 4.93$, $p < .001$). Further, using PROCESS model 4, we found evidence of mediation (indirect effect: $b = .59$, $SE = .12$, 95% $CI = [.36, .83]$).

Study 2

We tested whether prompting participants to think about what the professional would do in case of failure increases perceptions of knowledge and preparedness in the after condition, eliminating the effect.

METHOD

Participants were 275 members of Mechanical Turk ($M_{age} = 39.65$, 56% women, https://aspredicted.org/VND_1J2) who were randomly assigned to one of four conditions in 2 (before vs. after) \times 2 (control vs. prompt) between-subjects design. We used a scenario describing an IT problem, in which the professional’s first solution did not work. In the prompt condition, before learning the first solution failed, participants were asked to indicate what they thought the professional would do in case of failure (try something else, give up, other: _____). We measured competence, preparedness and confidence (see pre-registration).

RESULTS

An ANOVA on competence revealed a main effect for prompt ($F(1, 271) = 12.99$, $p < .001$), as well as an interaction ($F(1, 271) = 4.23$, $p = .04$). In the before condition, prompting had no effect ($M_{control} = 5.43$ vs. $M_{prompt} = 5.64$, $t(136) = .77$, $p = .45$). In contrast, prompting increased perceptions of competence in the after condition ($M_{control} = 4.98$ vs. $M_{prompt} = 5.75$, $t(135) = 4.10$, $p < .001$). We used PROCESS, model 8 to test for moderated mediation through preparedness. The index of moderated mediation was significant ($b = -.58$, $SE = .21$, 95% $CI = [-1.00, -.18]$), and the interaction became non-significant ($t(270) = .13$) when preparedness was included in the model ($t(270) = 17.60$, $p < .001$).

CONCLUSION

Service providers often need to make multiple attempts to solve a problem. A doctor may need to change treatments, a nutritionist may prescribe a new diet, a plumber may use different methods to unclog a pipe, and an IT specialist may employ alternative tools to fix a computer. Each plan that is not used as the first plan can be considered a backup plan, and it should be no surprise that professionals would be capable of trying different approaches to solve a problem. Yet, we find that disclosing a backup plan only after failure, which is probably typical, lowers perceptions of competence by making the professional appear less prepared than if they had disclosed a backup plan prior to the initial attempt.

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Reconsidering The Collective Photo Essay Method - Application and discussion through the visiting experience of a theme park

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EXTENDED ABSTRACT

The collective photo essay (CPE) was developed by Holbrook et al. in the late 1990s and early 2000s to understand the consumer experience. An adaptation of this method is proposed and discussed in today's digital environment, through the experience of visiting a theme park dedicated to man and nature.

Experience has been a central object of marketing research for forty years and the pioneering article by Holbrook and Hirschman (1982). The contributions define the contours of the consumer experience with different methods. The methodological question is precisely the focus of this research. An important part of this literature aims at measuring the antecedents and consequences of the experience, while others try to define its content according to a comprehensive approach and highlight the variety experience types. The present work is part of the second perspective. How to apprehend the experience lived in a consumer situation?

Specific methods have been developed in this comprehensive logic. They mainly use phenomenological interviews (Thompson et al., 1989, 1994), observation - possibly participating observation (Canniford and Shankar, 2013), introspective methods and biographical essays (Wallendorf and Brucks, 1993; Holbrook, 1995; Arnold and Price 1993; Graillot et al., 2011) or methods from visual anthropology (Dion, 2007; Schembri and Boyle, 2013), notably digital (Pera et al., 2022).

Among these methods, the collective photo essay (CPE) developed by Holbrook and Kuwahara (1998), Holbrook et al., (1997, 1998, 2001), Holbrook (2005, 2006) appears particularly relevant to study lived experience because it is based on an original combination of visual and introspective methods. However, the CPE method still seems to be little known, whereas the development of digital audiovisual technologies allows us to better apprehend the lived experience while restoring its sensitivity, emotional and dynamic character.

The research objective is to reconsider the CPE as a method to capture the consumer experience. It is shown that beyond a certain complexity of implementation and coordination, this method is relevant to 1) enrich the understanding of the experience, physical and sensory dimensions, in particular 2) give an account of a diversity of lived experiences 3) and restore the lived experience to third parties. In practice, the experience of visiting a theme park located in Nouvelle-Aquitaine, France, and dedicated to human beings' place in nature named *DéfiPlanet* (i.e., "*PlanetChallenge*" in English), has been investigated.

Holbrook and Kuwahara (1998, 1999) and Holbrook et al. (2001) propose a method named the collective photo essay (CPE), which combines several modes of data collection and production - visual and verbal - to study the consumption experience. This hybrid methodology combines photo-reporting and individual feedback from informants on their photos and collective reflections around non-personal photos to develop a better understanding of consumer experiences (Dion, 2007). It is in line with visual methods applied to marketing (Schembri and Boyle, 2013) and incorporates elements of photo-elicitation or photo-interviewing (Ndione and Rémy, 2018).

This method has already been used to study various consumer experiences such as life in New York (Holbrook and Kuwahara, 1998), happiness (Holbrook and Kuwahara, 1999), the experience of

living with pets (Holbrook et al., 1998, 2001) or ordinary beauty in everyday life (Holbrook, 2005). Graillot et al. (2012) study the visiting experience at the archaeological site of Bibracte, with notable difference, because the researchers themselves do both the photographic work and the verbalization of the photo-reportage. This is the path we followed here.

The research project brings together researchers specialized in consumer research, communication, and semiotics, and is conducted in collaboration with the *DéfiPlanet* park (i.e., "*PlanetChallenge*") dedicated to "the relationship between man and nature". Six researchers (three women and three men, aged between 30 and 50) spent one or two days in the park, in pairs, equipped with a digital camera with the instruction to produce a photo report illustrating their visiting experience.

Following this visit to the park, each person had to, individually, number each photo chronologically, caption it with a title and/or comments (i.e., vignettes), select photos representative of the experience, comment on the choice of each photo (justification), classify the photos in order of representativeness of the experience, and finally write a first photo-reportage (i.e., an individual essay enriched with photos) testifying to the experience.

Researchers meet for the third phase initiated by the presentation of the individual photo essays, before collectively defining the lived experience by highlighting its main themes. The narratives of experience are produced using the selected photos and an accompanying slide show. Then, the researchers collectively identified the constituent themes of the lived experience, inductively (thematic coding logic), and selected characteristic photos of these themes. Finally, a classification of the seven representative themes of the lived experience and of representative photos of these themes was retained.

Later, following this collective phase, the researchers individually selected a photo representing each theme. The seven themes of the lived experience and the final photos selection structure the final CPE that will be designed by the research project coordinator. It will be presented to the park leaders in the form of a slide show.

The research team was able to follow the protocol developed by Holbrook and Kuwahara (1998, 1999), Holbrook et al. (2001), Holbrook (2005,2006), and achieve the expected result: the formalization of the visiting experience and its components. In summary, the CPE method appears to be an individual and collective, personal, and sensitive, introspective, visual, and comprehensive method that allows for a better understanding and restitution of the consumption experience lived in situation. To help consumer researchers to mobilize this method, we share here some thoughts on the difficulties encountered (classification, formal variety), some points of vigilance (coordination), and some research perspectives to revisit the CPE method (data enrichment, restitution and return to the field).

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The Mere Placement Effect: Impact of Cart versus Wishlist Placement on Product Perception and Purchase Behavior

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EXTENDED ABSTRACT

Five experimental studies demonstrate the ‘mere placement effect’- that prior arbitrary assignment to a wishlist (versus cart) by itself may reduce purchase likelihood, sequentially mediated by purchase indecision and perceived product need. The time duration of placement in the wishlist or cart and retailers’ reminder message moderate the main effect.

E-commerce portals typically have a cart and a wishlist where consumers place items before purchasing (Popovich & Hamilton, 2014). Our research demonstrates the existence of a “mere placement effect” that merely placing a product in a wishlist/cart during an earlier shopping session could impact its purchase likelihood in subsequent sessions.

We posit that repeated cycles of shopping lead to habit formation (Wood & Neal, 2009):

Habit 1: Placement in cart/wishlist: Items for immediate (vs. future) purchase are added to the cart (vs. wishlist).

Habit 2: Movement from cart/wishlist: Items are purchased sooner (vs. later) when assigned to the cart (vs. wishlist).

In multi-session shopping, the initial session may involve an arbitrary assignment to a wishlist or cart, used interchangeably for bookmarking/organizing (Denegri-Knott & Molesworth, 2013) without consciously making purchase-related decisions.

Cognitive heuristics suggest that “subjects who infer that a stimulus condition implies another (X implies Y) will also believe that the second implies the first (Y implies X) and, therefore, will infer X from the existence of Y” (Wyer & Srull, 2014, p. 410). Shoppers, therefore, develop the following heuristic:

Wishlist -> Purchase later and lower purchase likelihood

Cart -> Purchase sooner and higher purchase likelihood

Further, the placement in the bucket impacts the consumer’s rationalization about whether the product is needed. Formally,

Hypothesis 1: A product placed in wishlist (vs. cart) is likely to be considered for purchase later (vs. sooner).

Hypothesis 2: A product placed in the cart will result in higher purchase intent than the one placed in the wishlist.

Hypothesis 3: Product placement in wishlist (vs. cart) increases (vs. decreases) purchase indecision and reduces (vs. increases) the perceived product-need resulting in a reduction (vs. increase) in purchase likelihood.

Shopping has an inertial quality (Dhar et al., 2007). Products placed in the cart (vs. wishlist) are likely to have inertia of motion (rest), and are moved sooner (vs. later). However, products lying in the cart for a long duration would lose inertia of motion, leading to delayed purchase, while products assigned to wishlist have inertia of rest, thus not impacted by time. Thus,

Hypothesis 4: When a product is assigned to a bucket, for a small-time duration of the wait, the purchase likelihood is higher for the cart than for the

wishlist, but this effect attenuates for a longer duration.

E-retailers send consumers targeted reminders or price promotions (Groening et al., 2021). Products in cart (vs. wishlist) have high (vs. low) inertia of motion; hence price promotion has a greater (vs. lower) impact on purchase likelihood.

Hypothesis 5: A promotional offer will have a significantly higher impact on purchase likelihood for a product placed in the wishlist than in the cart.

EMPIRICAL STUDIES

Study 1 and **2** tested H1 and H2 with participants from two Asian business schools. Study 1 employed a 2-cell between-subjects (placement in cart vs. wishlist) design, wherein participants ($N=119$, $M_{age}=25.94$, 43.7% female) read that their friend had added a headphone to a wishlist (vs. cart) and indicated its purchase time (Today(1)...Never(11)). The means were as hypothesized ($M_{cart}=3.31$, $M_{wishlist}=5.93$, $p<0.001$).

Study 2 had a 2-cell (cart vs. wishlist) between-subjects design such that participants ($N=116$, $M_{age}=26.07$, 39.7% female) were told about their placement (jeans to wishlist and watch to cart vs. watch to wishlist and jeans to cart), before indicating which product would be purchased within 15 days. The product placed in the cart had a higher purchase likelihood ($\chi^2=58.15$, $p<0.001$).

Study 3 employed a 2(Soft Board Placement: Cart/Wishlist) X 2(Table Lamp Placement: Cart/Wishlist) between-subjects design to test H3. Participants ($N=205$ from Prolific, $M_{age}=23.93$, 47.80% female), while browsing, had liked a soft board (focal product) and a table lamp (control), which they placed in wishlist/cart. They reported their purchase likelihood, purchase indecision, and perceived product-need.

An ANOVA analysis confirmed the main effect, and serial mediation analysis revealed a significant indirect effect of bucket type on purchase likelihood via purchase indecision and perceived product-need.

Study 4 demonstrates a boundary condition to the main effect through a 2(Bucket type: Wishlist vs. Cart) X 2(Time duration: two-days/three-months) between-subjects design. Respondents ($N=288$, age 25-30, 53.82% female) imagined placing a fitness band two-days (vs. three-months) back in the wishlist (vs. cart) and indicated their purchase likelihood.

Results revealed a significant two-way interaction ($F(1, 284)=4.15$, $p=0.043$). After a longer time-gap, placement in wishlist led to a higher purchase likelihood than in the cart ($p=0.029$), but not for a shorter time-gap ($p=0.516$).

Study 5 ($N=164$, $M_{age}=25.9$, 49.1% female) investigated the effect of reminder and price promotion communication on purchase likelihood via a 2(Bucket: wishlist vs Cart) X 2(Promotion: None/Present) between-subjects design. The scenario stated that their friend had placed a product in wishlist (or cart) and received a message (simple reminder vs. 70% discount). Measures for purchase likelihood and purchase timing were recorded.

There was a significant interaction effect ($F(1,160)=6.95$, $p=0.009$), such that promotion vs. reminder message had a greater

impact on purchase likelihood in the wishlist ($p < 0.01$) but not the cart ($p = 0.780$). The effect on purchase timing was similar.

CONCLUSION

This is the first research to conceptualize the mere placement effect and to demonstrate that the unintended addition of products to a wishlist or cart can alter product-perception and purchase likelihood.

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Communicating Amounts in Terms of Commonly Used Budgeting Periods Increases Intentions to Claim Government Benefits

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EXTENDED ABSTRACT

Millions of families have not claimed their child tax credit (CTC). Evidence from three pre-registered field experiments ($N = 30,874$) demonstrates that communicating the CTC benefit amount in terms of commonly (vs. uncommonly) used budgeting periods (e.g., \$300 a month vs. \$3,600 a year) increases intentions to claim the CTC.

In response to rising child poverty, the Biden administration expanded the child tax credit (CTC), automatically sending most families with children direct unrestricted cash transfers. However, four million children and their families had not received their CTC (Cox et al. 2021). These were primarily low-income families who are not required to file taxes. As a result, the IRS does not have the required information to send their payments automatically. Thus, the families who would benefit the most from the CTC were the least likely to receive it. Instead, they had to actively claim their CTC with the IRS.

Policymakers tried to persuade this low-income population to claim their CTC, noting that they could receive up to \$3,600 a year per child. However, describing CTC amounts on a yearly basis might not be optimal. Most people do not budget on a yearly basis (Zhang, Sussman, Wang-Ly & Lyu 2021). In a pre-registered pilot study we conducted among government benefit recipients ($n = 499$), only 0.6% reported budgeting on a yearly basis. Instead, most people reported budgeting on a weekly or monthly basis (28.3% and 39.5%).

We propose that people prefer income streams that are described in terms that match their common budgeting periods, as this match may help them simplify, plan, and effectively manage their resources. In line with this notion, in the same pilot study mentioned above, we asked participants whether they would prefer to receive \$60,000 on January 1 or \$5,000 on the first of every month for a year. In line with our theorizing, the vast majority of participants (84.8%) preferred to receive the monthly income stream. One explanation of this result could be that people perceive monthly income streams as larger than yearly income streams or large lump sums. However, because all participants read that they were earning a \$60,000 a year salary in the experiment's instructions, differences in size perceptions of the salary amount were unlikely to drive the results. Instead, consistent with the budgeting tendencies described above, 71% of those who preferred a monthly income stream noted that they chose the monthly income stream because it would help them budget better. Building on these insights, we hypothesize that describing the CTC benefit amount in terms of commonly used budgeting periods (e.g., \$300 a month) instead of the currently used uncommon budgeting period (\$3,600 a year) will increase people's interest in claiming the CTC.

We test this proposition across three large-scale field experiments measuring real behavior among individuals who had applied for government benefits in the past and were deemed eligible for the CTC. In these experiments, we encourage participants to visit a website to help them access their CTC. Code for America, a non-profit aimed at improving how the government serves the public, created the website and estimated participants' eligibility based on household income and composition. We pre-registered our hypotheses, study designs, and planned analyses for all studies (Re-

search Box 530; https://researchbox.org/530&PEER_REVIEW_passcode=JCHKGA).

In experiment 1 ($n = 8,448$), participants were randomly assigned to one of two budgeting period conditions (common vs. control). The exact messages read: "Hi [First Name], this is Gwen from GetCalFresh. You may have a child tax credit for up to \$[amount] per [week/year], which can be used to pay for any expenses, including childcare. Visit [link] to claim your tax credit of up to \$[amount] per [week/year]." As predicted, participants were more likely to visit the website (common: 34.9% vs. control: $z = 7.18$, $p < 0.001$) and click the "File your simplified return now" button on the homepage (common: 16.6% vs. control: 12.2%; $z = 5.76$, $p < .001$) in the common budgeting period condition compared to the control.

Experiment 2 ($n=8,248$) aimed to expand the generalizability of this effect to another common budgeting period (monthly) and examine whether the effects found in Experiment 1 were a result of the specificity of the amount shown (e.g., \$3,600 a year vs. \$69 a week). To account for this alternative explanation, we communicated the CTC amount on a monthly basis, which always resulted in round numbers (e.g., \$300 a month, \$550 a month). As in experiment 1, participants were more likely to visit the website (common: 31.7% vs. control: 27.4%; $z = 4.29$, $p < 0.001$) and click "File your simplified return now" (common: 14.8% vs. control: 11.9%; $z = 3.82$, $p < 0.001$) in the common budgeting period condition compared to the control.

Experiment 3 ($n = 14,179$) varied whether participants were encouraged to think about their budgets on a monthly or yearly basis (the budget period prompt) and whether the CTC benefit amount was described on a monthly or yearly basis (the benefit amount description). Participants were randomly assigned to one of four conditions in this 2x2 between-subject experiment design. Consistent with our theoretical model, there was a significant interaction between our two factors (budget period prompt and benefit amount description) ($z = -3.59$, $p < 0.001$). Specifically, when people were encouraged to think about their monthly budgets, describing the CTC on a monthly basis outperformed the yearly control (common: 25.5% vs. control: 22.0%; $z = 3.52$, $p < 0.001$). This was not the case when people were encouraged to think about their yearly budgets (common: 19.4% vs. control: 21.0%; $z = -1.66$, $p = 0.097$).

The optimal income description varies depending on a communicator's goal. A follow-up study demonstrated common (vs. uncommon) budget periods were more likely to increase people's claiming interest than their perceptions of the size of the benefit (see research box for details).

This large-scale field investigation systematically examines the effect of describing benefit amounts over different budgeting periods on people's interest in claiming government benefits. Our findings suggest that describing benefit amounts in terms that match people's budgeting periods is a cheap and simple intervention that can be rapidly deployed to help low-income families.

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Consuming Caffeine Before Shopping Leads to Higher Spending

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EXTENDED ABSTRACT

Coffee and other caffeinated beverages are popular worldwide. Consumers often have caffeinated beverages before shopping. This is further facilitated by some retailers offering complimentary coffee or having onsite coffee shops. A series of field and lab studies show that consuming a caffeinated beverage before shopping leads to higher consumer spending.

Caffeine is consumed worldwide usually through coffee, tea, soda, and energy drinks. Consumers often shop online and in brick-and-mortar stores immediately after or while consuming caffeinated beverages. Retailers seem to facilitate caffeine consumption by offering complimentary coffee to shoppers (e.g., Trader Joe's) or housing onsite coffeeshops (e.g., Barnes and Noble, Target).

Caffeine is a highly popular and powerful stimulant that excites the mind and body (Nehlig 2010; Volkow et al. 2015). Caffeine induces arousal, defined as a state of activation and alertness that varies from extreme drowsiness to extreme excitement (Pham 1996). Arousal can be a positive affective state (i.e., energetic arousal) or a negative affective state (i.e., tense arousal) (Gorn et al. 1997; Thayer 1986). Caffeine intake tends to increase energetic arousal with practically no effects on tense arousal, especially for intakes below 300 mg (Smit and Rogers 2000). We examine effects of caffeine intake in the range of about 30 mg and 100 mg to ensure ecological validity since most caffeinated beverages have caffeine content in this range (Smit et al. 2006).

The arousing effects of caffeine have been well documented (Barry et al. 2005). The effects materialize from consuming as little as 25–30 mg of caffeine (Quinlan et al. 2000; Smit et al. 2006) and last for hours (Whitsett et al. 1984).

Energetic arousal inhibits cognitive control and increases impulsivity. This is because caffeine consumption leads to the release of dopamine (Linnet et al. 2011) and increased dopamine levels lead to more impulsive behavior and reduced self-control (Buckholtz et al. 2010; Mayack and Nag 2015). Consistent with this, arousal leads to greater reliance on heuristic processing (Sanbonmatsu and Kardes 1988) and is associated with impulsive behavior (Rook and Gardner 1993).

In the context of the present research, we predict that caffeine will induce a state of energetic arousal that will lead to more impulsive shopping behavior in terms of higher number of items purchased and greater spending.

In addition to the main effects, we also propose that the effects of caffeine consumption on impulsive shopping behavior will be stronger for high hedonic products (i.e., those that provide fun, pleasure, or immediate gratification; Voss et al. 2003) and weaker for low hedonic products. This is because high hedonic product categories are more prone to impulse buying (Kushwaha and Shankar 2013). That is, impulsive behaviors are more strongly associated with products that are higher on hedonic values (Ramanathan and Menon 2006; Yim et al. 2014). As discussed earlier, since energetic arousal from caffeine consumption increases impulsivity, its effects are likely to be stronger for high hedonic products than for low hedonic products. Hence, we hypothesize that caffeine consumption before shopping leads to higher number of items purchased and greater spending, with this effect being stronger for “high

hedonic” products and attenuated for “low hedonic” products. We test our hypotheses with four studies.

Study 1 was a between-subjects field experiment conducted at an outlet of a major retail chain in France. All customers arriving at the store were offered a complimentary caffeinated (100 mg caffeine) or decaffeinated espresso. Upon exiting the store, purchase information was recorded. The results showed that spending, number of items purchased, and arousal were significantly higher when participants sampled the caffeinated (vs. decaffeinated) espresso. Additionally, there was a significant indirect effect of caffeine intake on the number of items purchased through arousal.

Study 2 replicated the key findings of study 1 in a more controlled field setting. This study was conducted at a retail store in Spain and had two between-subjects experimental conditions (beverage consumed: caffeinated espresso vs. water). Participants were randomly assigned to either the “caffeine” (75 mg of caffeinated espresso) or the “water” group. After consuming the beverage, they browsed the store. At the end of the study period, they provided purchase information. Consistent with the results of study 1, participants who drank a caffeinated (vs. non-caffeinated) beverage before shopping were more aroused and spent more. Also, as predicted, the effect of caffeine consumption on spending was driven by arousal.

Study 3, a field experiment, examined if the effects of caffeine on impulsive purchase behavior were enhanced for high (vs. low) hedonic products. The study was conducted at an outlet of a major retail chain in France (different than the one where study 1 was conducted). Incoming shoppers were offered a complimentary beverage (50ml of caffeinated or decaffeinated espresso or a 330 ml bottle of water). Upon exiting the store, purchase information was recorded. As hypothesized, participants who consumed the caffeinated espresso (vs. decaf espresso or water) spent more. Also, as predicted, the effect of caffeine on shopping impulsivity is stronger for high hedonic (vs. low hedonic) products.

Study 4 had a 2 (beverage consumed: caffeinated coffee vs. water) X 2 (product set: high hedonic vs. low hedonic) between-subjects experiment. Participants were given a cup of caffeinated coffee or a bottle of water. Participants were asked to take a look at either a high or a low hedonic product set and then indicate the items they wished to purchase at that moment. The number of items selected was the dependent variable. The results show that for high hedonic products, coffee (vs. water) consumption led to a significantly higher number of items selected with the effect attenuated for low hedonic products.

Overall, the findings from a series of studies conducted at retail stores in different geographic locations (in France and Spain) and in the lab indicate that consuming a caffeinated (vs. non-caffeinated) beverage before shopping leads to more impulsive behavior in terms of higher number of items purchased and greater spending. This occurs because caffeine consumption enhances energetic arousal, which, in turn, leads to higher shopping impulsivity. The effects of caffeine on shopping impulsivity are stronger for high (vs. low) hedonic products. This research is the first to demonstrate a direct link between caffeine intake and shopping behavior.

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The Lure of Ugliness: Information Presentation Strategies to Increase Donations to Normatively Unattractive Animals

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EXTENDED ABSTRACT

Normatively unattractive animals receive fewer donations. We show that different information processing styles activated by visual and verbal information can affect donation decisions. Specifically, unattractiveness conveyed through verbal information is likely to pique curiosity, increase learning intention and donations whereas unattractiveness conveyed visually elicits negative affective reactions and hurts donations.

Biodiversity loss is ranked as one of the top three threats to mankind (World Economic Forum 2022). Efforts to preserve animals are not always successful. Animals that are normatively unattractive often attract fewer charitable contributions (Cryder, Botti, and Simonyan 2017) and research attention (Fleming and Bateman 2016). The current work shows how visual and verbal information processing strategies can be used effectively to pique curiosity about these animals and increase donations.

According to the dual-coding theory (Paivio 1986), each stimulus can be encoded and processed by visual or verbal systems. However, these two systems induce different processing styles. Even when eliciting similar affective responses, verbal inputs activate prefrontal regions of the brain that represent high-level cognitive interpretations, whereas pictures activate systems for attending to and encoding affective properties of the stimulus (Ochsner et al. 2009). Cognitive operations activated by verbal information require top-down processing, which leads to schema-driven interpretations of new information in terms of prior knowledge (Wyer, Hung, and Jiang 2008). In contrast, affective responses are automatically triggered by concrete perceptual inputs in a bottom-up way (Ochsner et al. 2009).

Thus, it is not surprising that donation appeals that feature pictures of attractive animals elicit positive affect and an approach tendency whereas appeals depicting unattractive animals are likely to elicit an avoidance response. But is this tendency always likely to be observed? There are instances when people approach unattractive targets. For example, people are known to zoom out of pictures depicting an unpleasant social disaster but are eager to view the picture if it is described verbally (Oosterwijk 2017). Such findings suggest that verbal processing might play a role in whether people seek out an unattractive stimulus. Unfortunately, however, in much of research conducted, unattractive targets are presented visually, and verbal descriptions are rarely studied.

We attempt to reconcile the inconsistent results that people approach or avoid visually unpleasant stimuli by invoking the different processes of visual and verbal systems. When exposed to unattractive pictures, people engage in affective, bottom-up processing. The negative subjective responses motivate people to avoid the stimulus. However, when exposed to words that conceptually describe an unattractive target (e.g., an ugly bird), people engage in cognitive, top-down processing. Such descriptions must be interpreted with respect to an existing schema. However, unattractive (or ugly) stimuli, by definition, deviate from existing mental schemas (Grewal et al. 2018; Veryzer and Hutchinson 1998). The inability to interpret the verbal description of an unattractive target in terms of an existing schema is likely to make people aware of the gap in their knowledge and motivate them to learn more about the target. This tendency is likely to yield a more favorable response to it. Four studies confirmed our hypotheses.

Study 1 ($N = 249$, pre-registered) manipulated the dominant processing styles by changing the presentation order of verbal and visual information. Participants exposed to the verbal description of an endangered frog first indicated a higher interest in learning ($M = 4.78$) than those exposed to a picture first ($M = 4.26$; $F(1, 246) = 5.20, p = .023$). Also, participants in the *verbal-first* conditions were more likely to give 10 cents of their earnings from the survey to help the unattractive target (49.6%) than those in the *visual-first* conditions (36.5%; $\chi^2(1) = 4.27, p = .039$).

Study 2 tested if verbal labels elicit curiosity about unattractive species when competing information about other attractive options is available. 67 student participants were allowed to read mini magazines placed in their cubicles while waiting for the next study. Three magazines with the titles, “Ugly/Beautiful/Jumper Animals in the World,” were arranged in counterbalanced order. More participants picked the “ugly animals” magazine first (46.3%) compared to “beautiful animals” (25.4%; $\chi^2(1) = 12.00, p < .001$) or “jumper animals” (19.4%; $\chi^2(1) = 12.86, p < .001$). In total, more than half of participants read the magazine about “ugly animals” (68.7%; $\chi^2(1) = 9.33, p = .002$).

Study 3 ($N = 113$) used a 2 (Primed goal: learning-first vs. donation-first) \times 2 (Target fish: unattractive vs. neutral) mixed design. If verbal descriptions make people curious, a manipulation that primes thoughts about learning first (as opposed to donating) should increase the likelihood of donating to unattractive species. Participants were shown two endangered species side by side; one rated 9/10 (i.e., unattractive) vs. 6/10 (i.e., neutral) on the unattractiveness dimension. Before participants saw these descriptions, either a learning or a donation goal was primed. As expected, the primed learning goal led to an 18.7% increase in donation likelihood for unattractive species compared to the primed donation goal (54.4% vs. 35.7%; $\chi^2(1) = 3.98, p = .046$).

Study 4 ($N = 268$) employed a 2 (Curiosity about animals: low vs. high) \times 2 (Target animal: ugly endangered vs. endangered) between-subjects design. In *low-curiosity* (*high-curiosity*) conditions, participants were exposed to many (few) unknown trivia questions, which should (not) preoccupy their attention and inhibit curiosity about the following stimuli (Kruglanski and Webster 1996). Next, in *ugly-animal* (*control*) conditions, participants saw a charitable appeal for endangered animals - “We Need Your Help! We are Ugly (*Endangered*)”. Donation intention for endangered animals that were described as ugly declined when curiosity was low ($M = 3.32$) than high ($M = 3.93$; $F(1, 263) = 3.89, p = .034$). This was not observed for animals that were merely described as endangered ($M_{\text{low-curiosity}} = 4.12$ vs. $M_{\text{high-curiosity}} = 3.74$; $F(1, 263) = 1.74, p = .19$). The interaction of curiosity and target animals on donation intention was significant ($F(1, 263) = 4.83, p = .016$). A bootstrapping analysis (Model 85, Hayes 2017) showed that the interaction on donation intention was serially mediated by eagerness to elaborate and evaluative responses ($b = -.14, SE = .06, 95\% \text{ CI } [-.28, -.04]$).

This research is not only of substantive importance but also speaks to theoretical issues such as when and why people might be drawn to normatively unattractive targets. Or, how verbal and visual information can activate a mindset to process information differently and the downstream consequences these tendencies have.

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On the Development of PARA: A Text Analytic Method to Detect Textual Paralanguage in Social Media Data

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EXTENDED ABSTRACT

This research develops an algorithm (called PARA) to identify textual paralanguage, or nonverbal cues in text. PARA is validated using social media data from Twitter, YouTube, and Instagram. Automatically-detected textual paralanguage is an indicator of sentiment valence and intensity and improves prediction of consumer engagement relative to existing text tools.

The sheer volume of text-rich data offers exciting opportunities for marketing managers; yet, the task of deciding what to consider in text is often overwhelming. There have been calls for analytical tools to aid researchers and practitioners in analyzing text-based content. The purpose of this work is to develop a comprehensive automatic text tool for nonverbal communication expressed in text-based messages: the textual paralanguage classifier (PARA).

Most of what is considered today in text analytics are actual words themselves, forming inferences and making predictions from subtle nuances in the meaning of words. In this research, we take a different approach. We focus on extratextual elements in online written communication, called textual paralanguage (TPL). Text is imbued with nonverbal cues in myriad ways that are detected by PARA. For example, auditory aspects of speech are generally indicative of how words would be spoken. For example, vocal aspects can convey tempo (e.g., amazingggggg, in this case denoted with ‘stretchable words’), emphasis (e.g., !!!!!), stress (e.g., words in ALL CAPS), through various vocalizations (e.g., ugh, ah, or hmm), etc. Visual nonverbals can communicate body language (e.g., the thumbs up emoji) or facial behavior (e.g., smiley emojis). Even tactile interaction can be communicated via text (e.g., hug emoji). Often thought to be trivial, many market researchers and firms employing text analytics begin cleaning datasets by normalizing spelling, extracting extraneous punctuation, or eliminating other symbols or elements thought to be generating “noise.” We expose here that traditionally-neglected aspects of text speech are actually quite meaningful.

To develop and validate PARA, this work utilizes social media data from corporate brands on Twitter, YouTube comments, and Instagram influencers (N = 1,241,489 posts). Study 1 details the development PARA, using Twitter data from verified accounts of 69 national brands. PARA is built on both a dictionary-based and a rule-based approach. Following established procedures for dictionary creation, research assistants manually coded the tweets for instances of TPL. To comprehensively detect TPL, rule-based modules were developed for restructuring, pattern detection, stemming, and screening. These rules handle complex processing (e.g., words could be elongated in a variety of ways: “really” could be expressed as “reeeeally,” “reallllllly,” or “reallyyyyyy”). PARA can detect this and captures all possible stems of a word. In a sense, the algorithm has been programmed to engage in iterative processing by systematically bouncing between modules and expanding or contracting word forms. Assessing the performance of PARA relative to human coding, the accuracy rate on all tweets was 96.70%. High accuracy was attained across the TPL categories (auditory TPL: 93.51%, tactile TPL: 99.41%, visual TPL: 97.19%).

Study 2 tests whether TPL significantly influences perceptions of sentiment valence (i.e., positive, negative, or neutral valence) and intensity (i.e., the *degree* of positivity or negativity of a message).

Using data from Twitter (N = 4,200) and YouTube comments (N=5,000), human coders evaluated the post for sentiment valence and intensity (1 = extremely negative, 9 = extremely positive). This study employed a quasi-experimental design using a causal inference from text approach. To uncover the effect of TPL on sentiment, we account for a robust set of control variables, including platform fixed effects, 22 sentiment-related variables from various text tools. Word-based confounds were controlled for using an STM-based dimension reduction technique, which generated a text-based propensity score that captured how TPL is affected by words. Latent topic-based confounds were controlled for using topic modeling.

Results revealed that, on average, PARA significantly increased both sentiment valence (B = .092, SE = .018, $p < .001$) and sentiment intensity (B = .36, SE = .018, $p < .001$). Regressions using the TPL features further revealed heterogeneous effects on sentiment. For example, stress (B = .393, SE = .026, $p < .001$), emphasis (B = .30, SE = .024, $p < .001$) and tempo (B = .097, SE = .022, $p < .001$) revealed significant effects on sentiment intensity while not possessing statistically significant effects on valence. The effect size of PARA on sentiment intensity ($= .207$, $CI_{95\%} = [.187, .226]$) and sentiment valence ($= .054$, $CI_{95\%} = [.034, .075]$) was statistically significant. By identifying nonverbal parts of speech, PARA captures features of text that a human coder actually uses in making sentiment assessments.

The purpose of Study 3 was to test the predictive power of PARA on consumer engagement with likes and retweets of social media content. Data included publicly available Twitter data and scraped Instagram data from influencers (N= 1,216,057). Predictions were carried out using a 10-fold nested cross-validation procedure. We trained a linear model to predict engagement by fitting a Lasso regularized linear regression to 90% of the data and conducted out-of-sample predictions for the remaining 10% of the data (i.e., the holdout group). Predictive accuracy was calculated using the variance explained by predictive models based on cross-validation (VEcv). Results revealed that PARA significantly improved prediction relative to existing text tools and baseline features on Twitter likes ($\Delta VEcv = .231$, SE = .049, $t = 4.706$, $p < .001$), Twitter retweets ($\Delta VEcv = .037$, SE = .008, $t = 4.329$, $p < .001$), and Instagram likes ($\Delta VEcv = .156$, SE = .026, $t = 5.912$, $p < .001$). The data revealed that the inclusion of PARA improved prediction relative to a robust set of text analytic tools that rely predominantly on word-based assessments, extracting unique information that existing tools cannot detect.

In contrast to tools that are predominantly word-based, we developed a tool to detect nonverbal parts of speech to facilitate the discovery of insights from text. PARA automatically detects nonverbals in text. PARA influences the assessment of sentiment valence and intensity and improves prediction of consumer engagement with social media content. The intent of this work is to give structure to unstructured data and make the study of TPL accessible to researchers and practitioners through the development of a methodological text tool to detect language beyond *what* is said verbally, to *how* it is said nonverbally.

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The Impact of Review Request Wording on the Readers' Review Inferences and Subsequent Behavioral Intentions

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EXTENDED ABSTRACT

Five studies explore the impact of review request wording on readers' review inferences and their subsequent behavioral intentions. We show that simply framing a review request as helping others' decisions (vs. sharing experience) significantly increases the likelihood of trying and choosing the brand as reviews are perceived as less self-centered.

Online reviews are an important source of information providing valuable insights into product experience (Zhao et al. 2013 p.154). However, companies often face challenges because consumers often question reviews' reliability as they understand preference heterogeneity (e.g., Chu et al. 2015; Mogilner et al. 2020). Put it in a different way, consumers presume that reviews generally focus on writers' perspectives, thereby likely to be self-centered. This significantly lowers the effectiveness of reviews as the self-centeredness of messages hurts endorsements/persuasion attempts (e.g., Naylor et al. 2011; Ostinelli and Bockenholt 2009; Zhou and Shapiro 2020).

How could companies then decrease the self-centeredness of reviews and increase their effectiveness? One way would be prompting review writers to take others' perspectives when writing reviews. Indeed, research on perspective-taking theory has shown that simply respecting others' perspectives helps messages' effectiveness (e.g., Batson et al. 1997; Galinsky et al. 2008; Regan and Totten 1975) by helping better advice-based judgments (Yaniv and Choshen-Hillel 2012) and prompting attitude change (e.g., Tuller et al. 2015). Interestingly, research has identified a link between perspective-taking and helping behavior (e.g., Maner et al. 2016). For example, people express greater empathy when taking others' perspectives (Lamm et al. 2007) and promote prosocial activity (e.g., Schultz 2000) or altruistic behavior (e.g., Oswald 2002). Taken together, we posit prompting review writers to take others' perspectives will positively impact the recommendation effectiveness of reviews, as they become less self-centered. Specifically, we argue that simply wording review writing requests to help other consumers will generate less self-centered reviews and increase behavioral intentions to try/choose the product of the review readers. We test the hypotheses across five studies.

Study 1A (n=67) tested the effect of review request wording on perceived self-centeredness using the frequency of including first-person pronouns, an indicator of self-centered attitude/behavior (e.g., Brockmeyer et al. 2015; Raskin and Shaw 1988). Participants were randomly assigned to either control or help condition and wrote reviews on H&M. In the control condition, participants were asked to write a review and share their experience. In the help condition, participants were asked to write a review and help others' decisions. Then, we assessed the self-centeredness of the reviews using LIWC software's I-word measure (a higher number equals more first-person pronouns). As predicted, reviews written in help (vs. control) condition contained significantly less first-person pronouns (Control: 6.55 vs. Help: 1.57; $t(65) = 4.28, p < .001, \eta^2 = .23$). Study 1B (n=196) replicated the finding (n=198) with Uber Eats (I-word: Control: 6.69 vs. Help: 3.30; $t(194) = 4.98, p < .001, \eta^2 = .11$) and validated the effect is independent to the extent consumers trust (Control: 5.32 vs. Help: 5.54; $t(194) = -1.28, p = .20, \eta^2 = .01$) or confident (Control: 5.84 vs. Help: 5.95; $t(194) = -.75, p = .45, \eta^2 = .00$) with the brand.

Study 2 tested the hypothesis by directly measuring self-centeredness. In phase 1 (n=34), we collected reviews on Chipotle by prompting consumers to either 'share experience' or 'help other consumers' decisions.' In phase 2 (n=135), independent raters read five randomly selected reviews from respective conditions and evaluated the perceived self-centeredness of the reviews (three items: $\alpha = .76$). The word 'Chipotle' were replaced with 'restaurant for unbiased evaluation. As predicted, consumers perceived the reviews from help (vs. control) condition less self-centered (Control: 3.98 vs. Help: 3.22; $t(133) = -3.68, p < .001, \eta^2 = .10$). No significant difference in perceived confidence of the reviewers as reported by the raters (Control: 4.16 vs. Help: 4.05; $t(133) = -0.48, p = 0.63, \eta^2 = .00$) was found.

Study 3 expanded the findings with choice while controlling consumers' experience. In phase 1 (n=40), all participants took a short online guitar tutorial. Then, participants were prompted to either 'write a review and share experience' or 'write a review and help other consumers' decisions.' In phase 2 (n=180), independent participants were recruited and told to imagine that they are looking for an online guitar lesson. Then, they read 10 randomly selected reviews from respective conditions in phase 1 and made a choice whether to try the tutorial described in the reviews. Again, participants were significantly more willing to take the tutorial when reading reviews from help (vs. control) condition (Control: 29.5% vs. Help: 44.6%; $\chi^2(1) = 4.34, p = .04$). Further, there was no significant differences in perceived objectivity of the reviews (Control: 4.80 vs. Help: 4.99; $t(178) = 1.09, p = .28$), review writers' impression management (Control: 2.57 vs. Help: 2.70; $t(178) = 0.50, p = .62$), and similarity to the review writer (Control: 4.13 vs. Help: 4.26; $t(178) = .66, p = .51$).

Study 4 formally established the self-centeredness of reviews as the mechanism. Phase 1 (n=199) asked participants to write a review on Netflix either by sharing their experience or helping other consumers' decisions. Only those who were willing wrote a review (no difference in the willingness to write the review). In phase 2, (n=299), participants read seven randomly selected reviews from respective conditions in phase 1 (word 'Netflix' were replaced with 'streaming platform') and indicated their willingness to subscribe to the streaming platform. They also rated the perceived self-centeredness of the reviews as well as the perceived confidence, and impression management intention of the reviewers. As predicted, reading reviews written under help (vs. control) wording led to more favorable behavioral intention ($b = .35, t(297) = 2.03, p = .04$). Further, perceived self-centeredness of the reviews was a significant mediator of this relationship ($b = .07, SE = .04, 95\% CI [.001, .163]$). Perceived confidence of the reviewers ($b = .03, SE = .04, 95\% CI [-.050, .113]$) and impression management intention of the reviewers ($b = .03, SE = .03, 95\% CI [-.011, .086]$) were not significant mediators, hence ruling out the alternative explanations and validating perceived self-centeredness as our core mechanism.

The current research makes several theoretical and practical contributions. First, to the best of our knowledge, the current research is the first to investigate the impact of review request wordings, hence adding to online word of mouth and linguistic aspects of review literature. Second, we make a practical contribution by suggesting an easily implementable yet effective marketing tactic.

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To Err is (Not) Human: Examining Beliefs about Errors Made by Artificial Intelligence

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EXTENDED ABSTRACT

Algorithm aversion research largely demonstrates algorithm aversion in tasks related to human intelligence. We offer a deeper understanding by investigating lay beliefs about AI, per se: We show that consumers believe AI commits fewer total errors, but is more likely to commit a severe error, than humans.

Companies are increasingly relying on artificial intelligence (AI) in various aspects of their operations. Yet, a great deal of work has demonstrated that consumers are hesitant to adopt AI, a phenomenon referred to as “algorithm aversion,” (Jussupow, Benbasat, and Heinzl 2020). Algorithm aversion has been found to occur in domains where uniquely human capabilities (e.g., moral judgment, accounting for uniqueness, competence at making subjective judgments, etc.) are relevant (Bigman and Gray 2018; Granulo, Fuchs and Puntoni 2020; Longoni and Cian 2020). While this work successfully identifies the contexts in which algorithm aversion is likely to be observed, we know less about the psychological underpinnings for algorithm aversion or why algorithm aversion is observed in domains where uniquely human skills are not relevant (see Dietvorst, Simmons, and Massey 2014).

We propose that to understand the psychological processes driving algorithm aversion, we must understand what beliefs consumers have about AI. Furthermore, over many interactions with computers, we propose that consumers learn AIs’ incorrect responses are not consistent or systematic in magnitude: a response that is wildly incorrect is just as likely as a response that is slightly incorrect. This further implies that consumers should believe that AI is incapable of differentiating between errors, such that a response that is greatly incorrect (a severe error) is just as likely as a response that is slightly incorrect (a minor error). Due to this belief, consumers expect AI, as compared to a human, to be more likely to make a severe error and are reluctant to adopt it. We demonstrate the existence of this lay theory and its impact on consumer preferences in four studies.

In studies 1a – b, we provide initial evidence of people’s lay beliefs about the likelihood of relatively minor versus severe errors when a task is performed by AI versus a human. Study 1a investigates lay beliefs in a medical context, and study 1b replicates the results of study 1a in the context of a driverless vehicle. In both studies, participants are shown two line graphs depicting the performance of two service providers (i.e., a human vs. robot surgeon in study 1a; a human driver vs. driverless car in study 1b). One line (labeled “Surgeon 1” or “Driver 1”) was steeper, illustrating more errors overall, but predominantly minor errors. The other line (labeled “Surgeon 2” or “Driver 2”) was flatter, illustrating fewer overall errors but similar occurrences of major and minor errors. In study 1a and 1b, the majority reported that the flatter line was more representative of AI ($\chi^2(1) = 9.33, p = .002$ and $\chi^2(1) = 8.00, p = .005$).

In Study 2, participants were assigned to one of two conditions in which they were told they would be having an expensive or inexpensive item delivered. We predict that people will be willing to adopt AI in circumstances that are less risky, because the difference between AI’s error avoidance tendencies versus a human’s error avoidance tendencies are less relevant if highly consequential errors are implausible. In line with our predictions, participants displayed greater algorithm aversion when the package was expensive (vs. inexpensive; $M = 5.35$ vs. $M = 4.65$; $t = 2.01, p = .047$).

In study 3, we further demonstrate the importance of error likelihood and type when choosing to adopt AI by manipulating error consequentiality within a medical domain. Algorithm aversion should only be displayed when there is a possibility for severe errors. Therefore, study 3 used a 2 (error type: minor vs. severe) x 2 (medical service provider type: human vs. AI) cell between-subject design. Participants were told to imagine they were suffering from acute pain in their stomach, had a fever, and had gone to the emergency room. In the minor error condition, participants were told they needed to have an abdominal X-ray done and that only minor errors were possible. In the severe error condition, participants were told they needed to have an emergency surgery to remove their appendix and minor, moderate, and severe errors were possible. As expected, an interaction emerged between the error type and medical service provider type factors ($F(1,296) = 36.51, p < .001$). Algorithm aversion was displayed in the severe error condition where people were more likely to undergo the surgery if it was performed by a human as compared to AI ($p < .001$). However, this effect was attenuated and there was no preference between service provider types within the minor error condition ($p = .406$).

In study 4 we show that differences in risk aversion impact willingness to adopt AI when a severe error is implicit, but not explicit. The design was a 2(tram operator type: human vs. AI) x 2(error severity: high vs. low) x continuous (age: lower vs. higher) mixed design. Age was chosen as a proxy for risk aversion because it is easily obtained and it has been shown that younger (vs. older) consumers underestimate their risk for serious consequences in the context of driving (Delohomme, Verhiac, and Martha 2009). We expected that when severe errors were made explicit, age would not impact one’s willingness to ride a human (vs. AI) operated tram and all consumers would prefer a tram operated by a human. However, when only minor errors are made explicit and severe errors are implicit, we expect older (but not younger) consumers to display algorithm aversion. Results revealed a three-way interaction between type of tram operator, error severity, and age ($B = -0.7, p = .013$). In the high error severity condition, we find no interaction between type of tram operator and age ($F < 1$). In contrast, in the low-severity condition, we find a significant interaction between type of tram operator and age ($B = -0.08, p < .001$), such that older (younger) consumers were significantly less (more) likely to ride the tram when it was operated by AI.

Together, our studies reveal how a novel lay belief about AI impacts consumers’ willingness to adopt AI across different contexts, furthering our understanding of when and why consumers display algorithm aversion.

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Is that chatbot lying to me? The effects of linguistic markers in chatbot interactions

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EXTENDED ABSTRACT

We argue that attributions about chatbot trustworthiness are influenced by the language used by the chatbot in conversation. In four studies involving interactions with chatbots, we find that including certain linguistic markers dampens consumer trust, which negatively impacts willingness to share personal information and intentions to purchase.

Chatbots are AI-powered digital agents that “live” on messaging platforms and websites and support conversational exchange between an organization and its customers. The present work argues that a chatbot’s language can shape attributions about its trustworthiness. Four studies involving real interactions with AI-based chatbots demonstrate that including certain linguistic markers associated with deception dampens consumer trust. In turn, diminished trust negatively impacts willingness to share an email address and make a purchase.

Trust plays a fundamental role in interactions between humans (Bok 1978) and market agents (Morgan and Hunt 1994). It is especially important online (Urban et al. 2000). One factor known to damage trust is deception (Croson et al. 2003). We posited that exposure to *linguistic cues* associated with deception might prevent the activation of trust-related associations, even if no deception is intended.

We pretested six linguistic deception markers (Hauch et al. 2015). Participants ($n=95$) read a brand message that either included linguistic deception markers or did not. We found that low lexical diversity (i.e., repetition of words) and overuse of emphatic markers (i.e., exclamation marks) significantly diminished trust in the brand ($ps < .05$). Therefore, we focused on these two deception markers in our experiments. We manipulated them by creating two versions of a chatbot interaction. In one, the chatbot’s language included both types of deception markers; in the other it included neither. In all experiments, participants interacted with real, AI-enabled chatbots, then completed online questionnaires.

In Experiment 1, 197 participants (62.9% male, $M_{age} = 37.21$, $SD = 10.862$) interacted with a “Health and Wellness” chatbot. Then, participants engaged in a word completion task that served as an implicit measure of trust. Implicit measures have been used to assess non-conscious lie detection (ten Brinke et al. 2014). Participants completed words related to trustworthiness (truth, honest, believe, sincere), expertise (e.g., expert, skill), and eight neutral words (Ohanian 1990). The words contained one or two missing letters; participants typed out the full word.

Participants in the markers-present condition took marginally longer to complete the trustworthiness-related words: $M_{markers\ present} = 7.90$ vs. $M_{markers\ absent} = 6.03$; $F(1, 167) = 3.29$, $\eta_p^2 = .02$, $p = .07$. Yet the word “sincere” experienced a floor effect: response times (RTs) were higher than for the other trustworthiness-related words and did not differ by condition ($p = .52$). Thus, we analyzed the composite RT for the other trustworthiness-related words and found a significant difference by condition: $M_{markers\ present} = 7.76$ vs. $M_{markers\ absent} = 4.41$; $F(1, 168) = 7.72$, $\eta_p^2 = .04$, $p = .006$. There was no difference by condition for the neutral ($p > .3$) or expertise-related words ($p > .5$).

Experiment 2 investigated the effect of deception markers on purchase intent and measured trust using a different implicit measure: a lexical decision task. Participants ($n=200$; 52.5% male, $M_{age} = 22.00$, $SD = 4.13$) interacted with the “Health and Wellness” chatbot, which recommended a supplement called Spirulina.

After the interaction, participants completed the lexical decision task and provided purchase intentions: “How likely are you to accept

the recommendation that was given to you during the interaction?” and “How likely are you to purchase the supplement recommended to you?” (1=Not at all likely; 7=Extremely likely) ($\alpha = .89$).

In the lexical decision task, participants judged whether letter strings were words (e.g. “tree”) or non-words (e.g. “rtast”). There were 16 non-words and 20 words (10 neutral; 10 trust-related) (Herbst et al. 2012).

Results showed a significant effect of condition on average RT for trust-related words ($M_{markers\ present} = 0.94$ vs. $M_{markers\ absent} = 0.79$; $F(1, 196) = 4.62$, $\eta_p^2 = .02$, $p = .03$), but not for neutral ($p > .9$) and non-words ($p > .7$). Participants in the markers-present condition expressed weaker purchase intentions ($M_{markers\ present} = 2.57$ vs. $M_{markers\ absent} = 2.99$; $F(1, 198) = 3.96$, $\eta_p^2 = .02$, $p = .048$).

Experiment 3 tested if an explicit measure of consumer trust mediates the impact of these linguistic markers on lower purchase intentions. Participants ($n=178$; 70.8% female, $M_{age} = 21.90$, $SD = 3.27$) interacted with a “Coffee Selection” chatbot. It asked participants if they would be willing to provide their email addresses. In the markers-absent condition, 82.3% responded affirmatively, versus 59.6% of participants in the markers-present condition ($\chi^2 = 10.70$; $p = .001$). After the interaction, participants rated agreement with two trust-related statements (“The agent was trying to trick me” and “The agent told me things that were not true” ($\alpha = .81$)), and provided purchase intentions ($\alpha = .89$).

Participants in the markers-present condition expressed marginally stronger beliefs that the chatbot tricked them or told them things that were not true ($M_{markers\ present} = 2.78$ vs. $M_{markers\ absent} = 2.38$; $F(1, 173) = 3.58$, $\eta_p^2 = .02$, $p = .06$). A mediation analysis revealed a significant, negative, indirect effect of deception markers on purchase intentions, through agreement with the trust-related statements (indirect effect = $-.12$, 95% CI $[-.30, -.0004]$).

Experiment 4 explored the distinction between agents perceived to have human qualities versus agents perceived as bots. Participants ($n=214$; 71% female, $M_{age} = 21.74$, $SD = 3.00$) interacted with the “Health and Wellness” chatbot, which we manipulated to feel more or less human by including a name (or not) and a cartoon icon showing a human (vs. robot) next to each post (Longoni and Cian 2020). Both versions used deception markers.

Respondents indicated purchase intentions, rated agreement with the trust-related items used in Experiment 3, and indicated whether they felt like they had been interacting with a human or a robot. A sequential mediation analysis revealed a significant indirect effect such that the human-like condition increased the feeling of having interacted with an actual human, which then increased trust, and led to stronger purchase intent (indirect effect = $.0345$, 95% CI $[\.0002, \.0884]$).

Four experiments demonstrated that consumer trust is influenced by a chatbot’s language. In turn, diminished trust weakens behavioral intentions and willingness to provide personal information. To avoid these negative outcomes, marketers should avoid using deception markers, especially in chatbots that are not highly humanized.

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When I Feel How a Turtle Feels: Switching Perspectives Enhances Consumer Ethical Behavior

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EXTENDED ABSTRACT

This research contributes to the evolving research stream of visual perspective by proposing a switching perspective, comparing with first-person perspective, to enhance ethical behavior. Three experiments are conducted. Perceived fear and empathy are the sequential underlying mechanisms. Ad appeal is the moderator of visual perspective on ethical behavior.

Advertisers rely on images of different visual perspectives to evoke the consumer ethical behaviors. Prior research has revealed that different visual perspectives influence consumers' emotions (Hung and Mukhopadhyay 2012), interpretation of actions (Libby and Eibach 2002), and attitudes toward the ad and the advertised product, and purchase intentions (Zhang and Yang 2013). Most of prior studies in visual perspective focus on comparisons between an actor's (first-person) and an observer's (third-person) perspective. When making ethical judgments, the actor will judge themselves more harshly and hold themselves more responsible than an observer of the same situation. The first-person perspective shows a person who has caused harm accidentally (the actor) and the third-person perspective shows a person who has merely witnessed the same event (the observer) (Hirschfeld-Kroen et al. 2021). Different from previous research, we propose the switching perspective as an alternative to present a visual image.

Observations from practice demonstrates both first-person (i.e., Greenpeace's powerful ads for anti-plastic straws and WWF's ads for anti-fur) and switching perspectives (i.e., PETA's ad for stopping shark finning and illustrations presented in Negru (2022)) are popular in ethical behavior promotion. These observations inspire us to examine the perceptual differences between the first-person and switching perspectives, and to further investigate how visual perspective affects consumer ethical behaviors.

Drawing from the Transportation Theory in advertising (Green and Sestir 2017), we propose that the switching perspective could attract more attention and could be more persuasive in evoking consumer ethical behaviors than could the first-person perspective. Transportation theory describes the tendency of narrative consumers to "travel" or be mentally drawn into the reality described in a narrative, as well as the outcomes associated with this experience of narrative immersion. When showing the human in the animal's position (i.e., the switching perspective), people will be more likely to "travel" in the ad and to feel the animal's pain. Such the transportation experience will facilitate perceived fear of being the animal. Fear is negative emotion when people confront with a threat and sense danger. Fear could create concern for one's own physical or psychological well-being, the well-being of others, or relationships with others (Brooker 1981). Fear arousal and fear, in turn, would act as a drive to motivate action (Witte and Allen 2000). For instance, the *Farm*, a 2018 American film, was classified as a cannibal horror movie and was taken from the switching perspective (Horror Film Wiki 2018). Donors' perceived fear is a motive and is touted as a key driver of prosocial giving behaviors (Sargeant, Ford, and West 2006). On the other hand, ad viewers may sense less fear when seeing an ad with a first-person perspective, which only presents the fact what human do on animals. Such the ad with the first-person perspective will be less likely to generate the transportation experience and occur perceived fear.

Further, the perceived fear evoked by the ad with a switching perspective will lead to empathy. Researchers suggested that public service ads inducing negative emotions lead to empathic reactions and end with the decision to help (Bagozzi and Moore 1994). Previous research showed that fear and empathy have a strong relationship and empathy marginally mediated the relationship between fear and prosocial ratings (Marsh et al. 2007). Batson et al. (1997) observed that when people experience others' acute physical pain, they might feel personal distress and then, empathy. In the ethical context, we propose consumers will experience an increased perceived fear, which will lead to an increase in the empathy feelings and in the subsequent prosocial behaviors.

Finally, we propose the ad appeal as a potential moderator of ethical behaviors stimulated by visual perspective. Ad appeal in social marketing is frequently divided into self-benefit appeal and other-benefit appeal (Brunel and Nelson 2000; Fisher et al. 2008; Kim 2014; White and Peloza 2009). Following above research, we define a self-benefit appeal as highlighting what human can benefit whereas an other-benefit appeal as highlighting beneficiary may gain. In this research context, the switching perspective allows ad viewers to swap their standpoints with victim animals, and put themselves in the victim animals' situations. The focus of the other-benefit (i.e., animal-benefit) appeal, which pursues animal welfare and benefits, is congruent with the focus of the switching-perspective ad. Drawing from processing fluency, picture-text congruence increases processing fluency, in turn enhancing attitude formation (van Rompay et al. 2010). Therefore, such the combination will be more persuasive in motivating ad viewers to engage in ethical behaviors than the ad presenting the same appeal but with the first-person perspective. On other hand, a self-benefit appeal focuses on consumers, and will reduce the perceived fear and empathy. Because of the decreased feelings toward the ethical issue, consumers may be less responsive to the ad and will have lower engagement intention.

Three experiments were conducted. Study 1 was to understand how visual perspective impact participants' attention as well as willingness to donate (WTD). A two conditions (visual perspective: first-person perspective vs. switching perspective) between-subjects design was conducted with "no animal testing" as issue. The aim of Study 2 was to examine the sequential mediations of perceived fear and empathy. The experimental design was the same with Study 1 but using "no plastic in the sea" as the issue. Study 3 examines the moderating effect of ad appeal on boycott intention. A 2 (visual perspective: first-person perspective vs. switching perspective) x 2 (ad appeal: self-benefit vs. other-benefit) between-subjects design was conducted with "Fur-free" as the issue. We found that the ad with switching perspective attracted more attention (i.e., fixation time and fixation frequency) and contributed more WTD than the ad with first-person perspective. Second, while using switching perspective (vs. first-person perspective) in ad, consumers perceived an increase in their fear and feel empathy, which in turn translated into an increased prosocial intention. Finally, the ad with switching perspective matched better with slogan of other-benefit appeal than with slogan of self-benefit appeal. However, no difference was found for the ad with first-person perspective when matching with slogan of self- or other-benefit appeal.

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The Effects of Reaching Numerical Roundness on Consumer Subgoals

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EXTENDED ABSTRACT

The current research proposes that consumers who achieve numerically-round subgoals will have higher superordinate accomplishment perceptions than those who achieve numerically non-round subgoals; further, we show the effect is due to greater motivation to persist. The results of all the three field and lab experimental studies support our predictions.

The literature in numerical cognition predicts that when people achieve round numbers in their goal pursuits, they lose their motivation to persist (Pope & Simonsohn, 2011). However, the literature in roundness and subgoals show that people use round subgoals as performance indicators and treat them as rewards (Allen et al., 2017; Soetevent, 2022). Therefore, achieving a round subgoal should lead to increased motivations and expectations to accomplish their superordinate goal. In this paper, we aim resolve the apparent conflict in numerical cognition literature. Our research predicts that achieving round numerical subgoals, compared to non-round ones, may positively impact motivations to expect higher accomplishment perceptions for the superordinate goal.

We conducted four studies. Our pilot study utilized the results from a 10km race in Madrid, Spain on December 31st, 2019, which was made available at Kaggle (see <https://www.kaggle.com/datasets/endo9e7a6/madrid-10k-new-years-eve-popular-race>). The dataset includes racers' information, such as age, sex, finishing order, and total time. In addition, each racer was tracked by an RFID tag, and their time was recorded when they passed certain markers such as 2.5 km and 5 km. There was a total of 34,044 runners (32.5% female) who finished the race. The results showed that those who reached the 2.5km benchmark in 15 mins were significantly more likely to finish the race under 60 minutes than those who reached the same distance in 16 minutes or 17 minutes (15 vs. 16 $\chi^2=84.29, p<.001$; 15 vs. 17 $\chi^2=80.18, p<.001$). However, we did not observe this effect for those who reached the same distance in 16 vs. 17 minutes (16 vs. 17 $\chi^2=2.99, p>.08$). When we analyze the 5km group, we also observe that those who reached 5 km in 30 minutes are significantly more likely to finish the race under 60 minutes than those who reached the same distance in 31 minutes or 32 minutes (30 vs. 31 $\chi^2=23.49, p<.001$; 30 vs. 32 $\chi^2=20.61, p<.001$). This effect disappeared when we compared the 31 vs. 32 minutes ($\chi^2=.787, p>.35$).

Study 1 consisted of four separate scenario-based experiments via mTurk utilizing four different research stimuli (airline miles, credit scores, weight loss and running) to measure the effect of round numerical subgoals on higher accomplishment perceptions. The results show that when consumers reached a round number at a subgoal, their accomplishment expectations for the superordinate goal were significantly higher than when they reached a non-round subgoal, even though the percentage magnitude of accomplishment for the subgoal was identical regardless of the round or non-round group.

In Study 2, we used grading as our study context and conducted a field experiment as well as a scenario-based experiment. In Study 2A was a one-factor (roundness: not round vs. round) between-subjects design. Fifty-seven undergraduate marketing students participated (54.4 % female; mean age=22.7) at a large eastern US university in two sections of *Marketing Analytics* in Spring 2020, which is a required course for marketing majors. Each assignment/assessment

points were equally distributed. For example, Exam 1 was graded out of 1,000 in the round section and out of 976 points in the non-round; in both sections, the wording, grade percentage and number of questions were identical—only the point values differed. For this study, we collected student feedback immediately after Exam 1 scores were delivered in class. The results of Study 2A support our prediction that students are more motivated when graded on a scale using round numbers. In addition, we found that roundness indirectly affects expectations of overall class performance; specifically, student motivation is greater when round-number scales are used, and the greater motivation predicts higher course-grade expectations. We further replicated these findings in another class using a scenario-based experiment.

Finally, we created a game for Study 3 and measured motivations and accomplishment expectations. A 2 (roundness: not round vs. round) between-subjects design was used. Two-hundred forty-eight undergraduate marketing students (46.7 % female) at a large midwestern US university participated for extra credit. Participants were asked to complete a task called “spot the ball” (Gunasti and Ozcan 2019), in which they needed to guess the location of a soccer ball on the screen multiple times. Those in the round (non-round) condition were told that they were told that earning 400 (386) points would be considered doing really well on this game. Next, they were shown as picture and were asked to guess where the location of the ball. After they made a guess, they were told that they answered correct and earned 100 (86) points regardless of their answer. Note that both conditions equivalently reflected 25% of all possible points earned in the first round. The results replicated the previous studies.

Our findings have implications for marketing and behavioral researchers who investigate numerical roundness in a variety of different contexts. While roundness effect has been reported in a variety of contexts our research further presents evidence of a numerical roundness effect within the contexts of airline miles, credit scores, weight loss, student grades and games. Additionally, our research contributes to the literature that explores goal setting and evaluations. While the prior research found that people increase their performance and have higher motivations to reach a round numerical reference points such as .300 batting averages and 1,000 points on the SAT, their findings were limited to a single goal. Our paper explored this issue within the context of a subgoal and found that aspiring to a round-number subgoal has positive effects on the superordinate goal perceptions by increasing overall motivations. For marketing practitioners, our findings may have product, service, or promotion design implications. For example, an app that tracks users' daily steps and sends notifications to motivate them may use round subgoals for such markers. A weight loss program may benefit by gamifying its process and rewarding its participants when they reach a round subgoal. Finally, we show that expectations for accomplishing the superordinate goal may depend on consumer motivations.

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It's Not Me, It's You: Awareness of Being Nudged Results in Oppositional Changes in Self-Perceptions

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EXTENDED ABSTRACT

The growing use of marketplace nudges has come with an increase in awareness of their implementation, but it is unclear what impact this knowledge has on consumers. We demonstrate that awareness that one's behavior may have been nudged causes self-perceptions to shift opposite to the desired behavior.

Nudges, which are used to subtly shift behavior while respecting freedom of choice (Sunstein and Thaler, 2003), have been widely embraced by countless organizations, including firms, governments, and even charities. In recent years, the expanding implementation of nudges has been met by an increase in awareness of their use among the general population due, in part, to popular media. In the present work, we examine the consequences of consumers learning that a choice they made may have been nudged and propose that nudge awareness causes a backfire effect by shifting self-perceptions opposite to the intentions of the nudger. We demonstrate that this effect is bidirectional (such that nudges aimed at improving well-being negatively impact self-perceptions and vice versa) and provide evidence that this shift is driven by decreased perceived personal causality. Additionally, we show that greater resistance to external influence (i.e., higher trait reactance) causes self-perceptions to shift to a greater degree as a result of nudge awareness.

In study 1, a total of 804 MTurkers (49.50% female, $M_{Age} = 39.75$) participated in a 2 (Outcome Valence: Positive vs. Negative) x 2 (Nudge Awareness: Aware vs. Unaware) design. Participants either read a scenario that involved seeing calories on the left side of a menu and ordering a salad (positive nudge) or seeing calories on the right and ordering a cheeseburger (negative nudge; Dallas, Liu, and Ubel 2019). In the nudge aware conditions, participants were informed of the nudge that was used and how it may lead to healthier/less healthy choices (depending on condition), and in the nudge unaware condition no further information was given. Participants then indicated how health-conscious they considered themselves to be on a seven-point (1– Not at all, 7– Extremely) scale. A two-way ANOVA predicting perceived health-consciousness from nudge awareness, outcome valence, and the two-way interaction yielded a significant interaction ($F(1,804) = 63.8, p < .0001$). An analysis of simple effects showed that, relative to not becoming aware of the nudge, awareness of the positively valenced nudge led to a decrease in perceived health consciousness ($M_{Unaware} = 5.29$ vs. $M_{Aware} = 4.89$; $F(1, 804) = 12.1, p < .001$), and awareness of the negatively valenced nudge led to an increase in perceived health-consciousness ($M_{Unaware} = 4.78$ vs. $M_{Aware} = 3.73$; $F(1, 804) = 56.9, p < .0001$).

In study 2, 403 MTurkers (50.87% female, $M_{Age} = 39.23$) were assigned to one of two conditions (Nudge Awareness: Aware vs. Unaware) using just the negatively valenced nudge scenario from study 1 (i.e., menu calories on the right leading to a less healthy choice). In the nudge aware condition, participants were informed of how the nudge may affect behavior, and in the nudge unaware condition no further information was given. Participants then indicated how health conscious they considered themselves to be before responding to two measures of perceived personal causality: "I chose what I did because I was influenced by somebody else" and "I would have acted differently if not for the influence of someone else" ($r = .85, p < .0001$). Consistent with the pattern of results for the negatively valenced nudge in study 1, in the nudge aware condition participants

considered themselves more health conscious ($M_{Unaware} = 2.97, SD = 1.45$ vs. $M_{Aware} = 4.28, SD = 1.45$; $F(1, 306) = 82.02, p < .0001$). We see the same pattern of results for the effect of nudge awareness on perceived personal causality ($M_{Aware} = 2.29, SD = 1.35$ vs. $M_{Unaware} = 1.80, SD = 1.59$; $F(1, 401) = 15.51, p < .0001$). A PROCESS model 4 analysis (Hayes 2017) with condition as the IV, perceived health consciousness as the DV, and perceived personal causality as the mediator yielded a significant indirect effect ($b = -.07, SE = .02, 95\% CI, -.1200$ to $-.0292$).

In study 3, 612 MTurkers (50.98% female, $M_{Age} = 41.01$) were assigned to one of two conditions (Nudge Awareness: Aware vs. Unaware). All participants chose from a partitioned menu where three unhealthy fried food options were listed individually and one healthy option was grouped together (Fruit: your choice of apple, banana, or orange). This nudge has been shown to encourage the selection of individually listed options (i.e., fried food; Tannenbaum et al. 2015). After choosing, those in the nudge aware condition were informed of the nudge that was used, and those in the unaware condition were given no additional information. All participants indicated how health conscious they considered themselves to be, completed a filler task, and then responded to a trait-level reactance scale (Hong and Faedda 1996; $\alpha = .88$). A two-way ANOVA among those who made a nudge-consistent choice ($n = 455$) predicting perceived health consciousness from nudge awareness, mean-centered trait reactance ($M_{Reactance} = 3.81$), and the two-way interaction yielded a significant interaction ($F(1, 453) = 5.32, p = .02$). Because participants who made the nudge inconsistent choice were not affected by the nudge, there was no difference in perceived health consciousness from nudge awareness among participants who selected fruit ($n = 157$). A PROCESS Model 1 moderation analysis conducted on those who made the nudge consistent choice with nudge awareness as the IV, health consciousness as the DV, and reactance as the moderator revealed a significant effect of reactance on health-consciousness for those 3.34 and higher in reactance (67.69% of participants). In a separate study we replicated the main effect of nudge awareness on health consciousness with a partitioned menu using consequential choice (i.e., participants actually received their selection from the menu).

By examining the broader consequences of consumers' awareness of nudges, our work provides insights on two aspects of nudging that have been previously overlooked. First, given that individuals are increasingly becoming aware of nudging as a tactic, we examine what the impact of this awareness may be. Second, we show that the effects of nudges may span beyond their immediate impact on choice to more general psychological outcomes. Future studies are planned to test whether the shifts in self-perception we identify as a result of nudge awareness affect subsequent consumer choices.

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The immoral licensing effect: Helping a stigmatized person increases dishonesty among prejudiced helpers

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EXTENDED ABSTRACT

We document an immoral licensing effect wherein past counter-attitudinal prosocial acts make people feel wrong and license future unethical behaviors. Four studies show that after helping a person experiencing stigma, prejudiced consumers were more dishonest in subsequent incentivized tasks and reported a weaker moral self-concept.

Recent sociopolitical discourse has brought stigmatized populations into focus and highlights diverging social trends regarding stigmatized people. On the one hand, evidence suggests that it has become increasingly acceptable to express prejudice against stigmatized groups such as overweight or obese people, sexual minorities, and racial and ethnic minorities (Crandall, Miller, & White, 2018; Ruisch & Ferguson, 2022). On the other hand, many institutions including governments, firms, and universities have claimed increasing investments in promoting diversity, equity, and inclusion (DEI). Thus, there appears to be a tension of individual-level prejudice pitted against institutional-level support for the stigmatized: prejudiced people may help stigmatized individuals due to job requirements, laws and regulations, social expectations, etc. In the current research, we ask: what are the consequences of helping stigmatized beneficiaries, especially among people with prejudice against such beneficiaries?

We find that prejudiced helpers feel licensed to be dishonest for monetary gain after helping stigmatized beneficiaries. We suggest this is so because prejudiced helpers personally consider helping a stigmatized person to be immoral, yet are required to engage in it because of social, legal, and regulatory reasons. We term this process as *immoral licensing*, wherein past counter-attitudinal prosocial acts make prejudiced helpers feel wrong, dirty, and ashamed, and license future unethical behaviors. We explain our theorizing below.

Stigmatization is a societal phenomenon; individuals are stigmatized when a significant portion of the society enforces social sanctions through negative attitudes and acts (Goffman 1983; Link & Phelan, 2001; Major & O'Brien, 2005). Social stigma manifests through mechanisms such as negative stereotyping, prejudice, and discrimination, and occurs in presence of power asymmetry. In the current research, we utilize the construct of prejudice to capture individual-level attitude toward a stigmatized person. Prejudice is defined as the negative evaluation of a person on the basis of group membership (Crandall, Eshleman, & O'Brien, 2002). Importantly, prejudice implies that primary judgments about a person are shaped because of a category membership *rather* than information about the person (Allport, Clark, & Pettigrew, 1954).

Existing research documents some consequences of helping behaviors, although these studies do not examine social stigma. This literature unanimously suggests that helping leads to positive mood (often termed 'warm glow'; Andreoni, 1990) and improves the helpers' moral self-concept (Gneezy et al., 2012; Khan & Dhar, 2006). Helping can increase subsequent virtuous behaviors through a self-consistency process (Gneezy et al., 2012; Kristofferson, White, & Pelozo, 2014) or decreases virtuous choices through a moral licensing process (Khan & Dhar, 2006). Psychological license refers to the perception that one can take an action without fear of discrediting themselves (Monin & Miller, 2001). Moral licensing is a type of licensing wherein people imagine, recall, or engage in a morally laudable action, as a result, feel liberated to subsequently engage in morally questionable actions (Monin & Miller, 2001).

We propose an *immoral licensing* effect, such that helping a stigmatized beneficiary is perceived as immoral by prejudiced helpers

and licenses them to be dishonest. We put forth that in immoral licensing, the past helping task acts as a license not because helping is considered virtuous and improves the helper's moral self-assessment, but because it was done in opposition to the helper's personal moral values. Helping the stigmatized person allows prejudiced helpers to meet external standards of being virtuous, thus enabling them to disengage from being subsequently virtuous or even feel entitled to a reward. Immoral licensing is akin to moral licensing in that helping behavior increases later unethical conduct, but it differs from moral licensing in that prejudiced people find the licensing task (i.e., helping stigmatized beneficiaries) to be less moral and feel wrong for engaging in it.

We report a series of sequential behavior paradigm experiments using a 2 (stigma experienced by the beneficiary: low vs. high; randomly assigned) \times prejudice (continuous; measured) between-subjects design. All experiments start with an initial transcription task where participants type the contents of a scanned, handwritten note into an open-ended space. This transcription task was framed as helping someone experiencing high versus low stigma. We manipulate stigma within the written content of these notes. In studies 1 and 3, the stigmatized beneficiary is an unemployed man experiencing obesity stigma on the labor market. In study 2, the stigmatized beneficiary is a woman experiencing obesity stigma and considered a DEI candidate for recruitment. In study 4, the stigmatized beneficiary is a gender nonbinary student experiencing distress due to the lack of gender-neutral bathrooms on their campus. After participants complete the transcription task, to test for immoral licensing, a second task measures dishonesty in a dice roll game (studies 1-3), perceived morality of helping, and moral self-assessments (study 4).

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Meanings and Practices of Food-Enjoyment amongst Lower-Income-Group Consumers

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EXTENDED ABSTRACT

The joy of food, typically construed as sinful or epicurean, is understood from the perspective of privileged-affluent consumers. We extend this conceptualization of food-enjoyment by exploring its meanings/practices among the lower-income-group consumers. Findings reveal a *kinventional* approach to food-enjoyment by lower-income consumers, encompassing variations in embodiment, capital, fluidity, and evaluation.

INTRODUCTION

Food-enjoyment has been conceptualized on two broad approaches—first, based on a visceral, or ‘sinful’ approach to food when external sensory cues impact the brain’s pleasure centres; and second, based on an epicurean perspective involving appreciation of aesthetic and exotic taste properties (Cornil & Chandon, 2016; Elder & Krishna, 2010).

LIG consumers are presumably restricted by limited capital resources from seeking or accessing enjoyment in food. We argue that LIG consumers may have their own means of deriving pleasure through food consumption, not necessarily dependent on material resources, and not captured via the current sinful-epicurean perspective towards food-enjoyment.

Thus, we attempt to answer the following research questions pertaining to a) meanings and practices of food-enjoyment amongst LIG consumers, and b) their relation to present meanings of food-enjoyment.

Since our inquiry focusses on participants from different social classes, the theory of distinction and class-based structuring of consumption (Bourdieu, 1984; Holt, 1998) was used for data-interpretation.

METHOD AND ANALYSIS

The study adopts a qualitative methodology, utilising 20 semi-structured in-depth interviews, observations and field notes. Questions revolved around the meaning of “good, enjoyable” food, favourite food items and how they elicited enjoyment, and the consumption practices to actively derive pleasure from food. Data interpretation followed a hermeneutic approach (Thompson, 1997) involving an iterative process.

Participants were identified using purposive sampling and snowballing technique (Saunders et al., 2016), across two urban Indian metropolitan cities—Ahmedabad and Delhi.

LIG participants ($N=13$, 8 female, age 35-40) lived in large families with the family’s monthly income ranging from 150-200 USD. The respondents were in labour-based blue collar occupations, with most working as house-helpers or housekeeping staff in an educational institution. HIG participants ($N=7$, 5 female, age 30-35) were typically in corporate-managerial or academic roles, and two were home-makers. HIG respondents resided with 3-4 family members, with the family’s monthly income being upwards of USD 2000.

A brief overview of the emerging themes, in the form of five continuums are:

Embodiment: Cognitive<-->Embodied Enjoyment

LIG consumers’ conception of food-enjoyment involved utilizing embodied/hands-on involvement with food preparation and consumption; based on skills and implicit knowledge developed.

Participants spoke about deriving food-enjoyment through certain skills and mechanisms, such as their knowledge of cooking-styles, and ability to discern food types and quality.

In contrast, HIG respondents’ conception of good food involved dishes at their “final” stage and focussed on properties such as presentation, sophistication, and flavors. Food-enjoyment involved the use of knowledge at a cognitive/informational level, focussing on the healthiness of ingredients, uniqueness of cuisine, or authenticity of preparation. Often, home-cooking was seen as a laborious chore, and descriptions of food-enjoyment involved professionally-prepared food.

Capital: Cultural<-->Social Capital

For LIG participants, consumption of enjoyable food served as a means to social cohesion. They resided in *chawlis* (compact living-spaces), in a close-knit community where cooking and eating together were the norm. All participants had a very high degree of reliance on social support within their interpersonal network of proximate families and relatives. With limited economic capital, the LIG relied on their *social capital*, and food became a means to generate it through community-bonding.

The HIG focussed more on individual preferences, and expression of agency; perceived as a mark of *cultural capital* and sophistication. A higher individuality of food preferences, anchoring on strong personal choices, existed; and socialization was not integral to food-enjoyment.

Fluidity: Stable-Traditional<-->Fluid-Cosmopolitan Preferences

LIG respondents mentioned that *desi khana* (traditional cuisines), helped secure a sense of self and belongingness to community. The consistent and reliable traditional food is a comfort-based, familiar experience, as shared by a respondent,

“Food made at home makes me happy. Even if I eat food from outside as much as I want, still that doesn’t bring joy, only eating food made at our own home feels good – like dal-roti”- LIG/F/41

With the exception of some, most HIG respondents mentioned deriving joy from exotic, experimental, cosmopolitan cuisines. HIG consumers displayed variety-seeking preferences for trend-based foods and gravitated towards unique/rare meal experiences that were non-replicable at home.

Evaluation: Health<-->Taste

HIG participants classified foods as falling within ‘junk’ or ‘healthy’ categories, leading to a sense of guilt versus pride respectively. For them, food-enjoyment was a cognitive pleasure derived via achieving personal health-goals (calorie-restriction or higher nutrition).

In contrast, none of the LIG participants classified food as junk/healthy; their food-enjoyment was driven by taste perceptions of the traditional cuisine. For them, concerns pertaining to health meant illness due to unhygienic street-food.

Intersection of Tastes

We found evidence for the malleable conception of food-enjoyment of the LIG, arising primarily at intersection of ‘fields’ of HIG/LIG in offices/homes, or via mass-media influence, which displays HIG tastes as aspirational and normative.

GENERAL DISCUSSION

Our findings uncover some distinct meanings which we synthesize through the term “*kinventional*”. *Kinventional* food-enjoyment (as opposed to sinful-epicurean) refers to preparation and consumption of conventional/traditional foods, enjoyed in the presence of one’s kin or social network. This food-enjoyment form is an expression of embodied knowledge and a means of nurturing social bonds. Thus, we broaden the scholarly understanding of food-enjoyment, and revise the understanding that LIG consumers construe food only on its functional aspects.

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The Impact of Local-Global Identity on Consumers' Recycling Behavior

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EXTENDED ABSTRACT

Does globalization influence consumers' recycling behavior? This research examines how consumers' identification as a local (vs. global) citizen influences their recycling behavior. A series of studies document that those with a local (vs. global) identity are more likely to recycle and identify the underlying process.

Globalization has influenced how people think and behave around the world, allowing consumers these days to have both a local and a global identity (Arnett 2002). We suggest that those with a local (vs. global) identity might have fewer resources salient in their mind, as their boundaries might be limited to their surrounding local community, compared to the global world. Accordingly, those with a local (vs. global) identity would be more likely to be frugal and have a tendency to save resources. Therefore, one might predict that consumers with a local (vs. global) identity would be more prone to recycling (i.e., a frugal behavior) to save money and resources.

We test our hypotheses across four studies. Study 1 provides initial evidence of the effect of local (vs.) global identity on recycling tendencies. Study 2 replicates the core finding with actual recycling behavior, while study 3 examines the underlying mechanism. A final study examines the moderating role of scarcity, providing additional support for the process.

In Study 1, US undergraduates ($N=147$) were primed with local (vs. global) identity following Gao, Zhang, and Mittal (2017) with the "Think Local (Global) Movement" brochure supporting the local (global) movement. Then, they completed state-level measures of tendency to recycle items at home on 5-point scales ($\alpha = .92$). ANOVA results revealed that those primed with a local identity responded with higher recycling tendencies ($M = 3.52$, $SD = 1.37$) than were those in the global identity condition ($M = 3.03$, $SD = 1.48$; $F(1, 153) = 4.34$, $p = .039$).

In Study 2, US undergraduates ($N = 114$) were primed with local (vs. global) identity as in Study 1. As part of an ostensibly different study, they were given a sheet of paper to complete irrelevant tasks. Lastly, they were asked to discard the paper – either by disposing of it in the trash bin that was closer to the exit, or by placing it in the recycling bin inside the room – as they left the lab. A binary logistic regression indicated that participants were more likely to recycle when local (vs. global) identity was salient ($M_{\text{local}} = 55\%$ vs. $M_{\text{global}} = 35\%$; $B = .78$, $SE = .39$, $\text{Wald}(\chi^2) = 4.03$, $p = .045$).

Study 3 was conducted ($N = 80$) to identify the underlying process of the effect of local-global identity on recycling behavior. Participants completed a scrambled sentence task that primed local (vs. global) identity (Ng and Batra 2017). Next, we measured their recycling beliefs and concerns on 4-items ($1 = \text{strongly disagree}$, $9 = \text{strongly agree}$). Then, they completed state-level measures of frugality with 8 items ($1 = \text{definitely disagree}$, $6 = \text{definitely agree}$; $\alpha = .95$; adapted from Lastovicka et al. 1999), the mediator. ANOVA results revealed a significant effect of local-global identity on recycling tendencies, such that those primed with a local identity responded with higher recycling tendencies ($M = 7.49$, $SD = 1.56$) than were those in the global identity condition ($M = 6.63$, $SD = 2.09$; $F(1, 78) = 4.44$, $p = .038$). Further, mediation analyses (PROCESS Model 4, Hayes 2018) with 5,000 bootstrap samples revealed that the indirect effect of local-global identity with state frugality as the mediator was significant ($b = .60$, $SE = .31$, $95\% \text{ CI} = [.0369, 1.2404]$).

Study 4 was conducted ($N = 109$) utilizing a 2(local identity vs. global identity) x 2(scarcity vs. control) design to examine the moderating role of scarcity. Local (vs. global) identity was primed as in Study 1, and scarcity was primed with an episodic recall task (Park, Lalwani, and Silvera 2020). In the control condition, they wrote about what they did during the past week. The order of the primes was counterbalanced. Next, participants responded to seven items measuring their intentions to participate in a recycling program on 7-point scale ($\alpha = .94$; White, Simpson, and Argo 2014). Analysis revealed a 2-way interaction ($F(1, 105) = 4.72$, $p = .03$). Planned contrasts showed that while in the local identity condition, scarcity salience did not have an impact on recycling intentions ($M_{\text{scarcity}} = 5.56$, $SD = 1.35$ vs. $M_{\text{control}} = 5.75$, $SD = 1.34$; $F < 1$, $p > .56$), in the global identity condition, scarcity salience increased recycling intentions compared to the control condition ($M_{\text{scarcity}} = 5.92$, $SD = .85$ vs. $M_{\text{control}} = 5.08$, $SD = 1.34$; $F(1, 105) = 6.17$, $p = .002$).

Collectively, our findings provide converging and robust evidence that a local (vs. global) identity increases consumer recycling intentions and behavior, which is mediated by state frugality. Additional process evidence is provided by the moderating role of scarcity on the effect of local (vs.) global identity on recycling tendencies.

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The Uneven Fluidity of Genderfluid

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EXTENDED ABSTRACT

We uncover two unbalances in existing genderfluid trends in the marketplace. An analysis of baby names and genderfluid collections demonstrates that genderfluidity is skewed towards traditionally male tastes. Moreover, female and non-binary consumers adopting genderfluidity are perceived as cooler because embracing genderfluidity brings them closer to the supposedly dominating gender.

For centuries, men and women were expected to display their differing genders and societal roles through their dressing styles and consumption practices. Back then, the dominant perspective allowed for no ambiguity or possibility of deviance from the prescribed dress codes. However, lately, gender norms have shifted toward more diversity, equity, and inclusion, with styles and tastes that do not fit conventional gender stereotypes (i.e., are genderfluid) gaining increasing popularity (Thomas 2021). Seconding this shift, retailers and brands such as Nordstrom, Hollister, Marc Jacobs, and Gucci have recently launched genderfluid collections (Cohn, 2020; Thomas, 2021).

In theory, genderfluidity is a gender expression that “crosses and merges masculine and feminine” (Cohn 2020). Notwithstanding this hypothetical blurring between masculinity and femininity, in all genderfluid trends, it is possible to trace back whether a specific genderfluid taste or style has historically been more associated with women or men. For example, recent genderfluid collections feature skirts and heeled shoes for everyone, both of which were historically female fashion items. Thus, a key question is how balanced the manifestations of genderfluidity are. If we trace back to the initial associations of tastes and styles that today are marketed as genderfluid, how fluid is the observed crossing and merging of gender expressions? And when people observe users of genderfluid products, do they judge them consistently?

Lay consumers hold highly inclusive beliefs about genderfluidity. According to a sample of 1,205 consumers, a truly genderfluid collection should have about a 48:52 ratio of traditionally female to male items. Moreover, most lay consumers (94%, $N = 408$) consider genderfluid goods cool regardless of the gender of those who adopt them. But in contrast to these balanced views and equal perceptions, we propose that actual manifestations of genderfluidity to date are far from this ideal level of fluidity. We argue that given the androcentric view permeating Western societies (Bailey et al., 2018) genderfluid trends and perceptions are heavily skewed toward traditionally male tastes and styles.

In four studies, we examine how androcentrism underlies judgments and decisions about genderfluidity by several market players, leading to an overall imbalance toward traditionally male tastes and styles.

Study 1 examined parents’ decision to name their children using a dataset of all registered infant names in the USA, beginning in 1880. In any given year, the average count of traditionally male names becoming genderfluid ($M = 652.19$, SD was significantly higher than the average count of traditionally female names becoming genderfluid ($M = 506.66$, $SD = 348.79$; $F(1, 278) = 8.37$, $p = .004$). A regression with the count of genderfluid names as the dependent variable, and traditional gender, year, and their interaction as independent variables revealed a significant effect of traditional gender ($b = 6,231.79$, $SE = 617.28$, $t(276) = 10.10$, $p < .001$),

a significant effect of year ($b = 11.44$, $SE = .22$, $t(276) = 51.11$, $p < .001$), and a significant interaction between these two variables ($b = -3.27$, $SE = .32$, $t(276) = -10.33$, $p < .001$). Genderfluidity has been growing, but the slope has been steeper for traditionally male names ($b = 11.44$, $SE = .22$, $t(138) = 51.11$, $p < .001$) than for traditionally female names ($b = 8.17$, $SE = .22$, $t(138) = 36.50$, $p < .001$). Thus, there are more traditionally male names given to baby girls, than the vice versa.

Study 2 examined designers’ decision to curate a genderfluid collection. We scraped all outfits from Gucci’s spring/summer and fall/winter 2021 women’s ($N = 81$) and men’s ($N = 53$) runway collections and its curated genderfluid collections ($N = 24$). The observed count of outfits from the traditional men’s ($w = 75\%$) and women’s collections ($w = 25\%$) reappearing in Gucci’s genderfluid collections differed significantly from the expected percentages resulting from weighting the overall number of men’s ($w = 40\%$) and women’s outfits ($w = 60\%$) in the traditional collections ($\chi^2 = 12.25$, $p < .001$). Moreover, the observed count differed significantly from the overall average of lay consumers’ expected ratio for a truly genderfluid collection based on the pilot mentioned previously: 48% womenswear to 52% menswear ($\chi^2 = 5.09$, $p = .024$). These findings suggest that there are disproportionately more traditionally male styles than female styles curated in genderfluid collections.

Finally, studies 3a and 3b presented a direct test of how androcentrism underlies consumers’ judgments of genderfluidity. Specifically, study 3a ($N = 500$) showed that men who engage in genderfluid consumption are perceived as less cool ($M = 3.00$, $SD = 1.74$) than those who identify as female, non-binary, or who do not indicate their gender ($M = 3.59$, $SD = 1.74$; $F(1,501) = 10.76$, $p = .001$). This effect was mediated by reduced perceptions of appropriate autonomy and moderated by observers’ traditional masculinity ideology (TMI) (index of moderated mediation = .11, 95% CI = [.029, .195]).

Study 3b replicated the role of observers’ TMI in a sample drawn from several Western societies ($N = 690$). A regression with perceived coolness as the dependent variable, and condition, TMI, and their interaction as independent variables revealed a significant effect of condition ($b = .20$, $SE = .07$, $t(686) = 2.84$, $p = .005$), no effect of TMI ($b = -.01$, $SE = .07$, $t(686) = -.07$, $p = .942$), and the predicted significant interaction between condition and TMI ($b = .20$, $SE = .07$, $t(686) = 2.90$, $p = .004$).

This research demonstrates the unevenness of genderfluidity in the marketplace. We hope this work encourages consumers and marketers alike to actively promote more balanced forms of genderfluidity and express more neutral judgments of consumers embracing this trend regardless of who they are.

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Charitable Donation Theories in the Wild: Evidence from a Large Online Donation Platform

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EXTENDED ABSTRACT

We tested the predictions of four charitable donation theories using a massive dataset of real-world fundraising campaigns. We found evidence for increased giving when the campaign includes a photo. Additionally, we found evidence for the identifiable victim and the scope insensitivity effects but evidence was inconclusive for the singularity effect.

As a prominent and efficient form of pro-social behavior, donation decisions have received a lot of attention in the scientific literature in recent decades. A specific feature of donation decisions that has piqued the interest of many researchers is the identifiability of the donation recipient. Thus, some researchers have studied whether identified victims receive more donations than unidentified or statistical victims (Kogut & Ritov, 2005a, 2005b; Small et al., 2007). Other researchers have studied whether the number of recipients affects donation decisions. Such studies usually compare donations to a single individual to donations to a group of people, namely the singularity effect (Kogut & Ritov, 2005a), or donations to groups of varying sizes, namely scope insensitivity (Baron, 1997; Baron & Greene, 1996; Fischhoff et al., 1993; Hsee & Rottenstreich, 2004; Kahneman et al., 1999).

While most of the evidence on donation decisions comes from laboratory experiments, evidence from the field is relatively scarce. Several exceptions include data from crowdsourcing platforms such as Kiva (Galak et al., 2011), Kickstarter (Dai & Zheng, 2019) and GoFundMe (Sisco & Weber, 2019), as well as direct mail solicitations to previous donors (Lesner & Rasmussen, 2014). These real-world studies often yield mixed results when attempting to corroborate findings from the lab; for example, the singularity effect was observed in people's actual behavior (Dai & Zheng, 2019; Galak et al., 2011), whereas the identified victim effect was not (Lesner & Rasmussen, 2014).

Here, we elaborate on these previous findings using a rich dataset of over three million donation decisions made with respect to over 600,000 fundraising campaigns. This dataset allows us to test the three effects simultaneously, by exploring a highly ecologically relevant, yet understudied factor that might influence donation decisions, namely visual cues. To date, most studies have used textual cues to inform participants about the identity of the donation recipients, mostly to elicit compassion towards them. Whereas some studies did use photos, such photos usually corresponded to the textual information given on the recipients (e.g., a photo of a single child when the donation recipient is a single child, or a photo of eight children when the donation recipients are eight children). Nevertheless, presenting a visual cue of the recipient does seem to affect donation decisions (Lee & Feeley, 2016) and so we study the unique effect of visual cues on donation decisions. We focus our attention not on the actual number of beneficiaries, but on the properties of the photo attached to the fundraising campaign. Thus, we study whether people's donation decisions are affected, at least in part, not by the actual composition and identity of the recipients, but by their visual representation.

Methods and Materials Data

We use a large-scale dataset of donation decisions made on DonorsChoose.org, a non-profit crowdsources funding platform that

allows individuals to donate directly in response to classroom project requests from public school teachers. By launching a fundraising campaign for their class, teachers may request resources they know will help their students thrive, including books, basic supplies, technology, and professional development training. As of January 2022, the platform had helped over 2.1 million school projects get funded, raising a total of \$1.22B for both teachers and school children.

We constructed our dataset by merging two sources of information: fundraising campaign and individual donation datasets received from the DonorsChoose organization, and corresponding campaign photos scraped from the DonorsChoose website. Campaign information included the requested amount (i.e., funding goal), number of students affected by the fundraising campaign, class grade, school state, type of resource needed (17 categories, e.g., books, art supply, trips etc.), and whether or not the campaign reached its fundraising goal. From the donation dataset, we were mainly interested in the donation amounts, which allowed us to calculate the average donation for each campaign. Finally, we used the photos to obtain the number of identified donation recipients in each campaign by using a machine learning technique to detect human faces in the photos. Our final sample consisted of 609,884 fundraising campaigns submitted between April 2013 and February 2020, which included over 3.3M individual donations totaling \$94,726,910 in charitable contributions.

Analytical Approach Predictor variables

Most campaigns in our dataset (98.1%) included a photo. We used a popular face detection software package (Python 3.9.5, OpenCV library v4.5.2) to count the number of human faces in each photo when a photo was included. Visually sampling a large number of photos confirmed that photos featuring humans included school children (the donation recipients), but not unrelated individuals. Overall, the software detected faces in 36.1% of the photos. To test the performance of the software, we compared its results with manual counts performed by research assistants on 2,000 randomly selected photos from our dataset. The correlation was relatively high and significant ($r=.71$, $p<.001$), indicating that the software was fairly good at identifying the number of children in the photos. For robustness purposes, we repeated all of the analyses after using a different face detection package (Face Recognition v1.2.3); Results remained virtually the same. For the sake of brevity, we report only the results of the first package.

Dependent variables

Success rate: DonorsChoose platform uses an all-or-nothing donation system, meaning that if a campaign is not fully funded within four months of posting, any donations it has garnered will be returned to the donors' accounts. When, however, a campaign reaches its funding goal, DonorsChoose orders the requested supplies and ships them directly to the teacher. As such, fundraising campaigns in DonorsChoose either succeed or fail, allowing us to correlate success rates with different campaign characteristics, including photos. Of the campaigns analyzed, 67% were fully funded.

Average donation amount: A second dependent variable was the average amount donated to the campaign, calculated as the sum of donations to the campaign divided by the number of individual donors. In all analyses, the average donation was log transformed

to adjust for the right-skewed nature of this variable (Dai & Zhang, 2019; Sauermann, et al., 2019; Younkin & Kuppuswamy, 2018). Finally, outliers were defined as campaigns with average donations exceeding 2.5 standard deviations above the overall mean, and were excluded from the average donation analyses.

Results

The effect of including a photo

Success rate: Campaigns that included a photo had higher rates of reaching their fundraising goals compared with campaigns with no photo (67.7% vs. 61.2% respectively, $\chi^2[1]=288.7$, $p<.001$). The result remained the same even when we included only campaigns with photos featuring no identified donation recipients ($\chi^2[1]=202.63$, $p<.001$). A logit model predicting the campaign status at the end of the allocated fundraising time (fully funded vs. expired) by whether or not a photo was included in the campaign's description, revealed a positive and significant effect of such photo ($B=.289$, $z=15.08$, $p<.001$). The result remained the same when controlling for the amount of money requested, number of students affected by the campaign, and added fixed effects for class grade, state in which school is located, and resource type (hereafter, control variables; $B=.252$, $z=12.72$, $p<.001$).

Average donation amount: A linear regression of the log of citizen donors' average donation onto whether or not a photo was included, revealed that including a photo in the campaign description was positively associated with a higher average donation ($B=.03$, $t=2.64$, $p=.008$). As before, the results remained the same when control variables were added to the model ($B=.04$, $t=3.73$, $p<.001$).

Together, the data suggests that including a photo in the campaign increased both the campaign's success rate and the average donation.

The Identifiable Victim Effect

We compared campaigns with at least one identified child with campaigns with photos with no identified children. For complete regressions results, see Table 1 (Columns 1-4).

Success rate: Campaigns identifying one or more children had a greater likelihood of reaching their funding goal compared with campaigns with no identified children (68.3% vs. 67.4% respectively, $\chi^2[1]=52.76$, $p<.001$). A logit model predicting the campaign status at the end of the allocated fundraising time (fully funded vs. expired) by whether or not the campaigns included identified children, revealed a significant and positive effect of identifiability ($B=.042$, $z=7.27$, $p<.001$). This result remained robust to the addition of control variables ($B=.039$, $z=6.55$, $p<.001$).

Average donation amount: Consistent with previous results, campaigns identifying school children were associated with larger donations compared with campaigns that did not identify the donation recipients. A linear regression of the log of the average donation predicted by

whether the campaign identified the donation recipients, revealed a positive and significant effect of identification ($B=.009$, $t=3.07$, $p=.002$). This result remained robust to adding control variables ($B=.001$, $t=3.60$, $p<.001$).

Together, our data suggests that identifying the donation recipients in photos increases both the campaign's success rate and the average donation.

The Singularity Effect

We compared campaigns identifying a single child to campaigns identifying more than a single child. For complete regressions results, see Table 1 (Columns 5-8).

Success rate: Of the campaigns that identified a single child 68.12% ($n=77,866$) reached their goal, compared with 68.42% ($n=136,425$) of the campaigns that identified multiple children. These proportions are not significantly different ($\chi^2[1]=1.68$, $p=.195$). A logit model predicting the campaign status at the end of the allocated fundraising time (fully funded vs. expired) by whether the campaign identified a single or multiple donation recipients confirmed there was no effect of singularity on reaching the goal ($B=-.01$, $z=-1.30$, $p=.193$). The conclusion did not change when control variables were added ($B=-.009$, $z=-.94$, $p=.349$).

Average donation amount: We ran a linear regression of the log of the average donation predicted by whether the campaigns identified a single donation recipient or multiple donation recipients. The model revealed a significant effect of singularity such that campaigns identifying a single child were associated with larger donations than campaigns identifying multiple children ($B=.015$, $t=2.84$, $p=.005$). The effect was marginally significant when control variables were added ($B=.010$, $t=1.95$, $p=.051$).

As can be seen, we obtained mixed results that did not enable us to draw any definitive conclusions.

Scope Insensitivity

Finally, we explored whether donors on the DonorChoose platform were insensitive to the number of donation recipients identified in the campaign. In this analysis, we excluded campaigns identifying no children because, as demonstrated above, such campaigns are particularly unattractive to potential donors. For both dependent variables, we ran regressions predicting the respective variable using the number of children identified in the campaign's photo. To avoid the results being affected by the long tail in the distribution of the number of students identified (very few campaigns identified multiple children), we ran separate regressions while varying the maximum number of identified children in each regression.

That is, we first compared campaigns identifying only one child with campaigns that identified one or two children, then with campaigns that identified up to three children, and so on.

Success rate: We ran a logit model that predicted the campaign status at the end of the fundraising allocated time (fully funded vs. expired) based on the number of children identified in the campaign. As Figure 1 (Panel A) shows, while an increase in the number of identified children was associated with a higher success rate in 12 out of 14 models, only three models reached significance level ($p<.05$).

Average donation amount: We ran a linear regression of the log of average donation predicted by the number of children identified in the campaign. As Figure 1 (Panel B) shows, increasing the number of identified children was associated with a smaller rather than a larger average donation in all models, and reached significance level in only four models ($p<.05$), suggesting that donors on the Donorschoose platform were indeed insensitive to the number of identifiable recipients.

Together, our data suggests that the number of identified children hardly affected the campaign's success rate or the average donated amount.

General Discussion

We used a dataset containing a massive number of real donation decisions to examine the effect of photos on donation decisions as well as three prominent existing theories of donation decisions: the identifiable victim effect, the singularity effect, and the scope insensitivity theory. Our results revealed several interesting effects. First, we found that the use of visual cues, i.e., adding a photo to the campaign information, has a positive effect.

Thus, fundraising campaigns that include a photo are associated with larger donations and are more likely to reach their fundraising goal compared with campaigns with no photo. Second, identifiability helps! Campaigns with photos showing the donation recipients (of any number) are associated with both higher success rates and larger donations compared with campaigns that do not clearly identify the donation recipients using photos. Third, our results reveal that, as previously shown in lab studies, people are indeed indifferent to the number of donation recipients affected by their donation. Evidently, campaigns that identify more children were not associated with better success rates or larger donation amounts. Finally, our data does not suggest that a single identified donation recipient is associated with greater willingness to donate than multiple donation recipients, as would have been predicted by the singularity effect.

In recent decades, several practices have been used by behavioral scientists to validate, summarize, and generalize scientific evidence. Testing behavioral theories in natural decision-making environments where people are unaware of being measured, as opposed to artificial lab environments, is traditionally challenging. Randomized field experiments, the gold standard method for this task, is often logistically challenging and expensive (Lieberman et al., 2019), particularly when a large number of observations is needed to obtain sufficient power. When establishing causal links between variables is not of essence, researchers can take advantage of existing field data as a non-experimental method that provides excellent externally valid evidence. Thus, although analyzing field data can only offer correlational evidence, it is a powerful tool for validating predictions of behavioral theories. This work demonstrates how behavioral researchers can benefit from adding the use of advanced techniques to obtain and analyze large amounts of field data to their toolbox for validating and generalizing existing theories. In addition to increasing trust in published behavioral theories, generalizing these theories to the field helps gain a better understanding of how individuals act in real-life settings, which is indispensable for practitioners interested in applying findings in their domains.

Limitations

As with most behavioral research, the current investigation does not come without limitations. First, this study is correlational in nature and indeed draws causal inferences. The main goal of this investigation was, however, to explore whether predictions of existing theories generalize to real-world situations rather than to identify new causal mechanisms.

Second, since we obtained data only from one specific fundraising platform, the evidence is limited in scope. For example, our sample is composed of primarily American donors, and the goals of the campaigns are limited to educational purposes in public schools. Thus, our results may not be generalizable to other cultures or donation targets. Finally, we note that as with most field data analyses, our results are conditional on donors choosing to make a donation; we cannot observe those who were exposed to the campaigns but decided not to give.

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The (Reverse) Endowment Effect of Information

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EXTENDED ABSTRACT

In an increasingly data-driven world, it is essential to understand how consumers value information. This research demonstrates that sellers of information are willing to accept less than buyers are willing to pay because they feel less psychological ownership over their information resources.

Information is an important resource that is constantly exchanged. For example, consumers exchange information ranging from helpful tips (e.g., traveling advice on hiking forums) to expert advice (e.g., financial advising). Despite the prevalence of information exchange, little is known about how consumers value information. A large body of evidence suggests that sellers typically demand more in an exchange than buyers are willing to pay (Morewedge and Giblin 2015) because they have higher perceived psychological ownership (Morewedge 2021). In contrast, we demonstrate that this classic endowment effect reverses when information is exchanged.

Information is an exchange resource in the same way as products (MacInnis 2017). A key difference between intangible information and tangible products, however, is the form that ownership can take. Ownership of information is fluid by nature. When a handbag is exchanged, ownership clearly shifts from the seller to the buyer. When information about where to purchase a handbag is exchanged, both the seller and buyer possess, and are owners of, the information.

We propose that this unique form of ownership impacts how consumers value information. Specifically, we predict that sellers feel less ownership over information, compared to buyers and, as a result, are willing to accept less than buyers are willing to pay. However, if perceptions of psychological ownership over information are heightened (e.g., the feeling that they “knew it all along”, Wood 1978), we predict the effect will attenuate. We test our prediction in three studies. In each study, we randomly assign participants to the role of buyer vs. seller of a product vs. information and measure their willingness to pay (WTP) vs. accept (WTA).

In study 1 (preregistered: https://aspredicted.org/828_7K1), participants ($N = 601$; 46.9% female; $M_{\text{age}} = 39.88$) were randomly assigned to conditions in a 2 (Exchange Role: Seller vs. Buyer) \times 3 (Exchange Item: Product vs. Information vs. Hybrid Information-Product) between-subject design. Participants imagined exchanging mountain biking tips (information), a mountain bike (product), or a map of mountain biking trails (hybrid). The results revealed a significant interaction ($F(5, 595) = 22.00, p < .001$): while WTA ($M = 5.88, SD = .798$) was higher than WTP ($M = 5.32, SD = .813, p < .001, d = .693$) for the product, WTA ($M = 2.36, SD = 1.52$) was lower than WTP ($M = 3.27, SD = 1.05, p < .001, d = .702$) for information. There was no difference in WTA ($M = 2.91, SD = 1.33$) and WTP ($M = 2.70, SD = 1.26, p = .20, d = .161$) for the hybrid information-product.

Study 2 (preregistered: <https://aspredicted.org/blind.php?x=un2ty3>) replicates study 1 in a more natural setting by eliciting perceptions of an exchange item. Participants ($N = 148$; 43.90% female; $M_{\text{age}} = 38.24$) were randomly assigned to conditions (Seller vs. Buyer) in a between-subject design. Participants imagined exchanging a document and indicated the extent to which they perceived the document to be a product (1) or information (9). The results revealed a significant interaction ($F(1, 147) = 2.03, p = .05$).

Using floodlight analysis we found that WTA was greater than WTP when the document was perceived to a product (≤ 4.53 , Johnson-Neyman) but WTA was less than WTP when the document was perceived to be information (≥ 8.57).

Finally, in study 3, we demonstrate that increasing psychological ownership, operationalized as familiarity, moderates the effect. Participants ($N = 365$; 42.9% female; $M_{\text{age}} = 39.68$) were randomly assigned to conditions (Seller vs. Buyer) in a between-subject design. Participants were randomly assigned to conditions in a 2 (Exchange Role: Seller vs. Buyer) \times 2 (Information Familiarity: Familiar vs. Unfamiliar) between-subjects design. Participants were asked to indicate the price they would be willing to accept (vs. pay) to sell (vs. buy) a list of tips about things to do (restaurants, activities, etc.) in a state with which they were familiar (vs. unfamiliar). The results revealed a significant interaction ($F(1, 361) = 4.68, p < .05$): WTA ($M = 13.14, SD = 12.84$) was lower than WTP ($M = 20.07, SD = 15.33, p = .001, d = .49$) for unfamiliar information, but the effect attenuated for familiar information ($F(1, 361) = .02, p = .90, d = .02$).

In this paper, we demonstrate a novel and counterintuitive finding: sellers of information are willing to accept less than buyers are willing to pay. One important implication is that low feelings of psychological ownership may lead consumers to undervalue their information. Increasing feelings of psychological ownership, however, may serve as an effective intervention. We are next exploring a series of studies that will (1) moderate ownership of information through a Non-Fungible Token (NFT), (2) measure perceptions of psychological ownership directly, and (3) test the effect for different types of information (e.g., personal [demographic] information). Together, our studies elucidate how consumers value information.

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“You May be Contagious, but I’m not”: The Contagiousness Bias

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EXTENDED ABSTRACT

We find that people expect to be less contagious than a stranger with the same infectious disease (i.e., the “contagiousness bias”) because they expect to have a less severe version of the disease. Furthermore, this bias extends to close friends and contributes to complacency in complying with health recommendations.

The health behaviors necessary to slow down the transmission of contagious diseases that disrupt our lives, such as COVID-19, are uncontested (Islam et al., 2020). Given the known protections of such behaviors, why does lack of compliance persist?

Individuals consistently underestimate their likelihood of contracting illness, whether transmittable (Schneider et al., 1991) or genetic (Weinstein, 1987), compared with an average person. This perceived invulnerability to health risks, or the self-positivity bias (Harris & Guten, 1979), reduces individuals’ motivation to take preventive measures for their health (Perloff & Fetzer, 1986; Weinstein, 1989). Further, presenteeism, the practice of contagious employees come in to work while ill, occurs across businesses and cultures (Dew et al., 2005; Tan et al., 2014). Such behaviors present significant costs to others around the disease carrier and to organizations as a whole (Hirsch et al., 2017). However, ill people exposing others to their germs cannot be explained by their perceived invulnerability to a disease, since they have already contracted the disease. Instead, we propose such behaviors highlight a distinct manifestation of the self-positivity bias.

We hypothesize that people expect themselves to be less contagious than a stranger with the same communicable disease, a judgment pattern we label the “contagiousness bias” (H1). This bias may occur because individuals, (a) being overoptimistic about health risks, may expect their disease to be less severe and thus less contagious than the average person’s (H2A), or (b) believing themselves to be above average on various performance measures (Kruger, 1999), perceive themselves to be more efficacious at limiting the spread of their disease than others (H2B). Moreover, because false beliefs from the self-positivity bias tend to reach one’s extended self (Regan et al., 1995), individuals may expect close others to be less contagious than a stranger (H3). We test these hypotheses in three studies, all in which we assessed expected contagiousness for the [target] (“How contagious would you expect [target] to be?” 1 = not at all contagious; 10 = very contagious) among other measures.

Study 1 ($N = 203$) tested the contagiousness bias (H1) and its underlying mechanisms (H2A, H2B) using a 2-cell (judgment target: self vs. stranger) between-subjects design. Participants imagined either they themselves or a stranger named Sam tested positive for COVID-19. We assessed expected severity (“How severe would you expect your [Sam’s] coronavirus symptoms to be?” 1 = not at all severe; 10 = very severe) and efficacy (“How confident are you that you [Sam] can take the steps necessary to avoid spreading the coronavirus?” 1 = not at all confident; 10 = very confident). We found that participants expected themselves to be less contagious than Sam ($M_{\text{self}} = 7.42$, $M_{\text{stranger}} = 8.14$; $t(144) = -2.15$, $p = .033$) and expected their illness to be less severe than Sam’s ($M_{\text{self}} = 5.38$, $M_{\text{stranger}} = 6.93$; $t(144) = -4.00$, $p < .001$), with no difference in efficacy ($t(144) = -.12$, $p = .91$). Expected severity mediated the judgment target effect on the contagiousness bias ($\beta = .45$, 95% CI [.15, .87]), providing support that expected severity drives the bias (H2A; Hayes, 2017).

Study 2 ($N = 502$) tested whether the bias extends to close others (H3) and examined its downstream consequences, using a 3-cell (judgment target: self vs. close friend vs. stranger) between-subjects design. Participants imagined either they themselves, their close friend, or a stranger Sam caught the flu. We asked participants how important it is that the target follow health behaviors to slow flu transmission (e.g., “get a flu shot,” 1 = not at all important; 10 = very important). Participants expected themselves to be less contagious than a stranger ($M_{\text{self}} = 7.69$, $M_{\text{stranger}} = 8.15$; $F(1, 499) = 6.87$, $p = .009$) and a close friend less contagious than a stranger ($M_{\text{friend}} = 7.80$; $F(1, 499) = 3.91$, $p = .049$), with no difference between the self and a close friend ($F(1, 499) = .42$, $p = .52$). Furthermore, expected contagiousness mediated the judgment target effect on the importance of following health recommendations between the self and a stranger ($\beta = .075$, 95% CI [.017, .14]), or a close friend and a stranger ($\beta = .075$, 95% CI [.017, .14]), but not between the self and a friend ($\beta = .018$, 95% CI [-.042, .077]), indicating that this bias extends to closer others (H3) and contributes to complacency in complying with health recommendations.

Study 3 ($N = 834$) examined whether highlighting disease severity would increase perceptions of one’s own contagiousness in a 2 (judgment target: self vs. stranger) \times 2 (severity: salient vs. control) between-subjects design. Participants (a) imagined either they themselves or a stranger Sam came down with COVID-19, and (b) read severe COVID-19 symptom descriptions or did not. We again replicated the contagiousness bias ($M_{\text{self}} = 8.25$, $M_{\text{stranger}} = 8.63$; $F(1, 712) = 9.71$, $p = .002$), but participants expected the target to be more contagious when the severity was salient than when it was not ($M_{\text{salient}} = 8.62$, $M_{\text{control}} = 8.26$; $F(1, 712) = 8.44$, $p = .004$). There was no target \times severity salience interaction ($F(1, 712) = .74$, $p = .39$). Thus, although participants expected themselves to be less contagious than a stranger, when they perceived the disease to be more severe, they expected both a stranger and themselves to be more contagious. This suggests the important role of expected severity in the contagiousness bias and offers a way to heighten people’s perceptions of their own contagiousness.

Our findings extend prior theories of health behavior (e.g., protection motivation theory; Perloff & Fetzer, 1986) by showing that expected severity is relevant not only for the motivation to protect oneself from a disease (Weinstein, 2000), but also for the perception that one’s infection is contagious, which in turn determines whether one take steps to avoid spreading contiguous diseases. Our findings have practical implications for health messages: they could be more effective in promoting compliance with health recommendation by not only communicating the contagiousness of a disease but also highlighting the uniformity of the contagiousness across carriers.

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Defining and Understanding Vintage

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EXTENDED ABSTRACT

Using a multimethod approach, we define vintage, distinguish vintage from similar, yet different products (e.g., retro), and examine the motivations behind vintage consumption. Vintage is a composite formative construct with four product dimensions: age, design, quality, availability. Moreover, consumers use vintage products to express themselves more than to impress others.

New product trends and styles typically entail some element of novelty that sets them apart from previous trends. Indeed, the appreciation of fresh and unseen styles contributes to continuously shortening the fashion cycles, causing high environmental costs. Countering this general preference for the new, relaunching and adopting old products from the past, a market phenomenon broadly referred to as “vintage,” has emerged in recent years as an alternative, more sustainable way of consuming. But what is “vintage” exactly? And why do consumers use vintage products? In this research, we use a multimethod approach to answer these questions.

Using open-ended qualitative and quantitative data generation techniques, we conceptualize vintage as a composite formative construct with four key product dimensions (age, design, quality, and availability). We predict that vintage products will score higher on these four dimensions than new-old (or retro) and modern products. Drawing on our conceptualization of vintage and functional theories of attitudes (Katz, 1960; Shavitt, 1989; Wilcox et al., 2009), we further propose that vintage products are consumed to express oneself (i.e., value-expressive functions) more than to impress others (i.e., social-adjustive functions).

In study 1, we began our investigation into the construct of vintage using interviews, surveys, and web-scraped data consistent with systematic grounded theory methodologies. We recruited 92 vintage sellers and consumers at two vintage fairs, and we analyzed data on 1,370 vintage products sold online by 18 online retailers. Through a process of open, selective, and theoretical coding, we arrived at the conceptualization of vintage as a composite formative construct with four core dimensions: age (true original, ~ 20 and 100 years old), design (reflective of an era, cool), quality (long-lasting materials, craftsmanship), and availability (few pieces, hard to find).

In study 2, we developed a measure based on the identified dimensions and tested its validity among vintage, new-old, and modern product sets that are physically similar, from the same brand, and sold at comparable price points in the marketplace. In total, we tested our vintage measure on 36 products across four different product categories (i.e., watches, bags, vehicles, and other accessories). Participants ($N = 635$) rated six randomly assigned products, displayed either with product labels or without, on eight vintage items (e.g., “To what extent does the product appear to be a “true original”?” (i.e., the product is true to its roots and authentic),” 1 = Not at all a true original, 5 = Very much a true original). We z-scored all items and computed a vintage index. As expected, a repeated-measures linear regression revealed that vintage products scored significantly higher on the vintage index ($M = .26$, $SD = .59$) than new-old ($M = -.12$, $SD = .54$, $b = -.37$, $SE = .02$, $t(3,427) = -20.31$, $p < .001$) and modern ($M = -.14$, $SD = .51$, $b = -.40$, $SE = .02$, $t(3,405) = -22.10$, $p < .001$) products.

Studies 3a and 3b examined the signaling motivations behind vintage consumption using two experiments that feature an online dressing game. Respondents chose their favorite avatar and com-

bined different apparels to create an outfit for their first day at a new job.

Study 3a ($N = 296$) showed the process by manipulating respondents’ signaling mode across three between-subjects conditions (i.e., social-adjustive, value-expressive, and control). Consistent with our prediction, participants in the value-expressive condition were more likely to choose vintage items (= 86.1%) than participants in the social-adjustive ($b = -.58$, $SE = .16$, $t = 3.32$, $p < .001$) and control ($b = -.29$, $SE = .16$, $t = 3.26$, $p = .071$) conditions.

Study 3b provided mediational evidence using measured variables. Participants ($N = 289$) were introduced to the same dressing game as in study 3a but were all assigned to the control condition. We measured the extent to which participants were into vintage and their chronic social attitude functions. As expected, there was a positive and significant relationship between identifying as a vintage consumer and choosing vintage items in the game ($b = .43$, $SE = .06$, $t(287) = 7.75$, $p < .001$). Respondents who identified strongly as a vintage consumer (+1SD) chose twice as many vintage products ($M = 1.49$) as respondents who did not identify as a vintage consumer (-1SD) ($M = 0.75$). Moreover, chronic value-expressiveness mediated the effect of identifying as a vintage consumer on participants’ tendency to choose vintage apparel in the game (indirect effect = .043, $CI_{.95\%} = .011, .087$).

Study 4 showed that consumers are more interested in a vintage product when its ad promotes the value-expressive rather than social-adjustive functions of the product in a field setting. We manipulated the ad copy for a vintage Chanel bag on Facebook and Instagram across two between-subjects conditions ($N = 27,591$). In the value-expressive condition, the ad urged readers to “Express Yourself,” “Mix it up with vintage & dress to express,” and “Be yourself.” In the social-adjustive condition, the ad urged readers to “Make an Impression,” “Mix it up with vintage & dress to impress,” and “Be admired.” The value-expressive ad was more effective (CTR = .15%; cost per click = \$1.79) than the social-adjustive ad (CTR = .07%, cost per click = \$4.16, $t = 4.31$, $p = .038$).

In conclusion, this research deepens our understanding of vintage consumption. We provide conceptual clarity on the construct and a measure that helps eliminate mislabeling of vintage and other similar, yet different products, and demonstrate that consumers engage in vintage consumption to send signals about themselves more than to others. Finally, we demonstrate how managers can effectively frame marketing appeals for vintage products.

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Ending on a Familiar Note: Perceived Endings Motivate Repeat Consumption

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EXTENDED ABSTRACT

We demonstrate that perceived endings increase preferences for repeat experiences over novel ones. This preference shift occurs in various hedonic domains and in naturalistic contexts, affects consequential behaviors, and is driven by an increased desire for personally-meaningful experiences.

Does facing perceived endings increase preferences for novelty or repetition? Eight preregistered experiments reveal that as consumers faced a shrinking window of opportunity to enjoy a general category of experience (even when the opportunity would return later; e.g., eating one's last dessert before starting a diet), their hedonic preferences shifted *away* from new and exciting options and *toward* old favorites.

Consumers regularly choose between novel hedonic experiences (e.g., exploring a new buzzed-about restaurant) and familiar ones (e.g., revisiting one's same old spot). The dominant psychological assumption is that, holding constant factors like cost, availability, and convenience, consumers generally prefer novelty ("variety is the spice of life"; Kahn & Ratner, 2005; McAlister & Pessemier, 1982; Raju, 1980). Given that perceived endings motivate a general desire to *maximize* (i.e., "end on a high note"; Diener, Wirtz, & Oishi, 2001; Loewenstein & Prelec, 1993; Ratner et al., 1999), it is tempting to assume consumers might prefer experiences that are *new and exciting*. After all, past work and the popular notion of the "bucket list" suggest major life endings may motivate the pursuit of activities consumers have always wanted to try (Periyakoil, Neri, & Kraemer, 2018; Shu & Gneezy, 2010; Zimbardo & Boyd, 1999).

Another option would be for consumers to stick with what they *know* works for them—old favorites are typically safer bets than their novel equivalents. Familiar options can be relied upon to guarantee certain value, like hedonic quality (e.g., pure sensory pleasure). Yet, endings may also increase desire for another type of value: *personal meaning*. Final consumption opportunities may warrant a degree of poignancy (Ersner-Hershfield, Mikels, Sullivan, & Carstensen, 2008), emotional closure (Schwoerer, Krott, & Oettingen, 2020), and emotional gratification (Carstensen, Isaacowitz, & Charles, 1999) to match the occasion. Across eight experiments (all preregistered), we tested whether perceived endings increase consumer preferences for familiar versus novel activities.

Experiment 1 demonstrated the effect across three populations: a university lab ($N = 460$), M.B.A. students ($N = 163$), and national online pool ($N = 501$). Participants faced 10 hypothetical choices in 10 hedonic domains (e.g., restaurants, travel, movies) between a new option they were excited to enjoy vs. a familiar option they already knew they enjoyed. Crucially, participants were assigned to either choose for their last opportunity for a while to experience the given domain at all or chose as they normally would. For example, for restaurants, they chose between a novel and familiar restaurant for what would be their last restaurant experience for some time (or not). In all three populations, preferences shifted toward familiar options over novel ones when facing a perceived ending ($ps < .001$).

Experiment 2 ($N = 257$) replicated this effect in a naturalistic context: New Year's Resolutions. We collected longitudinal data across three waves that reflected either ending or control contexts. Participants who planned to give something up for New Year's chose between an activity about a novel or familiar version of their resolution category (e.g., a resolution to cut back on sweets meant choos-

ing between an activity about sweets they had never had before vs. sweets they had had before). Crucially, they made this choice just before New Year's (Wave 1: ending context), one month later (Wave 2: control context #1), and three months later (Wave 3: control context #2). As expected, participants chose the familiar activity more often in the ending context (68.09%) than in control context #1 (43.58%; $p < .001$) and control context #2 (47.86%; $p < .001$).

Experiment 3 ($N = 501$) extended the effect to a consequential choice with concrete monetary value. Participants entered a raffle for a \$30 gift card for either a novel or familiar restaurant of their choosing. Participants were assigned to either write about why they had many opportunities (control condition) or few opportunities (ending condition) to eat in restaurants over the next month, then choose a gift card. Again, we found that participants preferred familiarity in ending contexts: They chose a gift card for a familiar (vs. novel) restaurant more often when they considered having few (67.31%) as opposed to many (48.96%) opportunities to eat in restaurants for a while, $B = 0.76$, $SE = 0.19$, $p < .001$.

Experiment 4 ($N = 2,004$) tested mechanism by directly manipulating hedonic quality and personal meaning. Participants imagined taking a leisurely walk that we randomly assigned to be high vs. low in meaning (i.e., sentimental connection), high vs. low in hedonic quality (i.e., exciting stimulation), and in an ending vs. control context (i.e., the last walk of the season or the first of many walks of the season). Here, we measured participants' reaction to their assigned walk ($-5 =$ Terrible fit..., $+5 =$ Perfect fit...), and we observed the predicted 3-way interaction: Personal meaning was a uniquely stronger predictor of positive reactions, specifically in ending contexts, $F(1, 1996) = 6.16$, $p = .013$.

Experiment 5 ($N = 580$) expanded the paradigm to a new domain and tested mechanism another way. Participants first identified a novel song they had never heard but wanted to hear and a familiar song they had heard many times before. They then uploaded links to the songs into the survey from YouTube. We then assigned participants to either commit to not listening to music for a week (ending context) or behave normally (control context). Before starting, they chose one of their songs to listen to and rated whether a desire for meaning or hedonic stimulation drove their choice. As predicted, the ending context shifted participant choices toward the familiar song (59.59%) compared to the control context (39.93%), $B = 0.80$, $SE = 0.17$, $p < .001$; further, meaning mediated this effect (Indirect Effect = 0.62, $SE = 0.16$; 95% $CI [0.33, 0.95]$).

The current research highlights an insight that both qualifies and advances existing understandings of novelty's well-established gleam; Further, it bridges research on hedonic preferences, time and timing, and the motivational effects of change. Variety may be the "spice of life," but familiarity may be the spice of life's endings.

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Reimagining the sharing economy: Are platform cooperatives the answer?

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EXTENDED ABSTRACT

Platform cooperatives hold potential to revolutionize the sharing economy. We leverage consumer-prosumer's perspective to investigate whether platform cooperatives' promise for a responsible sharing economy is strategically viable and how they implicate the competitive market landscape. We offer actionable insight to reimagining the sharing economy toward sustained change.

Since its inception, the sharing economy has been underpinned by a utopian discourse promising economic, social, and environmental benefits (Belk 2010; Botsman and Rogers 2010; Schor 2021). However, sharing economy business models have largely failed to deliver the positive social outcomes they envisioned (Eckhardt et al. 2019; Belk et al. 2019; Laamanen et al. 2018; Schor 2020; Yates 2021). In turn, calls for research have urged for better understanding of the sharing economy's maturation, future and its intended transformative potential (Eckhardt et al. 2019; Schor 2020). In seeking to map this terrain, academics and practitioners have been drawing attention to an alternative business model holding potential to realize the sharing economy's promises and overcome its limitations: the platform cooperative (Schor 2020; Scholz 2014, 2016; Vallas and Schor, 2020). Platform cooperativism has three aspects: 1) replicating existing technology from commercial platforms; 2) embedding solidarity within the business model whereby platforms can be owned and operated by various forms of cooperatives; 3) reframing innovation and efficiency with an eye on benefits for all, not just profits for the few (Scholz 2016). Scholars have argued that platform cooperatives can benefit both end-users and platform owners (Schor 2020). However, platform cooperatives are struggling to gain momentum, raising questions about their transformative potential (Curtis, 2021; Qualtrough 2021). In this paper we therefore ask, how can platform cooperatives contribute to reimagining the sharing economy?

To explore this question, we study FairBnB and Driver's Cooperative – the two main platform cooperative challengers to AirBnB and Uber. We leverage netnography (Kozinets 2020) and depth interviews with purposefully sampled (Patton 2002) consumers and service providers, as well as with executives working or having worked directly with these platform cooperatives. Our investigative focus is twofold: on consumers/service providers' lived experiences with these platforms, and on management's strategic visions and practices. Analysis and data collection are proceeding iteratively, constructing emergent conceptual frames accordingly to arrive at theoretically informed representations of our informants' narratives (Spiggle 1994).

Findings indicate that there are three substantive domains – functional, structural and ideological – in which platform cooperatives are strategically disadvantaged or underperforming relative to commercial sharing economy platforms. First, platform cooperatives struggle to attract and/or retain end users and to deliver a competitive service due to a range of limitations which we label functional. Mainstream platforms dwarf platform cooperatives' marketing and promotional efforts, significantly restricting the cooperatives' outreach and visibility. In turn, while service providers are eager to support the cooperative model, there is a lack of platform awareness or interest from consumers. In parallel, platform cooperatives underdeliver on users' functional expectations and fail to measure up against their baseline requirements in replicating the existing commercial platform technology – a key characteristic for this business model (Scholz 2016). Such functional limitations significantly constrain organizational growth and brand equity building, illuminat-

ing that while platform cooperatives might be theoretically promising, functionally their potential to transform the sharing economy might be overestimated.

Second, despite arguments that platform cooperatives can outperform commercial platforms due to their scalability and agility (Philipp et al. 2021), we find that such competitive advantages are yet to be realized at the structural level. Our data suggests that stakeholders expect more disruptive, rather than replicatory, business models. While mainstream platforms are known to underbid their competitors to drive them from the market, our respondents advocated for a different, decentralized approach, suggesting that attempts to overtake leading commercial platforms by replicating the strategies of these main players is not expected to deliver the promised radical overhaul of the marketplace. At the structural level, unlike mainstream platforms, cooperatives do not leverage venture capital financing, and lack workforce size advantages, as uptake is limited (Maier 2021). Our data suggests that this necessitates a strategic focus on developing innovative collaborative network effects and decentralizing dominant market power, whilst building scale through institutions (Laamanen et al. 2022) – for example through focusing on business models that leverage one-to-many (e.g., government or institutional contracts) rather than one-to-one sales models – which can produce the concentrated markets and user lock-in that investors find attractive (Vallas and Schor 2020).

Finally, platform cooperatives are mission-driven (Scholz 2016), and deploy various ideological narratives, such as providing guilt-free choice, and promoting non-commercial appeals (Beverland et al 2021). However, such narratives do not necessarily translate into consumer motivation to participate, for they can lack relevance at the level of the lived experience. For instance, FairBnB shares revenues with local communities. However, such ideological differentiation is not sufficient to foster consumer involvement, as consumers typically lack capacity or interest to get involved. Still, our data suggests that at the managerial level, if platform cooperatives can scale just enough to be potentially viable competition, they can disrupt the broader ideological landscape by injecting authentic narratives into the marketplace that expose the limitations of commercial platform claims' and push the market leaders to increase their focus on pro-social claims and engagements.

This study offers three primary contributions. In contrast to previous literature (Schor 2020; Scholz 2014, 2016; Zhu and Marjanovic 2021), we demonstrate that platform cooperatives are not a silver bullet solution. We identify a new role for platform cooperatives as catalysts for indirect change and show how these challengers can scale outside the one-to-one competition model. We also address the grand challenge of how marketing can contribute to responsible business (de Ruyter et al. 2021) with a strategic focus on developing innovative collaborative network effects. We suggest that platform cooperatives can disrupt from the margins, not by seeking to directly overtake leading platforms but from a peripheral position using institutional and ideological avenues. Finally, we contribute to the consumer ideology literature in the context of the sharing economy (Beverland et al 2022; Schmitt et al. 2022) by demonstrating that consumers seek to engage with platforms that allow them to resolve emergent conflicts between their experiences and ideological orientations but oscillate between reconciliation (using mainstream and alternative platforms) and alienation (experiencing and reacting to the problems with mainstream platforms). Overall, we offer actionable insights for reimagining the sharing economy.

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Identities without products: When preference for self-linked products weakens

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EXTENDED ABSTRACT

We introduce a distinction between two types of consumer identities based on whether carrying-out the identity relies on specific products/equipment/gear: product-dependent (e.g., cook) and product-independent (e.g., foodie). Product-independent identities deactivates information about whether products/brands are classified as self. Consequently, preference for self-linked products/brands is weakened while the self-links remain unchanged.

To grow its market share in a mature market, Samsung must effectively target users of its main competitor, Apple. This is a significant challenge given Apple customers' renowned brand loyalty, with many viewing the iPhone as a defining aspect of their self-identity. While most iPhone customers are unlikely to switch brands, how might Samsung identify and selectively target the minority who might be more likely to do so?

One key factor driving our loyalty to a given brand and its products is the extent to which we are *self-linked* to them. Consumers define and construct their self-identities in terms of connections (or links) not only to people, but also to products and brands (Escalas and Bettman 2003), with self-linked (vs. unlinked) products and brands consistently being more preferred (whether measured by loyalty, choice, or WTP; Dommer and Swaminathan 2013; Shu and Peck 2011). Thus, the extant literature suggests that the more a consumer is self-linked to her iPhone, the less likely she will be to switch to a different brand. Here, we challenge this view by revealing circumstances where the effect of self-links on preference attenuates even while the links remain unchanged. We specifically study how information about whether, or the extent to which, products and brands are self-linked can become deactivated, or functionally unavailable to influence mental processes like preference and choice (Eitam and Higgins 2010).

Our research builds on the finding that not all the attributes of a product are equally activated in every judgment and choice (for a review see Weber and Johnson 2006); that is, an attribute's ability to "influence thought and action processes" can vary across situations (Eitam and Higgins 2010: 951). For example, research has shown that activating one of the two central attributes of a sofa, comfort or price, lowered the influence of the other attribute on subsequent sofa choice (Mandel and Johnson 2002). If we conceptualize a consumer's self-links to a product as one of that product's attributes, then we can begin to explore the circumstances where the influence of this attribute is reduced.

When will we see low self-link activation? Information is less (more) activated when it is less (more) relevant in a given context (for a review see Eitam and Higgins 2010). As such, we predict that information about self-links to products will be more (less) relevant, and thus will have more (less) influence on product preference when we are relying more (less) on products to be ourselves. In other words, self-link information will have a bigger effect on product preference when we need products to carry out the activities central to who we are (e.g., for cooks to cook), but will have a smaller effect on product preference when we do not need products to carry out the activities central to who we are (e.g., for foodies to enjoy food). Since the active identity defines what being oneself means for a specific person (chronic) or in a specific context (situational) (Oyserman 2007), we predict that our need for products to be ourselves, and the resulting relevance and influence of self-link information, will

hinge on the active identity: Self-links to products and brands will be less relevant and less influential on product preference when the consumer's identity does not require products. Note that while we expect self-links relevance and thus their activation to vary depending on context, we expect that the self-links themselves will remain unchanged, because deactivation of information does not change its content (Higgins 1996).

To test this prediction, we introduce a new theoretical distinction between two types of consumer identities based on whether engaging in the activity central to the identity innately relies on specific products. Our pretests found that consumers perceive some identities, like cook, gardener, and photographer, to be heavily reliant on products (see Figure 1). For example, the identity of a cook is associated with a constellation of products such as kitchen knives, blenders, and pans needed for cooking. We term such identities product-dependent. In contrast, we find that consumers perceive other identities, like foodie, dancer, and music lover to be less reliant on specific products. For example, a foodie identity is primarily about using one's senses to enjoy food. We term such identities product-independent. Of course, foodies may use their phones to post pictures of their meals and music lovers may use headphones, so the labeling of an identity as "product-dependent" or "product-independent" is not based on a strict dichotomy. Rather, these labels reflect the perceived relative degree of reliance on products for carrying out each identity.

The basic premise of the present research is that since product-independent (vs. product-dependent) identities lower our need for products to be ourselves, information about whether, or the extent to which, products are self-linked becomes less relevant. Thus, our core prediction is that activating a product-independent identity will lower the activation of self-links to products and brands, as shown through the attenuation of the effects of self-links on preference.

Based on the extant findings that self-links to a product/brand increase preference for it (for a review see MacInnis and Folkes 2017), we expect self-links to products/brands to be activated by default (i.e., without priming) for the average consumer. Similarly, when a product-dependent identity is active, self-links to products/brands will remain activated, continuing to affect preference. Where we depart from previous research is in arguing that when a product-independent identity is active, self-links to products/brands will be less activated. In the context of a product-independent identity, then, the effect of self-links to products/brands on preference will attenuate, manifesting in weakened preference for self-linked products/brands. Of note, since this negative effect on preference is driven by attenuation of the effect of self-links on preference, it should be largest for those products/brands that are most self-linked (as there is a bigger effect on preference to attenuate). Thus:

Hypothesis 1: An active product-independent (vs. product-dependent) identity weakens preference for self-linked (but not unlinked) products and brands.

Hypothesis 2: The effect of an active product-independent identity on preference for self-linked products and brands is driven by lower activation of self-link information.

Importantly, the negative effect on preference is predicted for all self-linked products/brands, including ones unrelated to the identity (e.g., a kitchen knife). Thus, it is not the context of the specific identity (e.g., nature or food), but rather its level of independence on products that is theorized to drive the negative effect on preference.

Study 1 used 318 MTurk workers, preselected to own an iPhone. Identity was primed by asking participants to pick one of four possible identities to which they most related and write about how they express it (*product-dependent*: cook, audiophile, video gamer, and fisher; *product-independent*: walking lover, book reader, nature enthusiast, or music lover). Participants then allocated 50 points to reflect how likely they were to choose a new phone from each of four brands: Apple, Samsung, LG, and an open-ended option. In support of H1, ANOVA showed higher brand switching (% choice in non-apple brands) in the product-independent condition ($M = 23.12\%$) compared to both the product-dependent condition ($M = 15.6\%$, $F(1, 315) = 5.48$, $p = .02$) and a control condition, wherein no identity was primed ($M = 15.5\%$, $F(1, 315) = 5.78$, $p = .017$). Importantly, ruling out changes in the self-links themselves, this result was not paralleled by changes in participants' self-links to their iPhone (M *product-dependent* = 4.37 vs. M *product-independent* = 4.59, *NS*).

Study 2 begins to test our theory that the negative effect of product-independent identity on preference is driven by lower activation of self-link information (H2) using a two-wave longitudinal study. 220 (of 286) returned for the second phase. At time one, participants reported their 5 favorite and 5 least favored brands. At time two (collected 14-21 days later), identity was primed using study 1's manipulation with seven possible identities per condition.

Participants then judged 20 brand names on their length (short or long), including the 10 brands that each provided at time one and 10 highly familiar brands (identical for everyone).

Participants then received a *surprise* request to recall the brands they judged, with a possible bonus to incentivize performance. Priming a product-independent (vs. product-dependent) identity reduced recall of favorite brands (M *product-dependent* = 55.6% vs. M *product-independent* = 48%, $t(218) = 2.33$, $p = .021$), reflecting reduced activation of self-links to brands (H2) because self-links were less available to affect memory. Importantly, recall was not affected for participants' least favored brands (M *product-dependent* = 41.67% vs. M *product-independent* = 41.79%, $p = .97$) or for the general list of brands (M *product-dependent* = 29.26% vs. M *product-independent* = 31.25%, $p = .4$). Moreover, ruling out changes in the self-links themselves, identity type did not affect self-links to favorite (M *product-dependent* = 4.23 vs. M *product-independent* = 4.18, $p = .59$) and least favored (M *product-dependent* = 2.36 vs. M *product-independent* = 2.3; $p = .62$) brands.

Study 3 was designed to show that the negative effect of product independence on preference for self-linked products attenuates for unlinked products (H1). It used a 2 (self-link: yes vs. no) x 2 (primed identity: product-independent: "nature enthusiast" vs. product-dependent: "outdoor enthusiast") between-subject design with 271 students. These identities were selected because a pretest found them to be broadly applicable to many people, their domain similarity renders confounds less likely (i.e. as opposed to foodie vs. skier), and they significantly differ in perceived reliance on products. Participants in the nature (outdoor) enthusiast condition first read: "A nature (outdoor) enthusiast is a person who enjoys spending time observing wild animals and plants (engaging in activities like fishing and camping) in the countryside" and then wrote about how they express this identity. Participants in the self-linked (unlinked) product condition were then shown a mug, which had (did not have) a logo of their university and reported their WTP (incen-

tive compatible). ANOVA showed a significant interaction between self-link and primed identity ($F(1, 267) = 5.34$, $p = .022$). Priming a product-independent (vs. - dependent) identity lowered WTP for the self-linked mug (M *nature enthusiast* = \$8.76 vs. M *outdoor enthusiast* = \$10.14, $F(1, 267) = 4.1$, $p = .044$), but not for the unlinked mug (M *nature enthusiast* = \$6.33 vs. M *outdoor enthusiast* = \$5.81, $F(1, 267) = 1.48$, $p = .22$). Notably, consumers' self-links to the mug (manipulated through the presence vs. absence of the students' university logo) had a stronger influence on WTP, reflecting higher activation of self-link information (H2), when the primed identity was product-dependent rather than product-independent. Moreover, ANOVA ruled out the possibility that the results were observed because including (vs. not including) the university logo on the mug further increased consumers' self-links to the mug in the product-dependent (vs. product-independent) identity condition: Primed identity did not interact with the self-link manipulation to affect reported self-links ($F(1, 267) = .96$, $p > .32$).

Study 4 was designed to measure chronic product independence. It employed a two-wave longitudinal study. 165 (of 229) returned for the second phase. At time one, participants were asked to list four "hobbies, or things they like to do in their leisure time." Participants then read: "Some activities require using specialized products, equipment, or gear while other activities do not require gear and can be engaged in directly through the body and/or the senses." Participants then indicated the extent to which each activity requires using specialized equipment/gear. The degree of reliance on products of the four listed activities formed an index of chronic product independence.

At time 2 (7-month later), we measured consumer's self-links to their cellphone's brand and the consumer's likelihood to switch brand (using study 1's DV). The present study included not only iPhone owners, who tend to feel self-linked to Apple ($M = 3.9$; i.e., as in study 1), but also owners of Samsung ($M = 3.72$), LG ($M = 2.96$), and other brands ($M = 3.37$), creating greater variation in brand self-link. A regression showed that self-link predicted lower switching ($\beta = -8.43$, $t = -4.21$, $p < .0001$). Consistent with study 1, higher product independence predicted greater likelihood to switch ($\beta = 1.03$, $t = 1.72$, $p = .09$). Moreover, the interaction was positive and significant ($\beta = 1.65$, $t = 2.72$, $p = .007$). Echoing study 3's results, floodlight analysis showed that high (vs. low) product independence significantly ($p = .05$) predicted more brand switching for consumers in the top 59% of our sample in terms of their self-link to their phone brand.

Study 5 was designed to explore whether differences in consumers' degree of chronic product independence could be inferred (rather than measured), ideally from publicly available data, a possibility that would clearly be far more valuable to marketers. The study was thus conducted on Facebook, with the objective of increasing the click-through rate (CTR) of an advertisement for the Galaxy S10 among US consumers, ages 18-65, who owned an iPhone 7 or 7 plus; clicking on the ad for a different brand of phone served as a measure of openness to switching brands.

We used the Facebook interest targeting functionality in an attempt to segment the audience by likely levels of product independence focusing on outdoor activities (*product-dependent audience*: people interested in fishing, surfing, mountain biking, hunting, boating, and camping with no interest in mountains, nature, or lakes; *product-independent audience*: the inverse group). The split-testing feature of Facebook randomly assigned the Galaxy S10 ad to both audiences. 393 Facebook users (out of the 25,840 reached users) clicked on the ad, giving a total CTR of 1.52%. CTR of users in the product-independent audience (1.73%) was significantly higher

than the CTR of users in the product-dependent audience (1.33%; $\chi^2(1) = 6.6$; $p = 0.01$), which lowered the cost per click (product-independent audience: \$.55 vs. product-dependent audience: \$.66).

DISCUSSION

The current research challenges the extant view that consumers universally prefer self-linked products and brands by revealing circumstances where preference for self-linked products weakens. We introduce a novel typology that distinguishes between specific identities based on their degree of product independence. We use this typology to show that when product-independent identities are active, preference for self-linked products and brands can be weakened even while the links themselves remain unchanged.

Our findings offer a host of marketing implications. First, study 5 suggests that a consumer's degree of chronic product independence can be proxied from digital marketing profiles, opening up the novel possibility of segmenting consumers by degree of product independence and then targeting them with different messages accordingly (e.g., brand switching appeals). Such segmentation can similarly help a firm identify which of its own customers are likely to be less influenced by their self-link to the brand, and are therefore good targets for retention efforts like targeted price promotions (Lal 1990). Moving beyond chronic product independence, studies 1-3 demonstrate that marketers can use priming-like strategies to temporarily increase consumers' level of product independence, and thus lower consumer preference for self-linked products/brands.

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All Roads Lead to Rome? Evaluating Value Elicitation Methods

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EXTENDED ABSTRACT

Across five studies ($N = 2,941$), theoretically equivalent elicitation methods yield different estimates of consumers' willingness-to-pay. The Multiple Price List format results in lower WTP compared to the open-ended response format. Consumer demand estimated using the Becker-DeGroot-Marschak method is lower than demand elicited using real choice at a fixed price.

How much people value a product or service is fundamentally important to researchers in economics, psychology, and marketing. Valuation can be assessed in many ways, including choice, hypothetical willingness-to-pay (HWTP), and incentivized willingness-to-pay measures, e.g., the Becker-DeGroot-Marschak (BDM) and Multiple Price List (MPL) methods. BDM and MPL are widely used to ensure incentive compatibility and encourage truthful responses. Valuations elicited using these two methods are considered to reflect consumers' "true" valuations and predict their behaviors in the real world. In this research, we challenge this assumption and find that these two elicitation methods systematically lower people's valuation. Specifically, we propose and find that valuation is highest when elicited through hypothetical (unincentivized) WTP, lower when elicited through the open-ended BDM method, and lowest when elicited through the MPL method. More importantly, demand estimated using both BDM and MPL is lower compared to demand estimated using real choice at a fixed price. This casts doubt on the presumed incentive compatibility of the BDM/MPL methods, which may produce misleadingly low WTP estimates.

We report four preregistered and incentive-compatible studies (total $N = 2,607$) that test our predictions regarding the differences between value elicitation methods. In Study 1, 332 laboratory participants indicated the highest amount of money they were willing to pay to watch a movie. Participants were randomly assigned to one of three between-subjects conditions: Hypothetical Willingness-to-Pay (HWTP), the BDM, and the MPL methods. In the HWTP condition, participants answered, "What is the highest amount of money (in US dollars) you would be willing to pay to watch [movie-name]?" by entering a number into a textbox. In the BDM condition, participants first read instructions and answered a practice question to make sure they understood the BDM procedures. Then they answered the same open-ended WTP question as in the HWTP condition. Similarly, in the MPL condition, participants first read instructions on the MPL method and answered a practice question. Then, participants indicated whether they would "Prefer Movie" or "Prefer Money," at each of 20 price levels starting from \$0.50 and ending in \$10.00, in \$0.50 increments. We calculated WTP in this condition as the average of the two price levels between which the participant switched from "Prefer Movie" to "Prefer Money".

As predicted, participants' WTP differed significantly across the three conditions. WTP was highest in the HWTP condition ($M = \$7.50$), lower in the BDM condition ($M = \$5.21$), and lowest in the MPL condition ($M = \$3.68$), $ps \leq .001$.

Study 2 directly replicated the findings of Study 1 with 797 online participants. Moreover, we manipulated the order (increasing vs. decreasing amount) of the multiple price list and found that it didn't influence WTP: valuation in both MPL conditions ($M_{\text{increasing}} = \2.28 ; $M_{\text{decreasing}} = \2.03) was lower than valuation in the BDM condition ($M = \$3.44$), $ps < .001$.

Having established robust differences between the three methods, we then compared valuation elicited using these methods against people's "true" valuation. Although people's true WTP is an elusive concept with various definitions, we used people's real choice at a Fixed Price (FP) as the benchmark, as deciding whether to purchase a product at a fixed price most closely mimics consumers' actual decisions in the market.

In Study 3, 881 online participants were randomly assigned to one of six conditions in a 3 (method: Open-Ended vs. MPL vs. FP) \times 2 (decision incentivized: yes vs. no) between-subjects design. Participants indicated their WTP for a USB cable using either open-ended text response, MPL, or the FP method. Participants in the FP condition simply answered the question "Are you willing to pay \$7 for this USB cable?" (Yes/No).

Replicating results of the previous studies, participants' WTP for the USB cable was highest in the HWTP condition ($M = \$6.20$), lower in the BDM condition ($M = \$4.58$), and lowest in the MPL condition ($M = \$2.63$). To compare the Open-Ended, MPL, and FP conditions, we calculated the demand for the USB cable at \$7: the percentage of participants whose WTP was at least \$7 within the Open-Ended/MPL conditions, and the percentage of participants who answered "Yes" in the FP conditions. Whereas only 5% of the participants in the incentivized MPL condition were willing to purchase the product for \$7, 18% did in the BDM condition, $p < .001$. Importantly, 27% of the participants in the incentivized FP condition were willing to purchase the USB cable for \$7, more than those in the previous two conditions ($p = .088$ against 18% in BDM; $p < .001$ against 5% in MPL). This provides initial evidence that the BDM and MPL methods can systematically underestimate market demand.

Study 4 replicated Study 3 with more product categories. In Study 4, 597 online participants evaluated four products. For each of the four products, the percentage of participants willing to purchase the product at \$7 was significantly lower in the BDM condition than in the FP condition (16% vs. 36% for the USB cable, $p = .002$; 7% vs. 33% for the mug, $p = .001$; 13% vs. 31% for the movie, $p = .002$; 21% vs. 35% for the eBook, $p = .034$). This further supports our prediction that BDM could underestimate consumer valuation and market demand.

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Preparing for the Best as Much as the Worst: Consumers ignore the probability of bad outcomes when making backup plans

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EXTENDED ABSTRACT

When consumers make risky plans, they also make backup plans, but they don't always do so wisely. Across seven studies ($N = 3,163$) we find that consumers overinvest in hedges for risky prospects which are likely to succeed and underinvest in hedges for those which are unlikely to succeed.

People often must plan for the worst. They purchase warranties, insure their homes, and make backup plans. If people hedge wisely, they should be willing to pay more to hedge against bad outcomes which are more likely: a homeowner on the coast of Florida should invest more in flood insurance than one in the middle of Arizona. In this work we systematically investigate how people hedge against bad outcomes as the probability of that outcome occurring varies and find that participants spend their money unwisely: they dramatically overinvest in backup plans which are unlikely to be needed, while underinvesting in backup plans which are likely to be helpful.

To examine this behavior, we presented participants with the opportunity to hedge a range of risky prospects like gambles, a used car purchase, or a stock market investment, and varied the chances of a bad outcome occurring. We find participants in fact value hedges against less risky and more risky bad outcomes almost identically, with no pattern of higher valuations of hedges against more risky outcomes. Thus, it appears people do not take the probability of a bad outcome occurring into account when valuing hedges.

Studies 1a and 1b establish our basic effect. Here we showed participants ($N_{1a} = 202$, $N_{1b} = 177$) several trials wherein they were told that they had been entered into a lottery which they would either win and receive \$10 or lose and receive nothing. We varied the chance of winning the \$10 across trials (20%, 50%, 80%). For each trial, we asked participants to indicate their willingness-to-pay to change the losing outcome of the lottery from \$0 to receiving \$2, i.e. their willingness-to-pay to hedge. Participants paid a similar amount for the hedges regardless of starting probability in both Study 1a (Mean $WTP_{20\%} = \$0.70$, Mean $WTP_{50\%} = \$0.81$, Mean $WTP_{80\%} = \$0.81$) and Study 1b (Mean $WTP_{20\%} = \$0.76$, Mean $WTP_{50\%} = \$0.80$, Mean $WTP_{80\%} = \$0.84$).

Of course, the actual expected value of each hedge was not equal. A way to help account for this is to convert the WTP numbers to convert the raw mean WTP numbers for each lottery into the valuation of a 100% chance of receiving \$2 that they imply. For example, in the case where they have an 80% chance of winning a lottery, hedging participants are paying for \$2 which they will only actually receive in the 20% of the time that they lose the lottery. So, if a participant pays \$1 for a \$2 hedge on a lottery they have an 80% chance of winning, they are effectively paying \$1 for a 20% chance of receiving a \$2 hedge. We can use this valuation to infer that they would value a 100% chance of a \$2 hedge, which they are five times more likely to actually receive, at $\$1 \times 5 = \5 . This conversion allows us to compare valuations between lotteries with different chances of winning. Carrying out this conversion on these results, this pattern of implied valuations is clear in both Study 1a ($M_{20\%} = \$0.86$, $M_{50\%} = \$1.62$, $M_{80\%} = \$4.05$) and 1b ($M_{20\%} = \0.95, $M_{50\%} = \$1.60$, $M_{80\%} = \$4.20$), and this metric is what we report hereafter.

Studies 2, 3, and 4 tested and excluded alternative explanations for the effect, including participant confusion, the abstract nature of

the gambles, and the effect being specific to a change from a \$0 loss outcome.

In Study 5 ($N = 930$) we presented participants with three gambles where they had a 20%, 50%, or 80% chance to win \$10, or else lose and receive nothing. Between participants we varied whether we gave them the opportunity to hedge the losing outcome from \$0 to \$2 or invest in increasing the winning outcome from \$10 to \$12.

For participants hedging outcomes, we observed the same pattern of over/underinvestment as in our other studies, ($M_{20\%} = \$1.12$, $M_{50\%} = \$1.95$, $M_{80\%} = \$4.61$). However, participants who were instead given the opportunity to *invest* to improve their winning outcomes *were* responsive to expected value, with participants paying more to invest in the higher probability gambles with higher expected value as evidenced by their consistent valuation of the investments once their willingness-to-pay was weighted by their chances of winning ($M_{20\%} = \$1.20$, $M_{50\%} = \$1.04$, $M_{80\%} = \$1.04$, between-conditions comparison $p < .0001$).

This study suggests a remarkable discrepancy: consumers appear to be investing wisely but hedging poorly. For example, a consumer investing in a new car may accurately weigh the risks and returns of this purchase. However, that same consumer may then ignore risk when then choosing to insure that car, focusing only on the possible bad outcome and not how likely it is to actually occur—potentially leading to worse outcomes.

Finally, in Study 6 ($N=300$) we expanded beyond the tightly controlled framings used previously, presenting participants with richer, naturalistic scenarios which more closely match the range of domains where consumers might make these decisions: e.g., purchasing insurance, making backup plans for rain, or investing effort to increase chances of passing a test. Participants saw all six scenarios in random order, with the probability of the risky prospect in each trial varying randomly by participant. We found participants displayed the same pattern of hedging behavior in every scenario: paying similar amounts for hedges regardless of chances (all p 's $< .05$).

Whether the decision is purchasing insurance on a reliable car or making backup plans in the unlikely event of rain, consumers overinvest in hedges against unlikely bad outcomes. Conversely, whether it is hedging a risky stock trade or studying to improve a grade on a test one is likely to fail, people underinvest in hedges against likely bad outcomes.

REFERENCES AVAILABLE UPON REQUEST

(Re)ontologizing human and Contextualizing Trans- and Post-humanism for CCT

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EXTENDED ABSTRACT

This essay presents foundational accounts in the philosophy of technology, followed by intensive unpacking of the elusive terms, transhuman(ism) and posthuman(ism). Discussions and juxtaposition of trans- and post-human(ism) relative to their properties and qualities are provided based on a historical and cultural understanding.

INTRODUCTION

This essay seeks to reduce the gap between transhuman theories and consumer research while clarifying the relationship between posthumanism and transhumanism. As scholars in other fields have noted, one philosophy is often chosen as the focal subject without conscious appreciation of the other (e.g., Ferrando, 2013; Opdebeeck, 2017).

Living in the current time and space indeed motivates consumers and marketers to develop a multitude of post- and trans-human scenarios that intensify individual imaginations of humans and their lives in the palpably near future (e.g., Belk, 2016). Posthumanism is generally recognized as the label for approaches and ideologies that advocate alternatives, possibilities, temporalities, imaginations, compromises, and especially post-anthropocentric views in defining (future) human (e.g., Graham, 2002; Haraway, 2016; Pepperell, 2005). In lay terms, transhumanism is a more specific philosophy and practice that leads humans to recognize posthuman conditions mainly through biotechnology and artificial intelligence.

Studies in marketing in general and consumer research fields have thus far documented either very specific and technical areas of transhumanism (e.g., Lai, 2012; Lima et al., 2020; Takhar & Pemberton, 2019) or probed particular theoretical aspects of post- and trans-humanism with less focus on the emerging practices and technologies readily available (e.g., Botez et al., 2020; Giesler & Venkatesh, 2005).

In the marketing field, and consumer research in particular, there has been critical acknowledgment of the arguably obsolete Cartesian dualism, namely mind-body distinction, that tends to obscure the epistemological progress in trans- and post-humanism studies, especially in the West (Giesler & Venkatesh, 2005). Sherry (2000) also recognized convergence and resonance, as well as the blurring between material/body, myth/technology, and means/end, and even alluded to “inter-object-subjectivity.” The ongoing transformation of the consumer subject, from “not-machine” to body-machine and soul-computer, has also been documented in the light of posthumanism literature (Venkatesh et al., 2002). More recently, life itself (entangled with nanotech, biotech, infotech, and cognitive science), rather than stock discourses based on Cartesian techno-anthropology or philosophical anthropology, has been analyzed to provide different categories of life-technology that ultimately leads to transhumanism (Belk et al., 2020).

Recognizing the urgency to reimagine and rearticulate what human means in the future market, in the following sections, the background of trans- and post-humanism is first presented for familiarity with different thoughts and perspectives in the philosophy of technology. To do so, it is necessary to navigate through different ideas, traditions, and theories (albeit inexhaustive) that are potentially incommensurable yet critically pertinent to the evolutions of trans- and post-humanism to outline (Figure 1) the historical context and “topography” of the relatively new discourses that precipitate trans-

human markets and marketing. The subsequent section illuminates historical and theoretical properties and qualities of transhumanism vis-à-vis posthumanism (Figure 2). Implications and future research directions are also discussed.

Philosophy of Technology

The intricacy of the methods humans may adopt to improve tends to cause mixed feelings and blur the future vision. The literature, for example, lists some “strings attached” to the trans- and post-human market, such as the perceptible violation of the notion of “human purity” (Lai, 2012) and general fears about biotechnology and ethical considerations (Belk et al., 2020). Can education, rigorous training, and self-improvement fulfill human desires to be better, or must science and technology be extensively employed to be better than ever imagined? The philosophy of technology provides a platform to address those possibly clichéd inquiries. Only some notables will be discussed to provide succinct yet sufficient information for (de)construction of the essay. These notables also provide a foundation and useful insights for the later discussion on morality and ethics.

Heidegger

Heidegger (1927 [1996]) critiqued the Cartesian convention to demarcate between the knower (subject) and the known (object) by arguing that modern technology is not merely a tool or instrument but a mode and method of “revealing,” “challenging (*Herausfordern*),” and assembling the world in which *Dasein* (experience of existence) is intermingled with known externalities; hence, “being-in-the-world,” or more precisely, “being-alongside-the-ready-to-hand-within-the-world.” For Heidegger, technology is *enframing* (*Gestell*), which signifies a process by which any-thing and every-thing (i.e., beings in the world) is bestowed with a meaning. The potential of technology as *enframing* can also invalidate traditional boundaries and allow one to re-construct oneself. As the world seems to emerge from *enframing*, Heidegger (1977) also sees a danger of potentially homogenized *being* without other possibilities. That is, *enframing* as a constant ordering process may change human relations to our own existential modes; therefore, we join “standing reserve” to be (re)ordered by technology in the world. This relational and co-existential deconstruction of human/technology and subject/object divides is relevant (at least tangentially and implicitly) to developing the notion of technological mediation (Ihde, 1990) and network ontology (e.g., Latour, 1999; Riis, 2008) with some potential irreconcilability.

Merleau-Ponty & Ihde

Maurice Merleau-Ponty and Don Ihde made a theoretical development of the body-machine and human-technology relationships. Merleau-Ponty’s (1962) analyses call attention to the body as a conduit and vehicle (the ultimate mediator) to the world; the body needs objects (technology) to organize and make sense of the world. Awakened by Merleau-Ponty, Ihde (1990, 1993) viewed technology as “postphenomenological” extensions of the body, which he calls an “embodiment relation”, in which technology is embodied but divorced from experience and consciousness. He proposed that one analyze and interpret technology as it is—that is, in a more naturalistic, material, and practical manner—instead of relying on the philosophical classics (e.g., Heidegger) that focus too much on “Technology” and tend to blind one to the actual and empirical use of

technology. The same technology can be used and applied to various practices in very distinct ways, which sustains the stability of the technology in a form Ihde (2009) called *multistability*.

Stiegler

As such, our consciousness and body are continuously mediated by and shared with technology as the *Other*. This way of viewing human–technology relations can also be found in Bernard Stiegler’s (1998) notion of *prosthetic* beings, postulating that humans are never perfect or complete beings. This necessitates co-creation and co-evolution of humans and technology (e.g., Roberts, 2005). Stiegler (1998, p. 17) also problematized the historic adherence to the aporetic difference between humans and technics, as he claimed, “As a process of exteriorization (locating some experiences of life in technics), technics is the pursuit of life by means other than life.”

Verbeek

Ihde’s (1990, 1993)’s and Stiegler’s (1998) accounts on technological mediation and co-evolution are further analyzed by Verbeek (2005), who underscored human–technology relations rather than subtracting the performance of technology in constituting a lifeworld. In Verbeek’s view, a considerable portion of validating human existence is done by technological artifacts that enable humans to act and experience. For him, the world can only be interpreted into an intelligible reality, and the subjectivity is constantly (re)positioned and (re)contextualized in the world, with technology partaking in both metaphysical endeavors (Verbeek, 2008). He envisioned that humans can/should create technologies that improve lives.

Feenberg & Virilio

Adopting social constructivism, Andrew Feenberg brought a new aspect of the world co-constructed by wo(men) and machines. Feenberg (2010) analyzed the underlying workings and makings of power and control of the system (constituted of technology and machine) that may create biases and inequalities in the lifeworld by shaping identities and experiences. His interpretation, however, is centered more on the delicate but efficient relationship between the system and lifeworld, which is the core of his instrumentalization theory. He introduced a two-level analysis in the theory. On the first level, machines and artifacts are “de-worlded” (dethatched or de-contextualized) from human lives and experiences (Feenberg, 2010, p. 72), but on the second level, they are “re-worlded” (contextualized). This second level, on which the *social* and the *political* play significant roles to re-connect the system to lifeworld, distinguishes Feenberg’s account from many previous ones. He expected a more livable world created through more conscious and intimate social interactions that include technologies as at least quasi-agents.

In his book, *War and Cinema*, Paul Virilio (1989) prospectively addressed Feenberg’s (2010) relatively neutral position vis-à-vis technology and Latour’s (2005) view on object agency. Virilio (1989) criticized and warned of the *techno-apocalypse*, where subjectivities become devoid of reality, and agency is transferred to technologies. His concerns for modern technologies and the human relationships with them arise mainly from fetishization of speed and the loss of “richer” and more “meaningful” life experiences to technologies.

Latour

Linking, merging, and crossing-over inevitably replaced previously accepted territorial views of the world. By calling such classical accounts “ontological zones,” Latour (1993) problematized humans’ (subjects) exclusive possession of agency. He argued that all are hybrid, and that is the very reason the modern project has never been properly embarked upon. For Latour, it is only cultural and philosophical obstinacy to cling to the less critical perspective that ostracizes

mixes, hybrids, and in-betweens. This argument provides an opportunity to reimagine the lifeworld that fosters interdependency and even a symbiosis between human and technology.

Haraway

Haraway (1991) prospectively responded to the question raised from Latour’s ontological ideal that precipitated a multitude of research endeavors in consumer research in a rather stark and contentious manner by advocating a “border-free” world. She also emphasized resistance and revolution to reconfigure and reconstruct a system free from Westernized modes of organizing and interpreting the relationships between humans (also between genders) and between humans and non-humans. In her mythological and metaphorical notion of *cyborg*, she not only refuted the calcified dualism, but also promoted trespassing and even transgression to liberate all the identities and designations used to reinforce the past and current hierarchies. The “victim mentality” prevalent in the public and in the literature, which identifies technology as an actual threat to humanity becomes no longer relevant. Instead, Haraway stressed mutual responsibility between human and machine.

More’s Extropianism

Amassing different views of trans- and post-humanism, More (1990) introduced a notion of “extropy” as a formal attempt to at least metaphorically conceptualize transhumanism based on the newly coined term. It is the opposite of entropy that eventually causes the chaotic state of all things. Therefore, extropy helps reorganize and improve life through responsibility, morality, and inclusion (More & Vita-More, 2013). This *extropian* ambition also stresses intelligence, freedom, enjoyment, longevity, and expansion through reason, logic, and science that facilitates critical thinking in an optimistic manner (More, 1990, 1998, 2003).

Who/What to Call Trans- and Post-Human(ism)?

As evidenced in previous section, theories have progressed to the extent to which one can convincingly reject the idea of ontological, ideological, and practical separations between entities: humans and the rest. Disciplines such as sociology, anthropology, and cultural studies (e.g., Braidotti, 2013; Haraway, 2004; Sandel, 2007) have generated various discourses and performed useful diagnoses of trans- and post-humanism with the grand focuses on *human* and human relationships with *non-humans*.

The extant literature in marketing and consumer research recognized potentialities¹ of human-enhancing and boundary-breaking biotechnologies and advanced computing capabilities; traced the relevant politics, cultures, and history; cautioned about inherent consumer resistance; and inquired about “what the future holds” (e.g., Belk, 2014; Belk et al., 2020; Botez et al., 2020; Hoffman & Novak, 2018; Lai, 2012). Relatively absent in the literature, however, is a clear juxtaposition between transhuman(ism) and posthuman(ism) to (1) minimize unwarranted, inadvertent interchangeability of the two philosophies, (2) identify intersections among the current biotechnology, market(ing) capabilities, and consumers’ biological and sociocultural aspirations and reservations, and (3) accordingly suggest research orientations in the transhuman market that can arguably be the foundational premise for posthuman projects, albeit with a marked gap in viewing the human–technology relations.

¹ *Potentialities* call for moving beyond simply challenging and criticizing the dominant forms of organizing and emphasize that all such efforts remain constructive by demonstrating an imagined vision of what they could be (e.g., Spicer et al., 2009).

From a critical standpoint, transhumanism and posthumanism share the idea that *human* is a malleable and transformable condition (Ferrando, 2013). However, the most significant divergence between the two philosophical, onto-existential, and cultural-historical perspectives is found in their views on technology (e.g., Hayles, 1999). Transhumanism relies on technology and science in assembling its tenets and communicating the micro- and macro-level human projects. This approach renders the transhuman orientation that can be encapsulated as, “[by transhumanism] humanism is not only reaffirmed but radicalized” (Ferrando, 2019, p. 33). As such, the transhuman tradition tends to subscribe to a human-centered worldview and prescribe an instrumental slant on technology, which can inversely fuel the current frenzy in society based on a new doctrine in the market, namely the Fourth Industrial Revolution, which corporate capitalism “parasitizes” (e.g., Giesen, 2018).

What ideologically divides transhumanism and posthumanism in a subtle, yet unmistakably intelligible fashion is posthumanism’s adherence to praxis: the ineluctable entanglement between practice and idea(l)s (e.g., Ferrando, 2013). Arguably, transhumanism still espouses a dualistic conception of human(ism) and the subsequent proposal for relevant practices (Ferrando, 2019). That is, whereas transhuman theories, conventions, and ideals collectively recognize libertarianism and democracy to ensure individual freedom and the right to enhance oneself, as well as equality and diversity (e.g., Bailey, 2005; Hughes, 2004), the basic practice can still be seen as “hyper-centering” or “re-centering” the human in relation to technology.

Posthumanism, instead, marginalizes (in a relative sense) or (more precisely) neutralizes the human to retroactively and proactively include the historically marginalized (including technology, non-human, and other hybrids) in the discourse. Posthumanism embraces a multitude of centers rather than focusing on one: the human (Ferrando, 2013). From the posthumanism standpoint, transhumanism is highly “anthropo-technological” and promotes specific but provisional forms of the human. From transhumanism’s viewpoint, posthumanism is the ultimate end state where transhuman ambitions can be fully realized (e.g., Braidotti, 2013; Broderick, 2013). More pronounced throughout current discourses of the two approaches to be(come) human in the unprecedentedly tentative techno-political environment is the mutual *anamorphosis*. Both can view and acknowledge each other but only with a special device from a specific angle: human-enhancing technology and optimism (c.f., Hayles, 1999).

The quintessential division between the two discursive trajectories of transhumanism and posthumanism, if one were to identify it, arises when posthumanists remove technological determinism² from their visions of the new world. Posthumanists also tend to embrace posthumanism as a new condition, one still transitory and subject to further (r)evolution, for humans to face (Pepperell, 2005). This view also highlights the significance of intrinsic self-awareness rather than attempting to unpack the handed-down baggage full of potentially irreconcilable human–nonhuman relations. Most posthumanists regard both transhumanism and posthumanism as fluid ideologies without much political or philosophical criticism or prejudice towards the former. However, they see transhumanism as preceding and catalyzing the posthuman condition if “era-mentality” is still pragmatic for the discursive development (e.g., Ferrando, 2016; Fukuyama, 2002; Pepperell, 2005; Stock, 2002).

² Technological determinism projects a condition under which technology can/will answer all questions, which creates non-human conditions (Ellul, 1964).

Implications and Future Research

Given the complexities from philosophical concerns, theoretical dispersiveness, moral/ethical stickiness, socio-political uncertainties, cultural eccentricity, and practical variations of trans- and post-human idea(l)s, future research should delve further into the ways in which transhuman marketing can better partake in the proliferation of those new philosophies through sociocultural, politico-historical, and onto-existential provocation to the “democratically confining” conceptions of body and mind. To address such complexities, a few almost taken-for-granted, if not highly ossified, concepts need to be carefully dissected.

First, what is *choice*? How can we re-conceptualize and better comprehend the century-old term critical to explaining what humans do as consumers and marketers with agency? Is choice simply the opposite of (bio-genetical) *chance* in the transhuman market, as Buchanan et al. (2000) problematized, a socio-political reflex to potential (dis)advantages, or a premonition for new grand narratives? Whether it is one or all of them, choice has become a (s)word more encompassing and penetrating than ever conceived because, as not merely a (un)conscious action but a mode of *being*, it can iron, ripple, or rend the socio-politico-cultural fabric of society.

Second, are (do) body and material still *matter* without one another? Objects, technologies, humans, hybrids, and many *Others* in the trans- and post-human market all (become) *matter* as they represent what they are and what they traditionally are not.

Last, transformation—one of the most overworked concepts in various consumer research topics (networks, transformative consumer research, communities, consumer responsibility, etc.) in consumer research (e.g., Epp & Price, 2010; Giesler & Veresiu, 2014; Price et al., 2018; Tian et al., 2014)—has faced its own transformation in relation to transcendence as a characteristic, end state, and ideology espoused by transhumanism. Perhaps, what we need here is a new lexicon with which we can theorize the extremely precarious relationship (balance?) between transcendence and transgression effected by transhuman transformation.

Technologies are not programmed to wait. They advance themselves as actants with an intentionality that is potentially incongruent with that of the human developer. Technologies will favor those in the “right” bodily categories with coordinative minds. We should then house the dual meaning of inclusion: accepting all bodies and respecting all minds.

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Is this Store Liberal (Un)like me? Consumer Response to Company Policies in a Politically Polarized World

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EXTENDED ABSTRACT

Five studies (N = 2,717) demonstrate that consumers use company policies as a proxy for its underlying political ideology but interpret the political motivation behind these policies based on their own political ideology. A government mandate can balance both economic and prosocial goals by neutralizing company political identity.

Companies are increasingly expected to engage in sociopolitical issues. While getting involved in social issues is benign, political ones are risky (Hydock et al. 2020; Weber et al. 2021). Here, we differentiate between Corporate Political Advocacy (CPA; e.g., a store displaying a pride flag) from operational actions that might (inadvertently) align with a political ideology (e.g., mask requirements, being closed on Sunday).

When businesses engage in political advocacy, they do so to overtly support a political issue. Not surprisingly, consumers assign a political orientation to the company, which they believe motivates its actions (Duman and Ozgen 2018). However, company policies that align with a political issue (e.g., requiring masks), may be implemented because business owners think it is the right thing to do (Chin et al. 2013; Gupta et al. 2017), not to advance a political agenda. We argue that when a company implements a policy on a politicized issue, automatic political biases and stereotypes kicks in (Iyengar and Westood 2014) and political associations of the policy will carry on to the store, determining consumers' judgements of the company's political orientation.

Diverging from this automatic response, however, we expect inferences of political motivation to depend on consumers' own political ideology. This is because when consumers' political beliefs align with a company policy, the policy is perceived to be prosocial (i.e., absent of political motives; Brief and Motowidlo 1986) and simply the "right thing to do." However, when they diverge, the company will be inferred to be engaging in political advocacy, ultimately alienating these consumers.

Study 1A (N=607; 54% female) investigated if consumers infer company political motivation from its policies. Participants imagined encountering a storefront: "We Are Open" (control) or "We Are Open. Masks Required" (policy condition). They indicated whether they thought the store was politically motivated and their own political ideology. As expected, a store with a mask policy (vs. no policy) was inferred to be more politically motivated ($p < .001$), which was moderated by participant political ideology ($p = .003$): conservatives inferred a store with a mask policy to be politically motivated, but liberals did not. In Study 1B (N=612; 52% female), we instead measured company political orientation, finding that store with a policy (vs. no policy) was perceived to be more liberal ($p < .001$), but these inferences were not moderated by participants' political ideology ($p = .123$). Studies 1A and 1B establish that company political orientation and political motivation are two distinct constructs.

Study 2 (N=406; 43% female) investigates company political orientation and motivation from its policies jointly. Participants saw a restaurant search page showing that it was closed on Sundays (politicized policy) or Mondays (apolitical policy). The restaurant closed on Sundays (vs. Mondays) was perceived to be more conservative ($p < .001$) and more politically motivated ($p < .001$). Importantly, while differences in perceived political orientation were

independent of participants' own ideology ($p = .63$), inferences of political motivation were moderated by it ($p < .001$). PROCESS Model 14 supported our proposed moderated mediation: perceived conservatism of the restaurant led to inferences of political motivation only when participants were liberal, supporting and extending Study 1.

Study 3 (N=603; 50% female) compares company policy (i.e., banning plastic bags) to CPA (i.e., donations toward climate change legislation). As expected, store policy and CPA were both strong signals of company liberalness ($p = .73$), a judgement uninfluenced by participants' political ideology. Inferred political motivation, however, followed a different pattern. For CPA, inferred motivation was high regardless of participants' ideology ($p = .69$). But, for store policy only conservatives inferred political motivation ($p = .025$).

Study 4 (N=606; 49% female) tests the effect of store policies on purchase intent. Following study 1, storefront sign varied; "We Are Open" (control) or "We Are Open. Masks Required/Recommended" (policy conditions). Liberals rewarded a store with patronage if they had any mask policy ($p < .01$), while conservatives punished it ($p < .001$). Importantly, the pattern of purchase intent followed that of inferred political motivation. While all participants perceived the store as liberal, only conservative participants inferred political motivation ($p < .001$), in turn reducing purchase intent.

Finally, Study 5 (N=407; 48% female) tests whether attributing the policy to other sources would neutralize political inferences. Participants imagined visiting a coffee shop and observed its gender-neutral restroom sign (control). In the external agency condition, the sign cited a state law mandating gender-neutral restrooms. We find that government mandates neutralize perceptions of company political orientation ($p < .001$) and inferences of company political motivation ($p < .001$) and attenuate the influence of participant ideology on inferring motivation ($p = .08$).

We provide insight into consumers' response to politically polarizing company policies and disentangle company's perceived political orientation from its political motivation. We find that while the prior is universal, the latter is moderated by consumers' own ideology and ultimately drives purchase intent.

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Taking the Customer's Perspective and its Influence on Creative Marketing Performance

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EXTENDED ABSTRACT

This research explores the impact of taking the customer's perspective on creative marketing performance. A series of experiments demonstrates that taking a customer's perspective during idea generation tasks has a positive impact on the average creativity of generated ideas, but also a negative impact on the number of ideas generated.

Marketers are constantly tasked with generating ideas: new concepts for promotional campaigns, new positioning strategies that differentiate products, new insights into product design, and new uses for products and services. During the idea generation process, marketers also utilize preferred 'perspectives' (Grapentine 2012; Hoever et al. 2012), and the most espoused perspective is the customer's (Ewer 2021; Hounsla 2017). However, some practitioners encourage the adoption of a self-perspective (Grapentine 2012) or a broader perspective that has no particular individual in mind (Osborn 2012). The important question arises: *How does taking the customer's perspective compare to other perspectives in influencing creative marketing performance?*

We argue four common perspectives are taken by creative marketers during idea generation. First, the *self-perspective* (espoused by Steve Jobs, see Grapentine 2012) asks, "If I were in a given scenario, what could I do?" Second, the *customer-perspective* (attributed to Orison Swett Marden, see Ewer 2021), has marketers take the customer's viewpoint and asks, "If I were the customer in a given scenario, what would I do?" Third, the *untargeted-general-perspective* (supported by Alex Osborn's thinking, see Osborn 2012) asks, "what could be done in a given scenario?" and does not assume a subject. Fourth, the *targeted-general-perspective* (the control in many perspective-taking experiments, see Galinsky and Moskowitz 2000) asks, "What could a customer do in a given scenario?" and focuses on a target customer without explicitly taking the customer's viewpoint.

Drawing upon the creative cognition models of idea generation (Guo and McLeod 2014; Montag-Smit and Maertz Jr 2017; Nijstad and Stroebe 2006), we argue that, in comparison to the other identified perspectives, taking the customer-perspective results in the marketer generating *fewer* ideas, but also ideas that are *more creative*. This is because, in comparison to the other perspectives, the customer-perspective forces a greater focus on data related to the customer (Anderson and Pichert 1978; Grant and Berry 2011; Ku, Wang, and Galinsky 2015; Wills and Moore 1996), which is fewer in amount and harder to recall from memory than mental data accessible through the other perspectives. Because the mental data available while taking the customer's perspective is fewer and harder to recall from memory, cognitive models of idea generation would argue the idea generator should generate fewer ideas before giving up on the task. At the same time, cognitive idea generation research would argue that focusing on customer mental data will restrict access to more common mental data, which will encourage the creative marketer to explore new and less conventional avenues of thought, leading to the generation of more creative ideas (Ward 1994).

Hypothesis 1: In idea generation, taking the customer-perspective results in the generation of fewer ideas than taking the self-perspective, targeted-general-perspective or untargeted-general-perspective.

Hypothesis 2: In idea generation, taking a customer-perspective results in the generation of more creative ideas than taking the self-perspective, targeted-general-perspective or untargeted-general-perspective.

Across three studies including an in-field experiment, an online experiment, and a lab study, we compare idea generation performance (number and creativity of generated ideas) under the customer perspective to performance under the other proposed perspectives (results in Table 1). Study 1, which compares the customer-perspective to the targeted-general-perspective, finds participants taking a customer-perspective generate fewer ideas than participants taking a targeted-general-perspective condition ($t = -2.09, p < .05$) supporting H1. However, comparison of results for the creativity of ideas yields only directional support for H2 ($t = 1.24, p > .10$). An aspect of the Study 1 that may have influenced the creativity results is that specific characteristics were provided for the target customer that was used in the creativity task. Previous research notes example details significantly influence creative performance in idea generation while not influencing the number of ideas generated (Marsh, Landau, and Hicks 1996). Study 2 removes this possible systematic impact by having participants target someone they know and finds statistically significant support for H1 ($t = -2.004, p < .05$) and H2 ($t = 2.25, p < .05$). Finally, Study 3 uses a similar study design to compare idea generation performance between participants taking the customer-perspective and participants taking the remaining two perspectives. Results are consistent that taking the customer's perspective leads to the generation of fewer ideas in comparison to taking the untargeted general perspective ($t = -2.12, p < .05$) and the self-perspective ($t = -3.37, p < .01$), but also to the generation of ideas that are, on average, more creative in comparison to ideas generated while taking the untargeted-general-perspective ($t = 2.63, p < .05$) and the self-perspective ($t = 2.35, p < .05$).

From a theoretical standpoint, this research sheds light on how perspective impacts idea generation; taking the customer's perspective entails a trade-off between creativity and the number of ideas generated. Moreover, the classification of common perspectives in marketing practice allows for the application of perspective-taking literature to creative marketing performance. This paper also makes a methodological contribution by proposing a technique (participants using someone they know as the target in idea generation) to overcome the potential systematic impact of example characteristics on creative performance in experiments.

From a practical standpoint, both the number of ideas (Chandy et al. 2006; Verhage and Van Weele 1981) and the creativity of ideas (Anderson, Potočnik, and Zhou 2014) are important factors in company performance. This paper demonstrates how perspective influences both outcomes. Companies that value generating more ideas over creativity of ideas should encourage creative marketers to an untargeted-general-perspective, targeted-general-perspective or self-perspective. Companies that value creativity of ideas over number of ideas should encourage creative marketers to take a customer's perspective.

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The Effect of Warning Messages on Fake News Diffusion: The Role of Emotions

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EXTENDED ABSTRACT

We conduct a series of four experiment to assess the impact of the presence of a warning message on a fake news posts on emotional reactions and the intention to spread this post. Results confirm the role of emotional reactions but are more mixed regarding the impact of warning messages.

Context of the research

Since 2018, the display of warning messages has developed to respond to the fake news threat (Tandoc, 2019). Previous works have often assumed that reactions to fake news result from deliberative cognitive processing (Bago et al., 2020). However, recent research demonstrated that falling for fake news is better explained by a lack of reasoning (Pennycook & Rand, 2019) or reliance on emotion (Martel et al., 2020).

Therefore, this research aims to assess:

The influence of emotional reactions to a fake news post on the intention to diffuse this post (e.g., share, like, comment);

The impact of the presence of a warning message on the intention to diffuse a fake news post.

Drawing on the Feeling-as-Information (Schwarz, 2000) perspective, we hypothesize that emotional reactions to a fake news post increase the credibility of this post, which in turn increases the intention to diffuse it.

Drawing on the concept of attentional capture (Brady et al., 2020), we hypothesize that the presence of a warning message decreases the emotional reaction to a fake news post, which decreases the post's credibility and then the intention to diffuse it.

RESULTS

Study 1

We selected two posts that followed the release in France of the documentary "Hold-Up on COVID-19" in November 2020.

We used a between-subject design and collected 394 responses (200 control condition, 194 treatment condition).

One-way ANCOVAs showed no significant effect of the treatment on intention to share, like, comment, negative emotions, or credibility. Mediation analysis showed an indirect effect of negative emotions on the intention to share, like, or comment via credibility.

Study 2

The procedure and the measures were the same as in study 1, but we changed the stimulus material. We selected fake news related to vaccines (vs. related to COVID-19 in study 1) and in a "headline format" (i.e., vs. relaying/commenting on a documentary as in study 1).

We collected 811 responses (408 control condition, 403 treatment condition).

One-way ANCOVAs showed a significant effect of the presence of a warning message on intention to share, like, and negative emotions, but not on intention to comment or credibility.

The serial mediation analysis showed an indirect effect of the presence of a warning message on intention to share, like, or comment, via negative emotions and credibility.

Study 3

The study design was similar to studies 1 and 2, with the following changes: we selected three fake news related to COVID-19, as in study 1, but in a "headline format" (i.e., not relaying a documentary as in study 1), and included a more comprehensive array of emotions.

We collected 505 responses (256 control condition, 249 treatment condition).

One-way ANCOVAs showed no significant effect of the presence of a warning message on intention to share, like, comment ($p=.678$), or on emotions and credibility.

The serial mediation analysis shows an indirect effect of the presence of a warning message on intention to share, like, or comment via emotions and credibility.

Study 4

The study design was the same as for study 3, except that we selected a fake-news post not related to COVID-19 and with a "positive" tone.

We collected 172 responses (85 control condition, 87 treatment condition).

One-way ANCOVAs showed a significant effect of the presence of a warning message on intention to share, like, but not comment. One-way ANCOVAs also showed a direct effect of the presence of a warning message on positive emotions and credibility.

The serial mediation shows an indirect effect of the presence of a warning message via positive emotions on intention to share, like, or comment.

CONCLUSION

Most research on fake news rests on the assumption that the spreading of fake news results from deliberate reasoning (Martel et al., 2020; Pennycook & Rand, 2019).

Our results contribute to the understanding of the spreading of fake news in that we extend recent works showing the role of incidental emotions and reliance on emotions (Martel et al., 2020) by showing that the emotional reactions to fake news posts increase the intention to spread fake news posts, directly or via an increase in the post's credibility.

We also contribute to the understanding of the impact of warning messages on the spreading of fake news. When previous works focus on the direct impact of warning messages on credibility, we show that their impact is more on attenuating the emotional reaction to the post than changing readers' beliefs. However, the results are mixed: warning messages decreased the intention to diffuse a fake news post only when the post's topic was not extensively covered in the media (e.g., COVID-related news during the peak of the pandemic).

The main implication of this research is that the goal of initiatives aiming to decrease the dissemination of fake news should be to prevent the readers' emotional engagement in the post. The fight against fake news is more an "emotion battle" than a "cognitive battle".

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Can destigmatizing mental health increase willingness to seek help? Experimental evidence from Nepal

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EXTENDED ABSTRACT

Treatment Gap in Mental health. Mental health disorders are one of the largest global public health problems with over 1 billion living with depression, anxiety, or another form of a mental health issue (Kovacevic, 2021). The rise of COVID-19 not only increased these staggering numbers with rates of major depressive and anxiety disorders increasing by more than 25% worldwide (Santomauro et al., 2021) but also led to an increase in these disorders across the wider population (Lob et al., 2020). Despite these high numbers, many people never seek help, whether it be through formal care such as counsellors and health professionals, or through informal care such as speaking with friends and relatives, leading to severe implications for future health, education, and economic well-being (Braanlund et al., 2017; Flatau et al., 2002; Prince et al., 2020). Roughly 50% of people in need of mental health care worldwide are not receiving treatment (Newsom et al., 2021). The treatment gap for mental health care is higher in developing countries (Semrau et al., 2015; Thornicroft et al., 2017) with 75% of those with mental health issues never seeking treatment (Kovacevic, 2021). Even though mental health resources for severe disorders are scarcer and more expensive, the treatment gap persists at all levels of disorder intensity (Mojtabai, 2010) providing an opportunity to address these gaps at low and moderate levels of intensity, especially in developing countries with limited resources.

Treatment Gap and Stigma. Apart from barriers of limited mental health resources or scarcity of trained mental health professionals that dissuades people from seeking treatment, stigma related to seeking help for mental health issues contributes significantly to the treatment gap. Beliefs related to prejudice against people who have mental illness, and expectations of discrimination against people with mental illness increase the likelihood of treatment avoidance (Sirey et al., 2001). Addressing stigma related to beliefs about mental health issues is one pathway to increasing the use of seeking professional help. Often individuals access services once they have already experienced significant impairment and when these effects may be difficult to reverse (Henderson et al., 2013). Accordingly, it seems that nudges to motivate people with lower and moderate levels of mental health illness to seek professional help might be an effective strategy, especially in developing countries.

Study design using randomized control trial. In this study conducted in four districts in Nepal, we evaluated whether messages to reduce stigma delivered through the phone by an operator and followed up by SMS reminders could motivate people to seek help for issues related to mental health. Additionally, we were interested in understanding whether the

gender of the operator delivering this message influenced people's willingness to seek help. We designed a multi-treatment design where the 2,553 respondents who had agreed to participate in the study were randomly allocated to receive either one of two messages or the control group, where they received no message. Simultane-

ously, we cross-randomized the gender of the operator who would deliver this message to the respondents. We implemented this randomized control trial in collaboration with the Center for Mental Health Counseling Nepal, a non-government organization working in the mental health space in Nepal since 2003.

In the study, an operator conducted a phone survey with the respondent to ask about the incidence of mental ailment, attitudes toward mental health and mental healthcare, and household demographic information. The respondents were then randomly assigned to three conditions: (i) the framing treatment condition or (ii) the celebrity treatment condition, or (iii) the control condition where there was no treatment. When the participants were assigned to either of the treatment conditions, the operator delivered the message (related to the corresponding treatment) to the respondent. In the control condition, the operator did not deliver any message. Then the operator asked all respondents their willingness (on a scale of 1-5) to seek mental healthcare if they were in emotional distress. The operator then provided the respondent with the details of a helpline where they could receive information about free mental health services if they wanted and ended the call. The helpline was live for roughly three months.

First treatment: In the first treatment arm, we change to seek the framing around mental illness by providing information about how mental health problems are common. We mention that mental health problems such as depression, anxiety, feelings of loneliness, and excessive fear and nervousness are widespread. One in seven people worldwide struggles with a mental health or substance abuse problem. We also provide local statistics related to Nepal and inform participants that over 300 million people in Nepal (i.e., more than 13% of the population) experience mental health problems each year. Since stigmatizing attitudes often leads people to categorize certain groups as separate social entity, we predict that these statistics related to the widespread prevalence of mental illness would reduce perceptions of exaggerated social distance from stigmatized individuals (Smith, 2007).

Second treatment. In the second treatment arm, we provide information about a famous actor and comedian in Nepal who had sought help for mental health problems. We attempt to persuade participants to seek mental health treatment by highlighting the struggles of this celebrity who experienced depression (prolonged feelings of sadness, sleeping, eating irregularities, and suicidal thoughts) but recovered with the support of mental health professionals. The message encouraged people to look out for early symptoms of depression and then seek treatment from mental health professionals. Past research has shown that a celebrity's disclosure of mental health issues has motivated people to seek help (Ayers et al., 2014; Dillman Carpentier & Parrott, 2016, Francis, 2018). When people see a celebrity openly sharing similar struggles, they might become more inclined to seek help as it lowers the stigma associated with mental illness. These celebrities influence people who ascribe to their beliefs

about mental illness even without “ever having face-to-face interaction with them” (Brown 2015, p. 264). For example, in the United States, Carrie Fisher’s (best known for her role as Princess Leia on Star Wars) and Michael Phelps’s (Olympic swimmer) disclosures about their mental health illness led to great sharing of mental health issues on social media platforms (Park, & Hoffner, 2020; Hoffner, 2020). We predict that when participants in our study in Nepal become aware of the mental health struggles of their celebrity, it will motivate them to start talking about mental health and have a diagnosis of it.

Lastly, since both these treatments were administrated through the phone, where the surveyor called in participants to respond to a survey related to mental health, we also had an opportunity to vary the gender of the surveyors. Men are often known to seek lesser help for services related to health (Addis & Mahalik 2003; Mahalik, Burns, & Syzdek 2007). For example, men often choose to “tough it out” by avoiding feminine associations with health care (Courtenay, 2000). These health avoidance behaviors for men are robust across age, nationality, and ethnicity (Galdas et al., 2005; Wong et al., 2017). Stigma may be particularly salient for men as they desire to display stereotypical masculine traits of strength; seeking help may mean admitting an inability to handle things independently (Pinkhasov et al., 2010). We predicted that men would not want to admit their inability to handle their “own” issues before another man (vs. a woman). They would see the act of seeking help as a stronger sense of failure in front of another man reducing their willingness to seek help, making it particularly difficult.

Results.

Descriptive Statistics. Mental health disorders are common in Nepal, and the pandemic increased their incidence. In our survey conducted during the second wave of the pandemic, we found that 24% of respondents exhibited moderate to severe symptoms of anxiety or depression, and 21% claimed that their mental health had deteriorated since the pandemic. At the same time, we saw a gap in treatment: only 58% of those with moderate anxiety or depression thought they had a mental health issue. Of those who thought they had a mental health issue, only 33% sought any professional help, and 47% believed they would be judged negatively if they were to seek mental health treatment.

Model Analysis. In our fully specified model, we find that the both our treatments (i.e., the first and the second treatment) significantly increased the willingness to seek help than the control condition. However, we do not find a statistically significant difference in the impact of the two treatments. Moreover, we found that these treatments did not increase the willingness to seek help for those with above median anxiety and depression levels as measured by the GAD-7 and PHQ-8 scales respectively. Rather the treatment effects were being driven by those respondents with below median GAD and PHQ scores. These findings show that for people with low to medium effects, these nudge-type treatments are effective which is consequential in the context of a developing countries that face severe financial constraints. Lastly, we observed when male respondents were assigned to female enumerator their willingness to seek counselling was significantly higher than when they were assigned to male enumerators.

We see a direct impact of these treatments on this outcome; namely, receiving either treatment increases the likelihood that a participant is willing to seek help. Changing intentions is perhaps the most significant contribution of these interventions, as intentions can lead to behavioral changes down the road that may allow those suffering with mental health problems to get the help they need.

Conclusion. In this paper, we find evidence that phone-based interventions to reduce the stigma associated with seeking mental healthcare can be a useful demand-side tool to bridge the treatment gap in mental health care. We contribute to the literature on mental health interventions, stigma, and prejudice in three essential ways. Firstly, we conducted one of the first field experiments using low-cost, scalable text interventions to increase the use of professional mental health services for people who suffer from mental health illnesses of low to moderate intensity. To date, most studies have been conducted in lab contexts. Secondly, we explored the issue of barriers to mental health treatment in a developing world context. While mental health issues are prevalent everywhere, they are especially pervasive in developing contexts with low economic, health, and educational security (Kovacevic, 2021). Thirdly, we make an essential policy contribution by identifying the population segment for whom cost-effective and scalable nudge-like interventions will effectively reduce treatment avoidance. Overall, this paper extends upon work on stigma, prejudice, and mental health treatment.

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Can Power Distance Belief Influence Coupon Redemption?

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EXTENDED ABSTRACT

The present research identifies power distance belief (PDB) as a novel determinant of coupon redemption. In a series of studies, we find that those who are high (vs. low) in PDB are less likely to use coupons and examine implicit theories of change as a key mechanism underlying the effect.

The present research identifies consumers' power distance belief (PDB) as a novel determinant of coupon proneness and examines implicit theories of change (Dweck, Chiu, and Hong 1995) as a key underlying mechanism. We further test the role of perceived efficacy of price haggling as a managerially relevant boundary condition for the focal effect. We propose that PDB negatively predicts coupon proneness, and this relationship is mediated by an endorsement of an entity (vs. incremental) theory of change.

First, high (vs. low) PDB cultures tend to have clearly defined rules and have less tolerance for uncertainty (e.g., Hofstede 2001). High (vs. low) PDB individuals also tend to be hierarchical and are less open to diverse perspectives (Hofstede 2001), which restricts cognitive flexibility and perceived changeability. Moreover, people high (vs. low) in PDB tend to have a greater need for decisiveness (Hofstede 2001) and use more heuristics to make quick decisions. Thus, those high (vs. low) in PDB may be more likely to endorse an entity (vs. incremental) theory.

Second, because entity (vs. incremental) theorists expect less change in general, they are more likely to see prices as relatively stable and to be skeptical of price promotions. Entity (vs. incremental) theorists also prefer the status quo to changes (Morton et al. 2009) and may react more negatively to coupons because they are less likely to welcome change. In addition, entity (vs. incremental) theorists are more likely to make the fundamental attribution error and infer brand dispositions from external cues (Huang et al. 2017). Brands that offer coupons are perceived as of relatively low quality (Raghubir and Corfman 1999), and entity (vs. incremental) theorists may be more likely to stigmatize brands that offer coupons. Hence, people high (vs. low) in PDB, who are more likely to be entity (vs. incremental) theorists, may be less coupon prone.

We also examined the role of perceived efficacy of price haggling as a boundary condition for the effect of PDB on coupon proneness. We expected that when the perceived efficacy of haggling is enhanced (compared to a control condition in which this perception is not altered), the tendency of individuals who are high (but not low) in PDB to use coupons would increase.

STUDY 1

Participants (N = 280) completed a survey that included a \$1.00 coupon redeemable at a local cafe. We manipulated PDB using an ad with a tagline and a relevant image along with the \$1.00 coupon. High (vs. low) PDB people redeemed fewer coupons. A chi-square analysis revealed that PDB significantly predicted coupon redemption, $\chi^2(1) = 4.03, p = .045$.

STUDY 2

Participants (N = 158) completed a survey in which coupon proneness was measured using a scenario about a coupon available for a laptop computer. Participants reported the likelihood of redeeming the coupon using three items ($\alpha = .81$). PDB was measured by a 5-item scale (Yoo et al. 2011; $\alpha = .86$). We measured the endorsement of an entity (vs. incremental) theory using a 9-item scale (Wan et al. 2014). The results showed that the indirect effect of PDB on coupon proneness through entity theory was significant (95% CI, -.1811, -.0303).

STUDY 3

A total of 208 participants in a 2 (PDB: high vs. low) \times 2 (perceived efficacy of price haggling: enhanced vs. unchanged) design. Participants wrote three reasons either supporting (high PDB) or opposing (low PDB) a statement about social inequality (Zhang et al. 2010). They then read a consumer report which described statistics about the success rate of price haggling. In the haggling efficacy enhanced condition, the report indicated that the success rate is high. In the control condition, participants did not receive this description. They then read a scenario about a coupon available for a textbook and reported the likelihood of redeeming the coupon.

A significant interaction between PDB and the haggling manipulation on coupon proneness emerged ($F(1, 204) = 8.04, p = .005$). The coupon proneness of high PDB participants increased in the haggling efficacy enhanced condition, compared to that in control condition ($M_{\text{enhanced}} = 5.15$ vs. $M_{\text{unchanged}} = 3.29, F(1, 204) = 26.40, p < .001$). However, this manipulation did not influence the coupon proneness of low PDB individuals ($M_{\text{enhanced}} = 4.70$ vs. $M_{\text{unchanged}} = 4.32, F(1, 204) = 1.02, p = .31$).

Practical implications

Marketers who issue coupons should situationally lower consumers' PDB as a way of enhancing coupon redemption. Further, due to the role of the endorsement of implicit theories of change, high (vs. low) PDB consumers who are less coupon prone, should be presented with situational cues that enhance the incremental theory of change in order to increase their coupon proneness. Such efforts can be made with regard to price by contextual cues that highlight how successfully consumers can price haggle.

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No Comments (From You): Understanding the Interpersonal Consequences of Disabling Social Media Comments

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EXTENDED ABSTRACT

Many social media platforms allow users to disable the comment sections, as doing so is believed to improve mental health outcomes. However, a Twitter dataset and four experiments reveal that observers form more negative impressions of users who disable their comments, an effect driven by lower perceived authenticity.

For many consumers, social media is an inextricable part of daily life. While social media offers some social connection benefits (Lui et al. 2016), it has been widely criticized for negatively impacting mental health (Midgley et al. 2021). Accordingly, many social media companies have devised various strategies to mitigate the potential harm caused, including giving users the ability to disable comments on their posts. As social media comments can be filled with negativity (Lee 2018), limiting comments should presumably improve users' mental well-being.

While disabling comments may offer intrapsychic benefits, it remains unclear whether this decision could have unexpected interpersonal ramifications. In the current research, we posit that observers will form negative impressions of users who disable their comments and find their recommendations less trustworthy. Social media is conducive to fostering parasocial interactions (Aw and Chuah 2021), whereby consumers perceive other users, often strangers, as intimate conversational partners and engage in give-and-take exchanges with them (Dibble et al. 2016). By disabling comments, users remove a critical communicational channel that makes such interactions possible, disrupting the illusion of intimacy and undermining perceptions of authenticity. As a result, consumers will form negative impressions of such users.

Understanding the impact of disabling comments is critical to both consumer well-being and marketing policies. Mental illness is rising globally (Goodwin et al. 2020), yet many avoid addressing this issue due to the stigma surrounding mental health (Corrigan 2000). As such, it is critical to first understand how actions aimed at protecting one's mental health could be perceived. Additionally, given that firms spend billions annually on influencer marketing (Statista 2021), it is important to understand how influencer decisions (e.g., disabling comments) could impact these partnerships. We examine our predictions across a Twitter dataset and four experiments.

To explore reactions to the disabling of social media comments, we conducted a pilot study on Twitter. We scraped 404 comments from Twitter that mentioned the terms "turned off comments" as well as 451 tweets randomly selected from its livestream as a baseline condition. We then analyzed the amount of negative sentiment in each group of tweets. Tweets from our treatment group contained significantly more negative sentiment compared to the control group ($p < .001$).

We next conducted a series of experiments for greater internal validity. In study 1, participants ($N=187$) viewed a social media post from Aileen, a purported influencer whose comments were either enabled or disabled. After viewing the post, participants described their feelings towards Aileen, which were analyzed for negative sentiment and coded by two independent coders for overall sentiment and perceived authenticity. Finally, participants self-reported their overall impressions of Aileen. The sentiment analysis, independent coder ratings, and self-reported impressions all yielded the same pattern of results—participants formed more negative impressions of Aileen when she disabled (vs. enabled) comments on her account (all $p < .024$). Additionally, while 18.8% of participants indicated that Aileen was authentic when her comments were enabled, only 6.6% did so when her comments were disabled ($p = .044$).

Study 2 ($N=364$) examines the downstream marketing consequences of disabling comments using a 2-cell (comments: enabled, disabled) design. Participants first viewed a post from Aileen featuring a paper towel brand. Next, participants rated their overall impressions of Aileen before sampling the actual paper towels featured in her post. Finally, they rated the paper towel's quality and their interest in additional recommendations from Aileen. As predicted, participants formed more negative impressions of Aileen when her comments were disabled ($p < .001$). Mediation analyses revealed that overall impressions of Aileen mediated interest in future product recommendations ($CI_{95}[-.3310, -.0785]$) and product quality perceptions ($CI_{95}[-.5404, -.1702]$).

Study 3 ($N=610$), which was pre-registered, examines the psychological mechanism using a 3-cell (comments: disabled, enabled, control) design. Participants viewed a social media post from Caleb, an influencer. The first two conditions mirrored previous studies, while the control condition did not draw any attention to his comment status. Participants rated their overall impressions of Caleb, their interest in his product recommendations, and perceived authenticity. When Caleb's comments were disabled, participants formed more negative impressions ($p < .001$), expressed lower interest in his product recommendations ($p < .036$), and perceived him to be less authentic ($p < .004$) compared to the other two conditions, which did not differ from one another ($p > .737$). Mediation analyses revealed that perceived authenticity mediated impressions ($CI_{95}[.1856, .6655]$) and product recommendation interest ($CI_{95} [.2142, .7600]$).

Our theorizing predicts that at baseline, observers make competing attributions about the decision to disable comments. On one hand, disabling comments will lower perceptions of authenticity, but on the other, this decision reflects attempts to protect one's mental wellbeing. Given the automaticity of authenticity judgments (Fiske et al. 2007), we contend that authenticity attributions typically trump attributions of mental health protection unless mental health concerns are made salient, in which case the negative attributions of disabling comments are mitigated.

Study 4 ($N=606$), which was pre-registered, examines this prediction using a 2 (comments: disabled, enabled) x 2 (mental health: salient vs. not) design. Participants first read an article discussing Instagram's decision to give users the ability to disable comments, which was framed as either protecting users' mental well-being or simply as a new feature, before viewing a post from Rachel, an influencer. They then rated their overall impressions and her perceived authenticity. Results revealed interactions for impressions ($p = .011$) and authenticity ($p = .064$). At baseline, replicating prior studies, participants formed more negative impressions of Rachel when she disabled comments ($p < .001$), but this effect was mitigated when mental health concerns were made salient ($p = .214$). Moderated mediation analysis revealed that perceived authenticity mediated impressions at baseline ($CI_{90} [.1015, .4351]$), but not in the mental health condition ($CI_{90} [-.1423, .1727]$).

Our research reveals that observers form more negative impressions of social media users who disable their comments and express lower interest in their product recommendations, an effect driven by lower perceived authenticity. Importantly, this phenomenon is attenuated when mental health concerns are made salient. In sum, despite widespread knowledge that social media comments can negatively impact mental well-being, we find that steps designed to address this issue (e.g., disabling of comments) can be judged quite harshly.

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Forgoing Consumption of Products That Others Cannot Access

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EXTENDED ABSTRACT

Offering products accessible to a wider customer base may be beneficial for companies, as perceptions of brand inclusivity may improve consumer brand attitude and increase purchase intentions. In five studies, consumers who can access a consumption experience forgo this when aware that other consumers lack access to the same experience.

Prior research has documented many instances in which consumers deliberately pursue exclusive brands that are inaccessible to others in order to attain higher status and superiority over others (Berger and Ward 2010; Dubois and Ordabayeva 2015). However, recent research has found that some consumers who are able to afford exclusive brands, for example by purchasing luxury products, feel inauthentic consuming such products (Goor et al. 2020). In addition, the trend for more inclusivity is rising in the marketplace as consumers want brands to satisfy their needs as well as reflect their values (Angus and Westbrook 2020). The present research investigates whether consumers forgo consuming products or experiences they want when others lack access to those same products and experiences.

We define forgoing consumption as consumers' decision to intentionally abstain from a desired consumption experience (acquisition, utilization, or even product disposition). We suggest that consumers forgo a desired consumption experience when they are aware that another consumer lacks (vs. has) access to the same experience. We predict that this effect will be mediated by anticipated guilt. We argue that consumers forgo consumption because they project their desire for the purchase onto others and infer that the others will experience negative emotions due to their lack of access (Luangrath et al. 2020; Schkade and Kahneman, 1998; Van Boven and Loewenstein 2003; Wilson et al. 2000). The negative emotions attributed to others who lack access may induce anticipated guilt, which in turn increases a consumer's likelihood to forgo consumption. We further predict that the forgoing consumption effect will be moderated by closeness to the other consumer, such that the likelihood to forgo consumption is higher for a close (vs. distant) other. We also suggest that a brand that makes its products inaccessible to some consumers will be evaluated less positively.

A pilot study (N=144) revealed that 72.2% of the participants recalled having forgone consuming something they wanted when others lacked access to the same experience. Study 1 (N=301) tested whether i) consumers forgo a purchase when others lack access and ii) they are more likely to forgo depending on their closeness to the other person. Participants imagined browsing a clothing store, liking a sweater, and thinking of buying it. In a friend (stranger) condition, a friend (another shopper) mentioned they would love to buy that same style of sweater but could not afford it. In a control condition, no information about another person was provided. Contrast analyses revealed that participants were less likely to buy the sweater in the two social conditions (friend: $M = 4.35$, $SD = 1.75$; stranger: $M = 4.73$, $SD = 1.38$) than in the control condition ($M = 5.33$, $SD = 1.13$; $t(257.88) = 4.99$, $p < .001$, $d = -.58$). Purchase intention was marginally lower when the friend (vs. the stranger) lacked access ($F(2, 298) = 11.81$, $p = .061$, $d = -.24$), supporting our prediction.

Study 2 (N=205) tested whether consumers were more likely to forgo a superior option (calling an Uber) when a close person versus

a stranger lacked access to the same service and therefore used an inferior option (taking a bus). Participants imagined leaving their office, thinking about getting an Uber, and overhearing another person (either a friend or a stranger) telling someone on the phone that they were taking the bus because they had financial constraints. More participants forwent choosing an Uber when a close friend (65%) lacked access, compared to a stranger (48%) ($\chi^2(1) = 6.04$, $p = .014$). The result showed an overall higher likelihood rate of participants forgoing an Uber (56.6%) than choosing it (43.4%).

Study 3 (N=207) investigated anticipated guilt as a mechanism. Participants imagined that they and a gluten-intolerant friend were at a bakery thinking about ordering a donut. In the access (no access) condition, gluten-free donuts were available (were sold out). Participants in the access condition were more likely to order a donut ($M = 5.53$, $SD = 1.76$) than those in the no access condition ($M = 3.57$, $SD = 2.13$; $F(1, 199.63) = 52.08$, $p < .001$; $d = 1.00$). Anticipated guilt mediated the effect of accessibility on participants' likelihood to order the donut (indirect effect = -1.42, $SE = .22$, 95% CI = -1.87 to -1.03, 10,000 bootstrap resamples).

Study 4 (N=400) tested whether, in both a private and public consumption setting, consumers forwent buying something they wanted when aware that other consumers lacked (vs. had) access to the same consumption experience, anticipated guilt as a mechanism and consumers' attitude toward a brand. This study was a 2 (access vs. no access) by 2 (private vs. public setting) between-subjects design. They imagined they and a close friend had heard about a brand of jeans. In the private (public) condition, they went to the jeans store by themselves (with their friend). When deciding whether to buy a pair of jeans, they (their friend) saw another pair and thought about their close friend who would love them (said they would love them). In the access (no access) condition, the brand offered jeans in their friend's size (a limited array of sizes). As expected, planned contrasts revealed that in the public setting, participants in the access condition were more likely to buy than those in the no access condition ($M_{access} = 5.25$, $SD = 1.67$ vs. $M_{no-access} = 3.66$, $SD = 1.93$; $F(1, 396) = 43.56$, $p < .001$; $\eta_p^2 = .10$). Anticipated guilt mediated the interaction effect between accessibility and setting on participants' likelihood to buy ($\beta = -.62$, $SE = .18$, 95% CI = -1.00 to -.27). Participants in the no access condition ($M = 3.66$, $SD = 1.30$) had a less favorable attitude toward the brand than those in the access condition ($M = 5.13$, $SD = 1.18$).

Overall, our studies offer a novel perspective on nonconsumption: by showing that other consumers' lack of access to a desired consumption experience may undermine consumers' intention to engage in the same experience, leading them to forgo consumption.

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The Augmenting Effect of Low-Pitched Music on Perceived Product Luxuriousness

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EXTENDED ABSTRACT

This research demonstrates that, compared with high-pitched music, low-pitched music used in a commercial can augment consumers' perceived luxuriousness of the advertised product. This effect occurs because low- (vs. high-) pitched music can evoke a sense of formalness, which in turn increases the luxury perception of the advertised product.

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Post Hoc Explanations and Consumer Response to Algorithmic Decisions

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EXTENDED ABSTRACT

Algorithms' lack of transparency is often blamed for algorithm aversion in consumers. Four experiments demonstrate that algorithmic explanations can improve perceptions of transparency, attitudes, and behavioral intentions. The most effective explanations highlight concrete and feasible steps consumers can take to positively influence their future decision outcomes.

Algorithms are capable of making or assisting with critical decisions in many areas of consumers' lives. Nevertheless, many people distrust algorithmic decisions. One concern is their lack of transparency. In particular, machine learning algorithms are termed "black boxes" because one can only see their output, not the underlying mechanisms. To address the problem, organizations have started providing post-hoc explanations of the logic behind algorithmic decisions. However, it remains unclear whether explanations can address consumer concerns around fairness and accountability. We focus on *two types of explanations* identified by Binns et al. (2018):

- **Sensitivity:** How much each input variable would have to change to change the outcome (e.g., "If you drove 10 fewer miles per month you would qualify for a lower insurance rate").
- **Case-based:** Presents a case, similar to the consumers', from the data used to inform the decision (e.g., "In a similar case to yours someone who drove 850 miles per month was involved in an accident").

Both explanations provide information designed to improve transparency. However, this project seeks to test the hypothesis that compared to case-based (or no) explanations, sensitivity explanations will generate more positive reactions to algorithmic decisions and the organizations deploying them. Sensitivity explanations are more selective and contrastive than case-based explanations, filtering and highlighting decision-relevant variables, and providing counterfactual comparisons to clarify a variable's causal role. Ultimately, sensitivity explanations may be more useful to audiences, leading to more positive reactions towards the explanation (Hilton and Slugoski, 1996; Lombrozo, 2007).

Across all four studies, participants were recruited from the crowdsourcing platform Prolific Academic. In Study 1, participants ($n = 443$) were randomly assigned to one of 3 conditions: no explanation vs. case-based explanation vs. sensitivity explanation, in a between-subjects design. After reading a sample scenario, they read the target scenario, about a customer receiving a poor rate from a car insurance company, which used an algorithm to determine customers' insurance prices based on certain attributes (Binns et al., 2018). Participants then saw one of the explanation conditions. Lastly, participants rated the decision's transparency, their overall positive attitudes towards the company, and intentions to do business or recommend the company. Versus a case explanation, the sensitivity explanation increased perceived transparency, positive attitudes, and intentions ($ps < .001$).

Study 2 examined whether the actionability of sensitivity explanations content impacts its efficacy (e.g., "If you were aged 45-55 you would qualify for a better rate"). Participants ($n = 601$) were randomly assigned to one of four conditions (no explanation vs. case-based vs. sensitivity-actionable vs. sensitivity-non-actionable)

in a between-subjects design. Replicating Study 1, the actionable sensitivity explanation increased transparency, positive attitudes, and intentions relative to all other explanation types. Although any explanation – including non-actionable sensitivity – increased transparency, only the actionable sensitivity explanation increased attitude, and behavioral intentions (all $ps < .001$).

Study 3 tested the generalizability of our findings across multiple domains using the same design and measures as study 2 but applied across four new scenarios, within-subjects. Each of $n = 593$ participants responded to all four new scenarios (credit card application, parole decision, admission to a professional training program, and health insurance pricing). While non-actionable sensitivity explanations were viewed as more transparent than no explanation, attitudes and intentions were *lower* for the non-actionable sensitivity explanations than the no explanation conditions.

Study 4 ($n = 764$) investigated the moderating effect of outcome valence on explanations' effectiveness in a 2 (no vs. sensitivity explanation) \times 2 (positive [good rate] vs. negative outcome [bad rate]) between-subjects design. Across perceived transparency, fairness, and purchasing intentions, significant explanation \times outcome interactions were detected ($ps < .001$). When the outcome was unfavorable, participants in the sensitivity explanation condition (compared to no explanation) reported more transparency, positive attitudes, and intentions. When the outcome was favorable, the effects of explanation on attitude and intention were nullified.

While algorithms can make complex decisions in ways that are both accurate and fair, consumers are naturally mistrustful of algorithmic decisions when the decision-making process is opaque. Post-hoc explanations can dramatically increase the acceptability of algorithmic decisions, particularly when the outcome of the decision is not what the consumer was hoping for. However, not all explanations are equally effective. Explanations succeed by helping the consumer understand the decision process and illuminating possible avenues for improving future decision outcomes. Therefore, organizations that rely on algorithmic decisions should employ sensitivity explanations that clarify the criteria used and the exact amount of behavioral change required to achieve a more desirable outcome.

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Consumer knowledge hiding practices on digital platforms

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EXTENDED ABSTRACT

Exploring knowledge exchange considerations and enactments among consumers in a competitive practice (fishers), we identify three knowledge hiding practices: deliberate concealment, outright lying, and shading. We further discuss the mechanisms behind these important and under-researched practices based on how fishers negotiate tensions between forms of self-concern and community affiliation.

We investigate how consumers manage and exchange knowledge within a social practice. Social practices are routinized ways of doing that are key components of social life, from activities like walking or driving, to specific hobbies like skiing or fishing (Schatzki, 2002; Woremann and Rokka, 2015). Practices are enacted by people who integrate various practice elements of material setup, competences (bodily skills and routines), and cultural and personal understandings when practices are performed (Shove, Pantzar and Watson, 2012). People participate in practices in diverse ways as they are differentiated on many dimensions, yet everyone, no matter their level or degree of habituation or expertise, must acquire, use, and manage knowledge. Consumers exchange knowledge to communicate practice understandings, procedures, and objectives (Schau, Muñiz and Arnould, 2009); to acquire and share practice-specific skills and knowhow (Thomas and Epp, 2019); to learn “proper” practice performances from experienced practitioners, and about the moral parameters of these performances (Schau et al., 2009); to recruit other participants (Warde 2005); and to foster connections (Canniford and Shankar, 2013). However, a gap exists in our knowledge about what happens when consumers may not willingly provide their knowledge to others in [often competitive (Tumbat and Belk, 2011)] practices.

We explored knowledge exchange considerations and enactments among consumers in a competitive practice: fishing. Data are drawn from phenomenological interviews (Thompson, Polio, and Locander 1994) with 29 US and Canadian fishers. Informants were 93% male, between 21 and 56 years of age, with most having some college education or higher. Interviews ranged from 27 to 61 minutes (average 41) and were conducted via Skype, Zoom or phone. Two-month netnographic analyses of two fishing subreddits were also conducted – r/FishingForBeginners (30,500+ members, 546 threads and 12.2 average comments per thread) and r/flyfishing (134,000+ members, 409 threads and 15.4 average comments per thread). Groups with beginners and practitioners of highly technical fly fishing were selected as members of both are likely seek assistance from others.

In our findings, we identified three knowledge hiding practices: deliberate concealment, outright lying, and shading. First, consumers conceal knowledge for many personal reasons. While some of our respondents show a humorous spin on concealing, some deliberately conceal for personal gain and satisfaction. Fishers also deliberately conceal knowledge based on feelings of ‘ownership’ (Jusilla et al., 2015). Privileged knowledge is treated as a personal asset, based on it being hard-earned or akin to intellectual property to be actively protected. Fishers also conceal to protect collective resources like the shared natural environment. Second, consumers lie to protect or enhance practice experiences. In fishing, social and activity norms are forever in tension – to lie to others is typically deviant and a violation of social norms, yet some consider that within the framework

of fishing’s guiding norms it is acceptable to protect resources. For some, lies are limited to acceptable, non-threatening matters. Yet, while they interpret their harm as being mild, lying has impact. When deliberately concealing knowledge, one chooses to simply *not to be helpful* to others (e.g., not revealing fishing spots), but a lying fisher chooses to be *patently unhelpful* to others at the same time as they help themselves (Bok, 1999). Finally, shading is a neologism that combines *sha-ring* and *hi-ding*. Shading practices have elements of sharing and hiding intertwined as consumers reveal knowledge while they simultaneously hide it. Among shading, we further identified *audience-related shading* (i.e., when consumers calculate *with whom* to share and *from whom* to hide their knowledge), *content-related shading* (i.e., when consumers share some knowledge while hiding another piece at the same time with a specific calculation on *what* to share and hide), and *process-related shading* (i.e., when consumers focus on *how* they present knowledge based on their understanding of how different audiences will receive and decipher the content differently).

In this research, we discuss the mechanisms behind these important and under-researched practices based on how fishers negotiate tensions between forms of self-concern and community affiliation. Fishing is a context with evident resource scarcity, and this impacted the willingness of some to hide knowledge through concealment, lying, or some manner of shading. Knowledge is valuable and consumers weigh this in relation to myriad personally determined goals and how these related to any sense of community affiliation. We saw how this differed across consumers as for some, requested knowledge was to be covetously protected, yet others may distribute it strategically, while others again would give without encumbrance.

In conclusion, we introduce consumer knowledge hiding practices to consumer research. We encourage researchers to extend this new research direction to further understand its scale, scope, diversity, and impact.

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Consumer Aversion to Digital Mental Health Tools: The Role of Negative Self-Perceptions

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EXTENDED ABSTRACT

Research on consumer well-being has primarily focused on promoting physical health (e.g., healthy eating and exercise) and less on promoting mental health. We document consumer aversion toward digital wellness apps for improving mental (vs. physical) wellness and identify an intervention to increase the adoption of digital mental wellness tools.

The current research evaluates consumer interest in digitized mental wellness products (e.g., mobile health applications; Mohr et al. 2017) – an emerging industry in the wellness space – that is far less researched than consumer interest in physical wellness products (e.g., unhealthy foods and calorie tracking apps; Donnelly et al. 2017; Haws, Reczek, and Sample 2017). While mental wellness applications promote themselves as an effective alternative to in-person treatment with which certain stigma is associated (e.g., weak; Corrigan 2004), we demonstrate a consumer aversion toward mental (vs. physical) wellness apps consistent with what occurs when seeking mental health support from a human. This is because, while digital applications may be able to mitigate *social*-stigma for seeking mental health support, they may elicit *self*-stigma by sending a negative self-signal that one is ineffective at taking care of oneself. Four studies document consumer aversion toward mental (vs. physical) health apps and the underlying role of negative self-perceptions. We further show that these perceptions are miscalibrated and propose an intervention that can help mitigate the barrier to encourage adoption.

Study 1 ($n = 821$ Mturkers) employed a 2 (agent type: human vs. AI) \times 2 (wellness type: mental vs. physical) between-subjects design. Participants read about an app that connects users with a “[AI-powered] coach” for mental or physical wellness and indicated their download interest on a seven-point scale. A two-way ANOVA revealed a significant main effect of wellness type ($M_{\text{physical wellness}} = 4.00$ vs. $M_{\text{mental wellness}} = 3.72$; $p = .032$), a non-significant main effect of agent type ($M_{\text{human coach}} = 3.83$ vs. $M_{\text{AI coach}} = 3.90$; $p = .55$), and, as hypothesized, a non-significant interaction ($F(1, 817) = 1.20$, $p = .27$; Table 1). Thus, contrary to the existing notion that digitized mental health tools may increase interest, consumer aversion toward mental health support is robust to in-person and digital formats.

Study 2 ($n = 195$ undergraduates) explores the underlying role of negative self-perceptions. Participants read the same scenario used in the “AI” conditions in study 1 and indicated their download interest and self-perceptions of using the app on five positive (independent/strong/self-sufficient/capable/effective in taking care of myself; reverse-coded) and negative (dependent/pathetic/pitiful/incapable/ineffective in taking care of myself) items ($= .91$) on a seven-point scale. As hypothesized, download interest was lower ($M_{\text{mental wellness}} = 3.33$ vs. $M_{\text{physical wellness}} = 4.28$; $F(1, 193) = 16.81$, $p < .001$) and (2) negative self-perceptions were higher ($M_{\text{mental wellness}} = 3.37$ vs. $M_{\text{physical wellness}} = 2.82$; $F(1, 193) = 10.66$, $p = .001$) for a mental than a physical wellness app. A mediation analysis using PROCESS model 4 (Hayes 2017) confirmed the underlying role of negative self-perceptions (index = $-.3385$, 95%CI [$-.5820$; $-.1362$]).

Study 3 demonstrates that consumers overestimate how negative they will feel using a mental wellness app. In a 2 (between-subjects factor: mental vs. physical wellness) \times 2 (within-subjects factor: pre-consumption perceptions vs. post-consumption perceptions). All participants read about an app that connects them with

a mental (vs. physical) AI-powered health coach (“Alobot”) and indicated their *pre*-consumption self-perceptions ($= .94$) and *pre*-consumption performance evaluation of the app (e.g., “Alobot seems capable in resolving issues related to my emotional [physical] health”) on seven-point scales. Participants then interacted with the Alobot health coach. In both conditions, Alobot was programmed to provide five self-affirmation tasks and five goal setting tasks (closely resembling actual digital health tools; Martinez-Martin 2020). For each task, participants could click “skip this task” to indicate their (dis)engagement. Afterwards, all participants indicated their *post*-consumption self-perceptions ($= .95$) and *post*-consumption performance evaluations ($= .92$).

As expected, a one-way ANOVA on number of tasks revealed that participants engaged in more tasks in the physical wellness ($M = 4.50$) versus mental wellness condition ($M = 4.02$, $F(1, 404) = 10.34$, $p = .001$). Next, we examined the differences in self-perceptions in a mixed ANOVA with app type as a between-subjects factor and timing as 2-level within-subjects factor. Supporting our miscalibration hypothesis, pre- and post-consumption self-perceptions differed significantly as a function of the app type (Wilks’ Lambda = .99; $F(1, 404) = 3.92$, $p = .048$; see Figure 1): In the mental wellness condition, participants’ pre-consumption negative self-perceptions ($M = 2.90$) were significantly higher than what they actually experienced (post-consumption; $M = 2.53$). Conversely, with physical wellness, participants were accurate in their pre-consumption predictions ($M = 2.23$) and actual experience (post-consumption; $M = 2.07$).

There was no difference in pre- and post- performance judgments in the mental wellness ($M_{\text{pre-consumption}} = 4.21$ vs. $M_{\text{post-consumption}} = 4.32$) and physical wellness conditions ($M_{\text{pre-consumption}} = 4.77$ vs. $M_{\text{post-consumption}} = 4.68$; Wilks’ Lambda = .99, $F(1, 404) = 2.87$, $p = .09$), ruling out the possibility that aversion toward mental wellness app is driven by the differential performance expectations of these apps.

Study 4 ($n = 806$ MTurk workers) sought to mitigate consumer aversion of mental wellness apps by correcting consumers’ miscalibration in a 2 (miscalibration correction: present vs. absent) \times 2 (wellness type: mental vs. physical) between-subjects design. Participants in the calibration present (vs. absent) condition first read an article describing the experience of users of mental wellness (vs. shopping) apps, who, “despite initial doubts,” felt competent in taking care of (vs. finding the best product for) themselves when using the app. They then read about an app “AbleTo” designed for improving mental (vs. physical) wellness and indicated their interest on the same measures used in prior studies. As hypothesized, a two-way ANOVA revealed a significant interaction between the correction provision and wellness type ($F(1, 802) = 3.89$, $p = .049$): While the aversion toward the mental wellness app replicated in the “correction-absent” condition ($M_{\text{physical wellness}} = 4.13$ vs. $M_{\text{mental wellness}} = 3.50$; $p < .001$), the effect was mitigated in the “correction-present” condition ($M_{\text{physical wellness}} = 4.28$ vs. $M_{\text{mental wellness}} = 4.14$; $p = .42$). Taken together, the current work contributes to the health persuasion and consumer welfare literature by exploring consumer response to digitized mental health service.

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Trust Ratings Disguised as Satisfaction Ratings: Why Sharing Economy Ratings are Nearly Always Positive, and How to Fix the Bias

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EXTENDED ABSTRACT

With online, lab, and field experiments, we explore what leads to a positive bias in sharing economy ratings. We further test three ways to reduce the bias by making it easier for consumers to determine when and why their expectations were missed, including whether providers are trustworthy.

Ratings and reviews are a critical source of trust in the peer-to-peer (P2P) sharing economy because exchanges take place between strangers and without strict screening. But despite a high variance in quality on P2P platforms like Airbnb or Uber, nearly all ratings are positive. For example, Zervas et al. (2021) find that 94% of Airbnb properties are rated 4.5 stars or higher, compared to 26% for TripAdvisor, and Airbnb ratings are higher for properties that are cross-listed on both sites. Evidence from ratings of cross-listed properties, and comparisons of public and private feedback, suggests that P2P ratings are biased (Filippas et al., 2018; Fradkin et al., 2021; Zervas et al., 2021). This is important because if ratings don't reflect performance, it erodes trust, and users may leave the platform (Nosko and Tadelis, 2015).

Consumers may be reluctant to give negative reviews because of the social nature of P2P exchanges and a desire to not harm a 'peer' provider (Filippas et al., 2018; Proserpio et al., 2018). Building on this research, we argue that consumers feel that ratings are more important to peer (vs. commercial) providers because peer providers have few other sources of online reputation. Because ratings are so important, consumers are reluctant to give a negative rating unless it can be easily justified.

Service evaluations are often described using expectancy disconfirmation (Oliver, 2010). The disconfirmation evaluation (whether the experience is better, worse or same as expected) leads to feelings of *satisfaction*, and satisfaction drives word-of-mouth (e.g., Brown et al., 2005). We propose that disconfirmation also affects *trust* evaluations (i.e., reliability and integrity; Morgan & Hunt, 1994), because providers that meet expectations demonstrate they can be trusted to fulfill their commitments. We argue that P2P ratings are driven by trust in addition to satisfaction. Satisfaction is concerned with needs fulfillment, which is somewhat subjective to individual tastes, and may be more difficult to justify. But a consumer can justify a negative evaluation if a provider fails to deliver as promised, especially if they think the provider lacks integrity and intended to deceive.

A Pretest (n=192) confirmed that consumers of P2P (compared commercial) services feel their rating is more important to providers ($F(1, 190) = 24.76, p < .01$), and feel more strongly that they may need to justify the rating ($F(1, 190) = 3.19, p < .10$).

Study 1 (n=127) compared P2P and commercial service evaluations. A confederate posing as a provider for a commercial or a P2P food service invited participants to sample a cookie and to provide a rating for the company website. From PROCESS model 4, the indirect effect of disconfirmation on rating, through satisfaction, was significant for both the commercial ($\beta = .39, 95\% \text{ CI: } .14, .62$), and P2P conditions ($\beta = .39, 95\% \text{ CI: } .19, .66$) but there was an additional *direct* effect of disconfirmation in the P2P condition ($\beta = .28, 95\% \text{ CI: } .06, .51$).

Study 2 (2x2 design; n = 385) probed the role of *trust* in P2P evaluations. Participants viewed an accommodation listing

on "HotelEasy.com" (a commercial site) or "HomeEasy.com" (a P2P site). The listing description was *accurate* or *inaccurate*. Next, participants viewed pictures of their actual accommodation "experience" which matched the *accurate* condition. Participants provided a rating. From PROCESS model 15 (integrity and satisfaction were mediators) the *direct* effect of disconfirmation on rating was significant in the P2P ($\beta = .15, 95\% \text{ CI: } .06, .24$) but not the hotel condition ($\beta = -.04, 95\% \text{ CI: } -.13, .05$). The indirect effect through *integrity* was also significant for P2P ($\beta = .09, 95\% \text{ CI: } .01, .17$) but not the hotel condition ($\beta = .01, 95\% \text{ CI: } -.07, .10$). Finally, there was a significant interaction ($\beta = -.13, \text{ SE} = .07, p = .06$), such that the indirect effect through *satisfaction* was stronger in the hotel condition.

Study 3 (2x2 design; n = 160) reduces P2P ratings bias by making it easier to identify providers that lack *integrity*. Participants viewed online profiles of P2P graphic designers. On the profiles, the designers had evaluation scores for four attributes (e.g., "originality"). In the *five-star* condition, all attributes were evaluated at 5-stars, while in the *mixed* condition, three of four attributes were less than 5-stars. In the *consumer-evaluations* condition, participants were told that the attribute scores represented an aggregate evaluation from previous consumers. In the *provider-evaluations* condition, participants were told that the scores were given by the provider themselves, to help consumers understand their skills. Participants chose a designer to make them a logo. The logo was delivered with errors. Participants gave a rating. The *ratings* were higher in the five-star compared to mixed conditions ($F(1, 159) = 4.25, p < .05$), and higher in the 'consumer-evaluated five-star' compared to 'provider-evaluated five-star' conditions ($F(1, 79) = 4.37, p < .05$). *Integrity* was higher for 'consumer-evaluated five-star' compared to 'provider-evaluated five-star' ($F(1, 79) = 4.17, p < .05$), but *satisfaction* did not differ. Thus, consumers can justify a negative rating if providers deceive by inflating their own evaluations.

Study 4 (a field experiment with RVezy) reduces ratings bias by reducing the *perceived importance* of P2P ratings. After their rental experience, RVezy consumers (n=371) gave a rating. In the *individual* condition, participants were told that their individual rating would be visible. In the *aggregated* condition, their rating would be aggregated with ratings from other consumers and would not be individually identifiable. *Ratings* were higher for the individual compared to aggregated condition ($F(1, 356) = 6.63, p < .05$), and were considered to be more *important* for individual compared to aggregated ($F(1,355) = 4.14, p < .05$). From PROCESS Model 15, there was a significant interaction ($\beta = .15, \text{ SE} = .07, p < .05$) such that *satisfaction* had a stronger effect on ratings when participants felt the rating was aggregated and not individually identifiable. Participants could be more truthful (i.e., less biased) about their experience.

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The Visual Moderation Effect: How the Representation of Progress Affects Judgments of Loyalty Programs

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EXTENDED ABSTRACT

Six studies document a *visual moderation effect*, defined as the tendency of individuals to make progress estimates that are closer to the midpoint of a range when given progress information in a visual format (i.e., without numbers). This bias arises because of the relative ambiguity of visual (vs. numerical) representations.

In the context of loyalty programs (LPs), extant research has considered how the framing of numerical information influences customers' perceptions of progress toward a reward (e.g., Nunes and Drèze 2006; Bagchi and Li 2010; Pandelaere et al. 2011). Moreover, emphasizing what has already been accomplished versus what remains to be done alters LP progress perceptions (Koo and Fishbach 2008; Bonezzi et al. 2011). Yet, to our knowledge, no research on LPs has examined how customers perceive identical reward progress information that is presented visually versus numerically. This omission in the literature is surprising because the delivery of reward progress has rapidly shifted to mobile apps (Son et al. 2020) which have allowed firms to dynamically display reward progress in a wide range of formats based on consumers' LP stages. Hence, we investigate how actual reward progress, presented either visually or numerically, influences perceived LP progress.

Background: Imagine an LP customer who encounters a strictly visual display of her reward progress. While she may be able to see that she is near [far] from her desired reward, she will need to estimate her exact progress since this information has not been explicitly provided. To accomplish this, she may systematically follow an optimal strategy (Martins 1998; Nagel 1995) which is to guess a value near the middle of a range and thereby minimize the expected value of the distance between the guess and the correct number. When individuals are choosing from an array of options that they believe are equally probable, they rely on the heuristic of choosing values toward the middle (e.g., Christenfeld 1995). We hypothesize that when actual progress towards a reward is low, customers will be inclined to overestimate rather than underestimate their progress when LP information is presented visually. In contrast, when actual progress is high, LP customers will be prone to underestimate versus overestimate their progress. We further propose that (1) this visual moderation effect is unique to visual indicators of reward progress, (2) the bias will be attenuated when unambiguous, numerical progress information is offered. Given space constraints, we report two of our six studies.

Study 1: The study uses a within-participant design to test whether consumers perceive their progress to be less extreme if the same actual progress is displayed visually (vs. numerically). Participants learned that they would be shown 30 different indicators conveying progress toward a free reward on a LP app. The design follows a 2 (display: visual, numerical) x 2 (presentation order: visual first, numerical first) x 15 (actual progress: 1/15, 2/15, 3/15, 4/15, 5/15, 6/15, 7/15, 8/15, 9/15, 10/15, 11/15, 12/15, 13/15, 14/15, 15/15) mixed design (display presentation as a between-participant factor). We conducted an ANOVA on perceived progress with results showing a three-way interaction ($F(14, 568) = 2.57, p = .001, \eta^2 = .06$). At low levels of actual progress, perceived progress is higher when actual progress is displayed visually (vs. numerically). At

higher levels of actual progress, the pattern reverses and perceived progress is lower when actual progress is displayed visually (vs. numerically), consistent with our proposed visual moderation effect.

Study 2: We test for the visual moderation effect at both high and low levels of actual LP progress using a between-participant design: 2 (display: numerical, visual) x 2 (actual progress: low, high). Participants in the numerical display conditions were shown a screenshot of an app indicating that they had earned either 4/15 (low) or 11/15 (high) actual LP progress. In turn, participants in the visual display conditions viewed a screenshot of the same app showing a horizontal bar that indicated the same actual progress as in the two numerical conditions (i.e., 4/15 = low progress; 11/15 = high progress), but without showing any actual numbers. Lastly, participants completed perceived progress and confidence measures. Results show a significant interaction effect ($F(1, 618) = 14.94, p < .001, \eta^2 = .024$) with contrast analysis revealing that when actual progress was low, consumers perceived their progress to be greater if it was displayed visually ($M_{\text{visual}} = 39.12, SD = 18.40, N = 156$) versus numerically ($M_{\text{numerical}} = 34.19, SD = 12.87, N = 156$); $F(1, 618) = 6.22, p = .013, \eta^2 = .010$. In contrast, when actual progress was high, individuals perceived their progress to be lower if it was displayed visually ($M_{\text{visual}} = 70.54, SD = 21.76, N = 153$) as compared to numerically ($M_{\text{numerical}} = 76.43, SD = 15.62, N = 157$); $F(1, 618) = 8.83, p = .003, \eta^2 = .014$. To test the role of confidence, we conducted a moderated mediation analysis. In this model, display (0 = numerical vs. 1 = visual), confidence, and actual progress (0 = low vs. 1 = high) served as the independent variable (X), mediator (M), and moderator (W), respectively. The results of this analysis revealed a significant index of moderated mediation ($B = -5.15, SE = 1.18; 95\% CI = -7.58, -2.97$). The inverse relationship between display (0 = numerical vs. 1 = visual) and perceived progress was significantly mediated through confidence when actual progress was high ($B = -5.83, SE = 1.02; 95\% CI = -7.98, -3.95$), but not when actual progress was low ($B = -.68, SE = .7; 95\% CI = -2.12, .71$). These results are also consistent with our theorizing.

Discussion. Our four other studies examine downstream consequences of the visual moderation effect on motivation and behavioral intentions. They show that the effect is robust across 1) different visual formats, 2) various LP categories, and 3) different samples. Finally, our studies show that these findings generalize to progress contexts unrelated to LPs (e.g., perceived progress when downloading an app). Our findings contribute to literature on goal pursuit by demonstrating when and how ambiguous visual displays affect motivation. The visual moderation effect also has important ramifications for marketers. Our findings suggest that LP marketers may be able to increase consumer motivation to pursue reward-driven goals by displaying actual progress differently depending on whether the customer is near or far from a reward goal.

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Financial Exclusion and Consumer (Dis)empowerment

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EXTENDED ABSTRACT

The rise in the payday lending industry is attributed to financial exclusion, which occurs when vulnerable consumers are excluded by mainstream financial services. Consequently, regulators have recently enacted laws restricting the payday lending industry. This paper investigates how regulatory restrictions on payday lenders affect vulnerable consumers' lived experiences.

Introduction

A growing stream of academic and governmental research is examining the impact of payday loan access, restrictions, and bans on consumers. Typically, consumers use payday loans as a last resort when other sources of credit are unavailable (Bhutta, Skiba, and Tobacman 2015).

Interestingly, some researchers find that access to payday loans has no effect on consumers' financial welfare, loan delinquency, or credit scores (Bhutta 2014; Bhutta et al. 2015, Carter and Skimmyhorn 2017), and that increased access is associated with lower foreclosure rates (Morse 2011). In contrast, other studies find that access to payday loans can lead to negative outcomes for consumers, such as a diminished ability to pay bills (Melzer 2011), a significant increase in bankruptcy cases (Skiba and Tobacman 2019), prolonged debt to the payday lender (Consumer Financial Protection Bureau 2021), and an increase in household food insecurity (Chang 2019). Furthermore, access to payday loan rollovers is associated with higher use of pawnshops by low-income consumers (Carter 2015).

Similarly, there is mixed evidence on the efficacy of payday loan restrictions. Generally, payday loan restrictions are associated with a reduction in the number of payday lenders (Barth et al.

2016) and a decrease in levels of payday borrowing (Zinman 2010). In addition, regulations decreasing maximum interest rates are found to reduce loan defaults and increase the length of time for repayment (Li, Mumford, and Tobias 2012). Likewise, regulations reducing maximum loan amounts are shown to reduce the sizes of loans taken by consumers, which in turn has lowered default rates (Li et al. 2012). In contrast, other research finds that restrictions on payday loans harm consumers who often resort to higher-risk substitutes like overdrafts (Zinman 2010). Furthermore, increasing the maximum length of time a consumer has to payback a payday loan did not significantly lower their use of loan rollovers (Carter, Skiba, and Sydnor 2013).

The conflicting results of research on payday loan regulations and their impact on consumers highlights the desperate need for further investigations. Much of this existing research relies on government and industry databases to understand borrowing behavior following the introduction of payday loan regulations. While these studies provide valuable knowledge into the population-level effects of payday loan regulations, they do not provide an understanding of the individual-level consequences for the most vulnerable consumers. In particular, we lack research that documents consumers' perceptions of how payday lending regulations have impacted their relationships with payday and traditional lenders, and their access to other potential sources of credit, such as credit unions. Hence, our primary research question is: how do regulatory restrictions on payday lenders affect consumers' lived experiences?

Methodology

Context

In 2016, the province of Alberta enacted the most comprehensive payday loan regulations in Canada. According to the government, these regulations were designed to protect vulnerable Albertans from predatory lending practices by 1) cutting the cost of taking on payday loans; 2) helping borrowers escape the cycle of debt perpetuated by payday loans; and 3) ensuring that other short-term credit options were available to all Albertans (Alberta Hansard 2016). At the time of the regulation, the government estimated that 240,000 Albertans borrowed a total of \$500 million a year (Ellwand 2016). We chose Alberta as the study context because it set a precedent for regulating the payday loan industry with an explicit goal of empowering and protecting vulnerable consumers. Moreover, consumers of the payday loan industry are highly diverse in Alberta, spanning multiple ethnic groups and social classes, offering an opportunity to study the nuances of marginalization beyond racial divides noted in prior research (Crockett 2021; Bone et al 2014).

The growth of the payday lending industry in Canada can be traced to the late 1990s (Dilay and Williams 2018). Some have attributed the industry's growth to the rise in the number of financially excluded low-income Canadians who lack a relationship with mainstream banks (Buckland and Dong 2008). Available data indicates that, in 2016, there were approximately 1,431 registered payday loan outlets in Canada (Robinson 2018). Similar to the USA, Canadian payday loan borrowers tend to have lower income, lower net worth, and lower levels of education than non-borrowers (Simpson and Islam 2018). The majority of borrowers use payday loans to pay for necessities (Financial Consumer Agency of Canada 2016), with most turning to them as a last resort after being denied credit at mainstream financial institutions (Fantauzzi 2016). Recent estimates show that 75% of payday loan users in Canada are repeat borrowers (Simpson and Islam 2018).

In 2007, an amendment to the Criminal Code transferred the responsibility for regulating the payday loan industry to provincial governments (Government of Canada 2018). In forming their policies, most of the provinces aimed to implement regulations that both protected borrowers and prevented payday lenders from going out of business (Dilay and Williams 2018). However, more restrictive payday lending regulations in Canada are relatively new (Ebner 2017). The province of Alberta was the first in Canada to introduce payday loan regulations intended to protect consumers, and other provinces have since followed (Dijkema, 2019).

Under the new regulations, the interest rate was lowered from \$23 to \$15 for each \$100 borrowed over a two-week term (Service Alberta 2016). The new regulations prohibited payday lenders from 1) soliciting borrowers via phone or email; 2) charging fees to cash a payday loan check; 3) offering additional credit agreements to customers with an outstanding payday loan; and 4) setting a due date that precedes the borrower's pay day. Furthermore, the regulations required payday lenders to allow borrowers to pay back their loans in instalments over three pay periods, and to share financial literacy information with them (Service Alberta 2016).

Significantly, the regulations required the government of Alberta to work with credit unions to offer small short-term loans as a

fair alternative to payday loans (Province of Alberta 2016). By the time the regulations were implemented, at least two credit unions had started offering such payday loan alternatives (Wood 2016). Like most Canadian provinces where enforcement of the payday lending regulation is delegated to a consumer protection government body (Dilay and Williams 2018), the enforcement of this regulation in Alberta is the responsibility of the Director of Fair trading at the provincial government (Service Alberta 2016).

Participants

We conducted in-depth interviews with low-income borrowers to assess whether and how they were impacted by the new payday lending regulations in Alberta, Canada. As the only selection criterion, we recruited participants who had taken at least one payday loan in the three years prior to the interview date. Of these participants, 74% had applied for a payday loan after the new regulations came into effect, thus allowing us to assess whether the new regulations impacted their ability to acquire these loans and their perceptions of any changes to the industry detected. Participants were recruited through posters placed at partner community services and social support organizations that serve low-income individuals, as well as through social media posts on these partners' accounts. Participant compensation was \$30CAD plus \$6CAD for transportation.

In total, 46 low-income participants (47.8% female) from a major Albertan city participated in the interviews. The majority of participants (71.8 %) were between 25 and 54 years old, with most identifying as White (68.9 %) followed by Indigenous/native Canadian (11.1 %). The majority of participants did not have education beyond high school (54.3%), and only 26.6% were employed. Sixty-two percent of participants had household income below \$32,000 CAD. While we did not explicitly ask about governmental income support, many participants indicated that they were receiving some sort of government support, including welfare. Participants were generally underbanked: while 91.3% had a checking account at a bank or credit union, only 17.3% had a credit card, and 10.9% had access to other sorts of credit from banks or credit unions (e.g., line of credit). Most participants took payday loans more than once per year, with an average of 9 times per year.

Data Collection

The interviews took place in private rooms at two public libraries and participants were interviewed individually, with interviews lasting between half an hour and one hour. Once the participant's consent had been obtained, they were asked to complete a short questionnaire measuring the basic demographic variables reported above. After the questionnaire had been completed, a semi-structured interview was conducted, and audio recorded with the participant's consent. Guided by McCracken's (1988) four-step method of inquiry, the interview questions incorporated relevant analytic and cultural categories from the extant literature, such as experience with traditional banking and historical borrowing practices. Following Spradley (1979), we used grand tour questions to encourage participants to elaborate on their lived experiences with the lending industry, and how new regulatory policies such as lower interest rates and the ability to pay back loans in installments had affected their borrowing experiences. Upon completing the interviews, participants were thanked, debriefed, provided with a government issued brochure outlining the payday lending rules, and compensated for their participation. Interviews continued until data saturation was reached (Saunders et al. 2018).

Data Analysis

Data analysis was conducted in accordance with standard qualitative methods in management (Miles, Huberman, and Salda-

ña 2014). Proceeding abductively, the first and third authors began open coding the interviews, followed by a cycle of pattern coding (Miles et al., 2014). Next, the authors discussed the coding system, agreed on a codebook, and separately conducted a thorough coding of the data. In this stage, we attended to sensitizing concepts related to the research question (regulatory change, alternative borrowing practices). Finally, analytic memoing connected the emergent codes with extant literature to address the aims of the research question. We performed a collaborative synthesis wherein we mapped the relationships between the overarching themes that had emerged during the analysis. MAXQDA analysis software was used to manage the coding process, during which particular attention was paid to disagreements, exceptions, and tensions between narratives (Charmaz and Belgrave 2012). The analysis continued until thematic saturation—that is, the point at which no new themes emerged—was reached (Francis et al. 2010). Following analysis, we selected quotes that exemplified dominant views or concepts, or those that expressed exceptional or alternative perspectives.

RESULTS

The findings point to four main themes: exclusion from the mainstream financial market; perceptions of payday loans as empowering; lived experiences of vulnerability and exploitation; and the perceived impact of the regulatory changes. A selection of supportive quotes for each theme is presented in Table 1. Of the changes made to the Payday Loans Regulation, the lower interest rate and the option to pay back the loan in instalments were those that made the most positive impact on participants' experiences. These two changes actively interrupt the 'vicious cycle' of borrowing into which many consumers of payday loans fall. This cycle consists of borrowing a payday loan, most often to cover basic survival necessities, and then losing a substantial portion of one's pay check to pay back the loan plus interest (Lim et al. 2014). This leaves little money to cover basic necessities, leading the consumer to seek a new payday loan. It is clear from the data that the regulatory changes have helped to interrupt this cycle for some vulnerable consumers. However, the conditions leading to the vulnerability of these consumers are systemic and beyond the influence of industry-specific regulations (Bone, Christensen, Williams 2014).

In some ways, the new regulations made payday loans more consumer-friendly by introducing changes that allow vulnerable consumers to be more in control of their money. The majority of participants liked these changes because they make what is a last resort option for many seem less exploitative. Others felt that the change in regulation has made payday loan companies more selective about their customers. What used to be an industry that would give a loan to anyone, regardless of their credit or income, has now become one that requires customers to have regular employment income. Many participants spoke about being unable to take payday loans now if their income comes from social assistance or government programs. This leaves a large service gap, that is apparent from participants' testimonies indicating that many had sought payday loans because their social assistance income was insufficient to cover basic living expenses.

GENERAL DISCUSSION

Regulation of the payday lending industry is intended to protect vulnerable consumers by alleviating the exploitatively high interest rates (Consumer Financial Protection Bureau 2021) and empowering consumers to keep more of their money. Yet, the concept of empowerment is easily problematized by the findings of our study. In prior

analyses of consumer empowerment, the theoretical focus has been on consumer sovereignty (Denegri-Knott, Zwick, Schroeder 2006) and emancipation from the market (Firat & Venkatesh 1995), under the assumption that consumers are made vulnerable by market conditions and that consumer power can be recovered by resisting or leaving the mainstream market.

In this study, our focus is on consumers whose vulnerability is an outcome of their marginalization and exclusion from mainstream markets. Consumers of payday loans might be considered disempowered not simply due to the exploitative practices of alternative financial services, but primarily due to their exclusion from the mainstream financial market. Regulatory restrictions on the payday lending industry are not enough to counter the financial exclusion experienced by vulnerable consumers. While the reduction of interest rates and extension of payment periods on payday loans certainly helps vulnerable consumers keep more of their money, it does not directly address the systemic reasons leading them to use payday loans instead of less costly services offered by the mainstream financial market.

Notably, many participants had participated in budgeting, debt-reduction, or credit-building workshops at non-profit organizations in efforts to understand how to navigate the financial services mar-

ket. Some participants described these workshops as helpful, having provided them with practical advice they could apply to their financial situation. Others suggested that budgeting workshops were not useful, as they rely on a neoliberal emphasis on individual choice, without regard for the structural conditions constraining those living in poverty (Giesler & Veresiu 2014). This indeed highlights a key barrier to the effectiveness of traditional consumer empowerment interventions: they often focus on individual consumer outcomes without changing the structural issues, such as poverty, precarious employment, and cost of living, that disempower entire consumer segments. Policy interventions are most effective when they address the structural contexts of consumer behaviors (Shove 2010; 2014).

This research contributes to the growing literature on the effects of payday lending regulations in North America (e.g. Li et al. 2012). The present research is the first step towards filling a gap in the literature by investigating the lived experiences of low-income payday loan consumers, and how new, stricter regulations on this industry has affected their access to credit. Our findings offer directions for future research on consumer (dis)empowerment to consider the effect of market exclusion on the outcomes of policy interventions intended to protect vulnerable consumers.

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In Search of Moderation: How Counter-Stereotypical Endorsers Attenuate Polarization Over Consumption-Related Policy Issues

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EXTENDED ABSTRACT

Despite the widespread gap in political and consumption preferences along ideological lines, we show that counter-stereotypical endorsers can attenuate polarization over consumption-related policy issues (e.g., gun rights, marijuana legalization). Importantly, the endorsers attenuated polarization more by persuading in-groups than by dissuading out-groups, and may prove helpful in reducing dissensus.

Political polarization has been on the rise across the globe. As political orientation becomes increasingly central to people's identities, preferences become more clearly defined along ideological lines. Indeed, political orientation has been shown to predict policy opinion on a range of social issues nearly three times as well as other relevant socio-demographic variables. Although much has been documented on how political orientation helps explain divergent opinions and tastes, much less is known about what can bring them together. In other words, what can lead preferences to converge across the ideological spectrum, and why?

One possible answer to this question comes from research on source cues and in-group bias. People's policy preferences tend to be positively influenced by the preferences espoused by in-group sources, and negatively influenced by the preferences espoused by out-group sources (e.g., Cohen 2003; Van Boven et al 2018). For instance, an unambiguously liberal policy (e.g., gun control, cannabis legalization) is often supported by liberal sources, which due to (a) in-group favoritism and (b) out-group derogation, may in turn (a) maintain/further increase the support among liberals and (b) maintain/further increase the opposition among conservatives. Thus, *stereotypical sources* (i.e., endorsers who support a policy that most of their in-groups are perceived to support) likely maintain or even intensify polarization.

But, critically, not all liberals support liberal policies and not all conservatives support conservative policies. Although less frequently, policies are often supported by *counter-stereotypical sources* (i.e., endorsers who support a policy that most of their in-groups are perceived to oppose). The literature, however, has been silent about the role of source stereotypicality in shaping political polarization. How do counter-stereotypical sources influence preference polarization? If in-group bias allows us to predict that a stereotypical source would maintain or even intensify polarization, we could, by the same logic, expect a counter-stereotypical source to attenuate polarization.

To test this possibility, Study 1 used a real-world context to provide initial evidence for the asymmetric attenuation effect. Participants ($N = 226$) recruited on the streets of Rio de Janeiro read about an actual cannabis-related bill and learned that either a famous left-wing (stereotypical) or a famous center-right (counter-stereotypical) politician endorsed it (both actually did). After reading about the bill and the endorsers, participants indicated their support and completed a measure of political orientation. As expected, the results revealed a significant interaction between endorser and political orientation ($b = 0.41, p = .028$). In the stereotypical endorser condition, increases in conservatism were strongly associated with lower support for cannabis legalization ($b = -0.50, p = .001$). Consistent with the attenuation hypothesis, this effect was substantially reduced in the face of a counter-stereotypical endorser ($b = -0.09, p = .440$). Further, spotlight analyses provided evidence for the asymmetry. While relatively liberal participants did not significantly change their opinions across conditions ($b = -0.18, p$

$= .489$), relatively conservatives became significantly more supportive of the policy when it was backed by the counter-stereotypical endorser ($b = 0.64, p = .014$).

Study 2 provides several contributions. First, instead of using real politicians, we presented the endorsers based solely on their political orientation, which helps ward off potential confounders related to differences in personal attributes. Second, we included a control condition to disentangle in-group persuasion from out-group dissuasion. Finally, rather than using a policy associated with liberals, we now considered a policy stereotypically associated with conservatives: gun rights. Participants ($N = 342$) recruited through a Brazilian online panel read that a bill seeking to increase access to guns has received increasing support from conservative (stereotypical), liberal (counter-stereotypical) or some (control condition) congresspeople, and then indicated their opinion about the bill. As expected, political orientation was a strong predictor of preferences in the control condition ($b = 0.89, p < .001$), such that conservatives were more supportive of the gun rights policy than liberals. This effect was not statistically discernible from that observed in the stereotypical condition ($b = -0.14, p = .432$). Critically, there was a significant interaction between political orientation and counter-stereotypical endorser ($b = -0.53, p = .003$), such that political orientation became a substantially weaker predictor of opinions when the endorser was counter-stereotypical (vs. neutral; $b = 0.35, p = .007$). Further, while conservatives did not become less supportive of gun rights in the face of counter-stereotypical congresspeople ($b = -0.16, p = .533$), liberals became significantly more supportive of it ($b = 0.75, p = .004$).

Study 3 ($N = 412$) employed a similar procedure, with three exceptions. First, we used an even more salient policy: abortion rights. Second, we excluded the stereotypical condition since it resembled the control. Third, we employed a 3-item measure of beliefs about the benefits of the policy to explore the process behind the change in preferences. We reasoned that counter-stereotypical endorsers would be particularly apt to change the opinions of in-group members, as people tend to receive in-group (vs. out-group) criticism less defensively. We replicated the asymmetric attenuation ($b = 0.20, p = .040$). However, the interaction between political orientation and endorser failed to predict beliefs ($b = 0.12, 95\% \text{ CI} = [-1.11, 0.36]$), which led to a non-significant difference in the indirect effect across conditions ($b = 0.08, 95\% \text{ CI} = [-0.07, 0.23]$). We then estimated the same model but with opinions as the mediator and beliefs as outcome; the analysis revealed that the indirect effect in the neutral endorser condition ($b = -0.31, 95\% \text{ CI} = [-0.44, -0.18]$) became non-significant in the counter-stereotypical endorser condition ($b = 0.08, 95\% \text{ CI} = [-0.07, 0.24]$). Overall, in addition to replicating the asymmetric attenuation in the context of a morally-charged policy, study 3 suggests that instead of engaging in biased belief-update processing, the endorser's in-groups engage in posthoc rationalization.

Our findings suggest that counter-stereotypical endorsements significantly attenuate polarization, and do so more by persuading in-groups than by dissuading out-groups. Taken together, our results highlight the potential of counter-stereotypical endorsements as a persuasion tool to reduce polarization.

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Time Will Tell: The Impact of Activating Time versus Money on WOM Generation

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EXTENDED ABSTRACT

This research examines how time and money can differentially affect consumer's Word-of-Mouth generation. Results of four studies and one field study show that activating time (vs. money) increases consumers' information sharing behavior. This effect is driven by an enhanced desire for social connection when time (vs. money) is activated.

Time and money are both scarce resources. Extant research on time-money differences shows that the activation of time and money drive people to acquiring different mindsets and prioritizing different considerations (MacDonnell & White 2015; Wan, 2018).

Time-activation strengthens focus on interpersonal connection with others (Aaker et al., 2011), increasing the tendency to conduct activities that foster social relationships. In contrast, money makes people more self-interested and less sensitive to social realities: activating money enhances insensitivity to unfairness and social rejection, and reduces pro-sociality (see Vohs 2015 for an overview).

The desire for social connection is a primal motivation to communicate with others (Berger 2014; Sun et al 2006). People achieve the goal of social bonding by talking to or sharing information (Rime, 2009). Therefore, information sharing not only helps strengthen ties with close others but also provides an opportunity to connect with distant others by building preliminary trust (De Angelis et al., 2012).

Based on the above discussion, this research proposes that time-activation, in contrast to money-activation, triggers social-connectedness motives, which in turn prompts consumers to share more information. Four experiments and one field study test and gather confirmatory evidence for our propositions.

Study 1 tested whether time (vs. money) can influence consumer's WOM generation. 204 undergraduates were randomly assigned to think about the amount of time (vs. money) they spent on music streaming services. A third control condition was also included where participants were directed to the next question directly without any time or money activation. Upon completing the task, all participants were asked about their experience with the music streaming service. Following this, we measured the dependent variable, the likelihood of sharing their music streaming experience with others by writing an online review.

Results showed that activation of time (vs. money vs. control) increased people's sharing behavior ($p = 0.01$). A further binary comparison between time and money activation also confirmed this time-money difference ($p = 0.031$). Moreover, satisfaction towards music service did not show significant differences among the three conditions ($p > 0.50$), suggesting that variation in product satisfaction did not drive information sharing.

Study 2 used a negative-product setting aiming to rule out the possible explanation that money (vs. time) is related to negativity, which may lead to lower information sharing.

369 MTurkers were randomly assigned to recall spending time (vs. money) to fix a defective product and briefly describe the experience. They then read an informative article about a novel product titled Innovative Tap Design and were asked about the likelihood of sharing this content with others on social media. The results again revealed the effect of time activation on increased sharing behavior ($p = 0.014$).

Study 3 examined the underlying process. Participants were asked to think about a recent vacation and write down three pre-

purchase activities that involved spending time (or money). They then read that a new restaurant they had recently visited had very few online reviews and were asked about their likelihood of writing a review for it. The desire for social connectedness was measured as a mediator. Mood, and self-product connection were measured to rule out alternative mediation explanations.

The results again confirmed that time activation was more likely to elicit people to share their experience with others ($p = 0.047$). Parallel mediation showed that only social-connection desire played a mediating role (95% CIs [-0.36, -0.02]), ruling out the remaining two alternative mediators: mood (95% CIs [-0.09, 0.01]) and self-product connection (95% CIs [-0.10, 0.01]).

Study 4 moderated the process using a 2(Construct activations: time vs. money) \times 2(Relationship norms: communal vs. exchange) between-subject design. Using this design, we directly manipulated social-connectedness goals by activating their communal or exchange norms. Communal norms promote social comradery and connectedness, while exchange norms make people more transactional (Clark and Mills 1979). We expect that triggering an exchange-norms mindset will neutralize enhanced social-connectedness when time is activated. Time and money activation procedure was similar to study 3. Following this, participants were directed to the second task, which manipulated their relationship norms (communal vs. exchange) (Aggarwal and Law, 2005). Finally, they were asked about their information-sharing intentions in a scenario similar to Study 3. The results showed a main-effect of construct activation on consumer's experience sharing ($p = 0.019$), and an interaction between construct activation and relationship-norm ($p = 0.039$). A planned contrast revealed that, under the communal condition, people with time (vs. money) activation were more likely to share information ($p < 0.001$). However, under the exchange condition, there was no significant difference between the two construct activations ($p > 0.80$).

Study 5 was a field study that was designed to examine the time (vs. money) effect on information sharing with an actual choice. 183 consumers were recruited at a university café. After the manipulation of time (vs. money) construct, participants were told that there would be a Pop-up event at the café and were asked if they would like to share information about this event on social media with their friends. Consistent with expectations, people in the time (vs. money) activation condition were more likely to share this information ($p < 0.05$).

The findings from five studies demonstrate that activating the concept of time (vs. money) increases consumers' WOM behavior. This is driven by an enhanced desire for social connection when time is activated.

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Tight Culture Tight Pockets! The Effect of Cultural Tightness on Price Sensitivity: The Role of Consumer Frugality.

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EXTENDED ABSTRACT

Using real-world price-elasticity data across various categories, and country-level measures from 48 countries, we demonstrate that cultural tightness leads to greater price sensitivity, even after controlling for other cultural and socio-economic variables. We replicate this in four controlled experiments, and also establish the mediating role of consumer frugality.

Firms need to better understand how consumers will react to their future price actions. This knowledge is especially crucial in inflationary times when companies are compelled to engage in frequent and substantial price increases. Despite decades of economic research on price elasticity, we have a very scant understanding of personality factors that drive consumer price sensitivity. Consequently, researchers have called for more work into understanding factors influencing consumers' price sensitivity (Gao, Zhang, and Mittal, 2017; Lee, Lalwani, and Wang, 2020).

In the pursuit of this agenda, we examine one such factor: *does consumers' cultural Tightness (vs. looseness) affect their price sensitivity?* The answer to this question is especially important due to the deep-rooted link between ecological hardship and cultural tightness looseness. In recent years, Tightness-Looseness has emerged as an important cross-cultural construct. Gelfand et al. (2011) conceptualized Tightness as a theory about adaptation—the adaptation of societies (i.e., strengthening of social norms and intolerance of norm deviance) to the characteristics of their ecological environments and the adaptation of individuals to the resultant societal characteristics. The contention is further supported by a recent study by Jackson et al. (2019), demonstrating a tightening of cultural norms in response to ecological threats. Given the increased number of threats in consumers' environments (e.g., COVID-19, global economic slowdown, and political instability), the tightness-looseness framework presents itself as an imperative theory to study consumers' price sensitivity.

Specifically, we hypothesize that individuals from tight (vs. loose) cultures exhibit higher price sensitivity. Additionally, we propose a novel mechanism and hypothesize that increased importance placed on the virtue of frugality in tight (vs. loose) cultures manifests as higher price sensitivity. Frugality entails a judicious usage of resources and avoidance of waste (De Young 1986); and represents an individual's general preference for resource conservation and application of economic rationale (i.e., opportunity cost consideration) during resource acquisition (Michaelis et al., 2020). Our conceptualization is based on research suggesting that frugality as an individual trait stems from one's life experience and culture (Michaelis et al., 2020) and is likely to be a more highly valued virtue in resource-scarce cultural contexts (Ratchford, Schnitker, and Reppas 2021). Additional support for this argument comes from past research demonstrating a positive relationship between self-regulatory strength and frugality (Michaelis et al., 2020) and the evidence suggesting higher self-regulatory strength among individuals from tight (vs. loose) societies (e.g., Gelfand, Nishii, and Raver 2006).

We test the hypothesized relationship using four experimental studies and one real-world archival data analysis. In study 1, following Gao et al. (2017; Study 1), we examine the proposed relationship using country-level price elasticity for food, beverages, and tobacco, from the U.S. Department of Agriculture (USDA's) International Food Consumption Patterns Data Set. For our analysis, we collected the country-level tightness scores from Gelfand et al. (2021) and covariates suggested by

Gao et al. (2017). The regression analysis with the tightness index as the predictor variable and per-capita income, and the country's competitiveness index as covariates, demonstrates a significant negative association between the Tightness Index and price elasticity ($b = -.014$, $t(44) = -3.90$, $p < .001$). Thus, demonstrating that tight cultures exhibit greater price sensitivity. We ran additional models to control for Hofstede's cultural dimensions and globalization index. The result is robust even after inclusion of significant covariates ($b = -.009$, $t(26) = -2.35$, $p < .05$).

In study 2a ($N = 199$), we replicate the results of country-level data at an individual level by measuring cultural Tightness (Youn, Park, and Eom, 2019; $\alpha = .72$) and price sensitivity (Wakefield and Inman, 2003, study 2; $\alpha = .83$). The regression results indicated cultural Tightness and price sensitivity are positively related ($b = .378$, $t(197) = 3.315$, $p < .01$), indicating that individuals from tight culture exhibit higher price sensitivity. As consumers demonstrate differential price sensitivity for hedonic vs. utilitarian purchases (Wakefield and Inman, 2003). In study 2b, we replicated the previous findings using two purchase categories (i.e., grocery supplies and dine-in restaurants) and additionally controlled for relevant covariates (including household income and socio-cultural traits: power-distance belief, global-local identity). The regression result indicates that the relationship between cultural tightness and price sensitivity is robust across the two purchase categories and with inclusion of relevant covariates ($b_{\text{dine-in restaurants}} = .407$, $t(183) = 2.805$, $p < .01$; $b_{\text{grocery}} = .424$, $t(183) = 3.295$, $p < .01$).

In preceding studies, we measured price sensitivity using an established scale. In pursuit of greater generalizability, in study 3 ($N = 189$), we test the hypothesized effect by manipulating price in a single product category (i.e., fruits). Specifically, participants indicate the number of apples they will purchase at five incremental price increases (i.e., 10 cents increments from \$1.30 to \$1.80). The difference between the quantity purchased at the two extreme price points served as the dependent variable. The regression results revealed a significant positive relationship between cultural tightness and price sensitivity ($b = .543$, $t(187) = 2.389$, $p < .01$).

In study 4 ($N = 210$), we test the proposed mediation model. Participants first completed the five-item measure of price sensitivity (Lichtenstein, Ridgway, and Netemeyer 1993), followed by the measures of frugality (Lastovicka et al. 2003) and cultural Tightness (Youn et al., 2019). The mediation analysis using PROCESS Model 4 (Hayes, 2018), with cultural Tightness as the independent variable, frugality index as the mediator, and price sensitivity as the dependent variable, showed a significant indirect effect (.2976, 95% [CI]: [.1603, .4574]), and the direct effect became insignificant ($p > 0.10$).

Our research contributes to the growing literature on cultural Tightness and consumer behavior by introducing consumers' price sensitivity as a key manifestation of cultural Tightness. Second, we add to the literature on consumer frugality and introduce cultural Tightness as a factor influencing consumer frugality and its downstream effect on price sensitivity. At a substantive level, the availability of cultural tightness scores across different countries and across different U.S. states can help marketers identify segments that are less price sensitive.

REFERENCES AVAILABLE UPON REQUEST

The effect of racial bias on White Marketing practitioners' decisions for Black consumers

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EXTENDED ABSTRACT

Managers are mostly White. The racial mismatch between those who define products'/ services' strategies and those who consume, may lead to bias. Three studies with 842 marketing practitioners in the US and France show that racial bias lead White managers to biased and non-optimal marketing decisions when targeting Black consumers.

Companies' managerial decision-making process includes many steps conducive to bias. Often marketers rely on their personal beliefs and are not immune to biased decisions. We hypothesize that non-Black managers are more susceptible to implicit bias when targeting Black consumers, and that a higher propensity to prejudice against Black individuals makes managers more likely to make biased strategical decisions when targeting consumers from their outgroup. Therefore, we assess whether biased evaluations of Black consumers induce White Marketing practitioners to systematically make non-optimal managerial racially biased decisions. Precisely, we predict that consumers' race will influence non-Black practitioners' marketing assessments and consequent choices even in contexts in which consumers' race is not diagnostic and relevant for the decision.

Study 1 employed one factor (consumers' race: Black vs. White) between-subjects design. Our final sample was comprised of 102 participants (44.33% females; $M_{age} = 30.87$, $SD = 21.08$). Participants read a scenario in which they would have to assess the consumption patterns of a group of consumers. We informed the demographic profile of these consumers to manipulate their race (i.e., Black Americans or White Americans), while holding other characteristics constant across. We asked participants to judge (1 to 7- strongly agree) one item taped to capture a Marketing-related assessment relevant to managerial decisions (i.e., «All these consumers pertain to the same market segment») and another one to assess participants' biased perception of outgroup homogeneity (i.e., «All these consumers have very similar consumption habits»). Subsequently, participants responded to the five items (1 to 7- strongly agree) of the External Motivation (EM) to Respond Without Prejudice Scale ($\alpha = .90$), a proxy for propensity to prejudice propensity. As expected, participants in the Black consumers condition perceived consumers as pertaining all to the same market segment ($M_{Black_consumers} = 3.68$; $SD = 1.43$) in a greater extent than White consumers ($M_{White_consumers} = 3.15$; $SD = 1.30$, $t(100) = -1.98$, $p = .050$). A logistic regression confirmed that consumers' race interacted with participants' EM ($\beta = .37$, $SE = .17$, $z = 2.21$, $p = .030$), as participants high in EM perceived Black consumers as pertaining to the same market segment in a greater extent than White consumers ($p = .004$), but this perception was not displayed among those low in EM ($p = .852$).

Study 2 employed one factor (consumers' race: Black vs. White) between-subjects design with 560 non-Black Marketing and Business Master students and practitioners (52.85% females; $M_{age} = 20.17$, $SD = .75$) to assess whether these biased evaluations of Black consumers induce White Marketing practitioners to make non-optimal managerial decisions systematically (e.g., neglecting better financial market opportunities). We asked participants to choose one out of two potential cities a luxury company could open up a new store. In all the conditions, region A had wealthier residents than region B. While the racial profile of consumers in region

B was held fixed across conditions (i.e., always 72% White), we manipulated the racial profile of consumers in region A, where consumers were wealthier and, thus, a better market for luxury products company: a majority of White individuals (i.e., 71% White), vs. a majority of Black individuals (i.e., 71% Black). As expected, participants in the condition where the wealthier market had a majority of Black consumers indicated to the company to open their store in the market with less wealthy but more White consumers almost twice more frequently (35.54%) than participants in the condition where the wealthier market had a majority of White consumers (18.59%; $\chi^2(1) = 20.08$, $p < .001$).

As in study 2, study 3 employed a one factor (consumers' race: Black vs. White) between-subjects design with 181 Marketing and Business non-Black master students (48.86% females; $M_{age} = 3.70$, $SD = 1.60$). Participants were asked to judge about one of two wealthy regions for a company to open a new store: with a majority of "White French citizens" vs. a majority of "Black French citizens". Other information about the region held fixed across conditions.

As expected, participants indicated being less confident to open a new store in the proposed region when the majority of its residents was Black ($M_{Black_consumers} = 5.01$; $SD = 1.17$) relative to when the majority of its residents was White consumers ($M_{White_consumers} = 5.40$; $SD = 1.02$, $t(179) = 2.34$, $p = .018$). Participants were also less likely to invest in market research when their potential new market was mostly composed of Black (50%), relative to when it had a majority of White consumers (68.29%; $\chi^2(1) = 6.15$, $p = .013$).

The present work provides evidence that due to implicit bias, consumer behavior practitioners and analysts may consistently make non-optimal financial decisions when targeting consumers from stigmatized racial groups. At least for black consumers, non-Black practitioners may misperceive the variability preferences of this segment, neglect research information from them, and misperceive higher potential markets when a wealthier market is mainly composed of Black consumers.

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Second order effects of marketing interventions: Evidence from firearm daily deals

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EXTENDED ABSTRACT

Violence with firearms is an epidemic problem in the U.S., and we consider the role of marketing in normalizing firearms usage. Using difference-in-differences, we show that promotions for firearms training are associated with an increase in arguments involving firearms, suggesting that training alone is insufficient to ameliorate this issue.

Recent years have seen a marked increase in homicides, and particularly so those involving firearms. A proposed driver of this spike is the proliferation of firearms and the normalization of their use. Given their omnipresence, training in their safe handling and use may help to reduce risks associated with ownership. How might training influence incidence rates of firearms usage? On the one hand, we might expect incidence rates to fall. Comfort and familiarity with firearms, and knowledge of their power, might presumably increase owner's safe handling and storage of such weapons. Moreover, increased training with firearms might decrease reliance on the use of firearms to mitigate conflicts through conflict de-escalation, the use of alternate means to end conflicts, and conflict avoidance *ex ante* (under the presumption that others might also be carrying a weapon and trained in its use). Further, multiple organizations have called for mandatory training requirements as a way to increase gun safety (Gregory and Wilson 2018; Prevention Institute 2018).

However, some research examining differences between those with firearms training and those without suggests that trained individuals are more likely to engage in unsafe firearms behaviors, such as keeping loaded, unlocked firearms in homes with children (Hemenway, Solnick and Azrael 1995; Berrigan, et al. 2019), a behavior specifically proscribed by the NRA's safety instructions (NRA 2021). This type of risk-seeking behavior is consistent with the idea that training increases comfort with firearms. Moreover, such training may also increase the perceived instrumentality of firearms, i.e. an owner may believe they better understand how (and when) a firearm can be used to terminate a conflict, be it violently or nonviolently. If this is the case, individual training may in fact encourage people to resolve conflicts through firearms use, by imbuing users with comfort and an increased perception of their ability to use them effectively and appropriately.

We examine the effect of promotional discounts for firearms training offered at gun ranges, which has two potential impacts. First, such trainings can provide training in the use of firearms, increasing the perception of their instrumentality. Second, marketing legitimizes risky behaviors and politically contested markets (Huff, Humphreys and Wilner 2021; Humphreys 2010; Shepherd and Matherly 2021), suggesting that the training might normalize the possession, carry, and use of firearms among those exposed to these offers.

We employ a difference-in-differences approach, with the treatment being marketing promotions offered on deal-of-the-day websites (e.g. GroupOn) for firearms training in 20 counties across the U.S. in 2011, along with two placebo treatments: promotional offers providing access to firearms without training, and other common deals including golf and yoga. Our dependent measure was the number of criminal arguments involving firearms reported through the FBI's National Incident Bureau Reporting System during the period 2001-2019. This data set provided partial coverage in approximately half the counties in the USA, and various comparisons between covered and uncovered counties suggested that the observable differ-

ences between counties and potential selection issues were unlikely to be the driver of our findings.

We also include additional time-varying controls to account for alternative explanations, capturing firearms availability and salience, as well as broader economic and social factors. These data sets were sourced from the ATF, NewsBank, BEA, and U.S. Census, among others. As our dependent measure was a count variable, we estimated a Poisson model, incorporating two-way fixed effects to capture geographic- and time-varying heterogeneity. Results were consistent using a log OLS and IHS-transformed variables. All models were estimated using robust standard errors clustered on county.

We find that counties treated by promotional offers for firearms training experienced a significant increase in the number of arguments involving firearms. The identification strategy was validated in multiple ways, including an event study model, testing reverse causality, and for treatment heterogeneity. Results were consistent when controls were included, and we see a decreasing effect size when expanding the geographic radius of counties that experience treatment. Placebo treatments showed null effects of firearms promotions that do not involve training, nor for other common promotional offers. We see no effects on alternative dependent measures for other crimes recorded by NIBRS where firearms training would not be expected to have an effect, including counterfeiting and non-forcible sexual offenses.

Finally, existing theory suggests that individual firearm usage is predicated on consumers' perceptions of instrumentality (provided by training) and their availability. Thus, areas with wider firearms availability should experience a more substantial increase in firearms arguments following treatment. To test this, we interacted the treatment indicators with measures of firearms availability: the number of Federal Firearms Licensed (FFL) dealers and of sporting goods stores in the county. Following treatment, areas with higher levels of firearms availability experienced a larger increase, consistent with our theorizing.

Our results indicate that providing training in firearms increases the frequency with which individuals will use them to resolve conflicts. This highlights a pernicious negative impact of a common marketing intervention, which, in addition to increasing sales, helps to legitimize the regular use of firearms, and increase the perceived instrumentality of them for users. GroupOn at least tacitly acknowledged that these types of offers may have been problematic, and temporarily removed them from their platforms following the Sandy Hook shootings in 2012 (Popken 2013). However, this decision was reversed subsequently, and firearms training promotions are again offered on GroupOn as of 2022.

More broadly, our results suggest that the guidance of many advocates, who propose increased training in the use of firearms as a solution to the rise in firearms death, may not lead to the hoped-for decline in firearms deaths in the USA, and instead suggests that this may in fact further amplify this trend.

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The Cure Bias: Consumers Demand Fairer Prices for Curatives than Therapeutics

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EXTENDED ABSTRACT

This research documents a “cure bias,” whereby the perceived unfairness of charging high prices is greater for curatives (i.e., that eliminate disease symptoms) than for therapeutics (i.e., that reduce symptoms). This bias contradicts the premise of value-based pricing, which expects consumers to tolerate higher prices for putatively more efficacious medications.

The present research examines whether perceptions of price unfairness differ for curatives versus therapeutics. I refer to curatives (or cures) as medications that eliminate disease symptoms and produce “complete restoration of health,” whereas I consider therapeutics to be treatments that yield reductions in disease symptoms and an “improvement in health, but may not include the complete elimination of disease” (*Merriam-Webster’s Dictionary* 2021). Even though cures and treatments have different semantic meanings, federal drug regulators have not made formal distinctions between subjective descriptions of a medication’s efficacy (e.g., cure, treatment). As a result, health disclosures and advertisements may use confusing and inconsistent language when labeling a medication or describing its efficacy. This inconsistency in product labels and marketing communications underscores the need to enrich our knowledge of how consumers make judgments about curatives and therapeutics.

Even though both cures and treatments offer patients respite from the symptoms of a disease, curative medications imply maximal efficacy (i.e., 100% relief) whereas therapeutic medications do not. Research examining judgments of extreme outcomes at scale endpoints has found that changes in probability near the maximum possible value of 100% (or the minimum possible value of 0%) tend to be overweighted when compared to an identical change towards the middle of the distribution (Camerer and Ho 1994; Tversky and Kahneman 1992). On account of being located at the endpoint of the efficacy scale, curative medications may also be associated with the concepts of certainty and perfection to a greater extent than therapeutics.

From a price fairness perspective, the implication of past research is that consumers should be more tolerant of high medication prices for curatives than therapeutics because a cure is objectively more efficacious and psychologically more valuable. This prediction is consistent with the tenets of value-based pricing (e.g., Bach and Pearson 2015), a price setting approach that relies predominantly on the value of a product (or service) to customers to determine its appropriate price point (Hinterhuber 2008). Germane to the present investigation, consumer research suggests that consumers generally consider value-based pricing to be fair (Bolton, Warlop, and Alba 2003; Guo and Jiang 2016), “with fair prices being higher for higher-quality goods and lower for lower-quality goods” (Friedman and Toubia 2020).

In the present research, however, I propose that the general tendency of consumers to view value-based pricing as fair will *not* apply to judgments of curative medications. In contrast to the prediction derived from value-based pricing that consumers will tolerate higher prices for cures than treatments, I predict that the opposite will occur under certain conditions. Specifically, I propose a “cure bias” in price judgments of medications whereby the perceived unfairness of charging high prices is greater for curatives than for therapeutics even though cures provide superior value to patients.

I posit that the general presumption of consumers that value-based pricing is fair might not apply to medications that offer maxi-

mal efficacy (i.e., curatives). I posit that on account of their high efficacy, cures are perceived—often correctly—as important health advancements that can produce extraordinary societal impact. As such, I predict that consumers will insist that this value be widely shared and distributed rather than constrained or limited (e.g., to those who can afford it). My argument is derived from prior research on the norm of distributive justice, which is the motivation of members in an exchange to seek a fair and just distribution of an outcome (Huppertz et al. 1978; Maxwell 2008). In the pricing literature, work on distributive price fairness indicates that consumers are sensitive to price discrimination and evaluate the fairness of their outcome (e.g., offered price) in comparison to others’ outcomes (Ferguson, Ellen, and Bearden 2014). Extending this notion of distributive price fairness beyond dynamic or reference prices, my research treats the societally impactful good or service (e.g., the medication) as the focal outcome and suggests that consumers are concerned with ensuring that this outcome is universally attainable and affordably priced.

I further argue that the cure bias arises because consumers’ concern for distributive justice is heightened when a health outcome is perceived to be particularly potent (i.e., at the maximum efficacy endpoint)—as curatives (but not therapeutics) tend to be. There are a number of valid reasons why consumers may be more likely to demand universal access for curatives but not therapeutics, not all of which relate to distributive justice. For instance, when considering contagious diseases, consumers may demand universal access for cures not out of fairness concerns but for purely selfish reasons (i.e., to lower their own risk of being infected). Even in the context of non-contagious diseases, consumers may hold the belief that a curative is universally applicable (i.e., producing more certain or predictable outcomes) but that a therapeutic medication has more variable effects on patients, thereby resulting in its lower overall efficacy. Although the greater propensity of consumers to demand universal access for curatives (vs. therapeutics) is likely to be multiply determined, I claim that consumer concerns about distributive justice play a crucial role. Importantly, consumers’ greater demand for universal access to cures than treatments is in itself not a bias and may stem from one or more perfectly rational beliefs (e.g., about distributive justice, personal risk, etc.). My proposal is that the increased demand for universal access to cures (vs. treatments) gives rise to the cure bias in price judgments—which *is* a bias because it violates the fundamental (and rational) premise of value-based pricing.

I test my theorizing in a series of six studies. Study 1 establishes the basic effect that consumers are more likely to demand that cures (vs. treatments) are universally accessible to all patients. Study 2 shows that this effect is robust across a number of different possible descriptions of curatives and therapeutics. Studies 2 and 3 also provide evidence of the cure bias in price judgments, with Study 3 showing via mediation that the bias occurs because consumers demand universal access for curatives more so than for therapeutics. Studies 4, 5, and 6 explore potential moderators of these findings.

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Not in My Group: Racial Minorities' Enforce Stricter Ingroup Boundaries to Avoid Stereotype-Confirmation

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EXTENDED ABSTRACT

Across four experiments in two cultural contexts (the U.S. and Brazil), we show that when perceivers from stigmatized groups can exclude targets who reinforce negative stereotypes about the ingroup, they will do so to maintain the group's public reputation.

Despite the inaccuracies of group negative stereotypes and their disconnection from the actual behavior of non-dominant groups (Lee, 2016), the awareness that one could be judged based on negative group stereotypes causes perverse impacts on stereotyped individuals' wellbeing and behavior (Borman et al., 2016; Rees & Boege, 2014; Riek et al., 2006; Taylor et al., 2018). They trigger the threat of potentially confirming a stereotype oneself in the minds of outgroup members (Baysu & Phalet, 2019; Steele & Aronson, 1995). Along this line, a situation in which an ingroup member behaves in a way consistent with an ingroup stereotype can pose a threat to members of stereotyped groups as outgroup members can use it as "evidence" that the stereotype is true about the group members (Cohen & Garcia, 2005; Purdie-Vaughns & Eibach, 2008).

The literature has documented a myriad of psychological defense mechanisms that individuals use to deal with stereotype threats (Steele & Aronson, 1998) and protect their group reputation (Desombre et al., 2018; Shapiro et al., 2012). But no research has investigated whether individuals under stereotype threat change how they define whether individuals are members of the ingroup or members of an outgroup (i.e., social categorization; Nam & Chen, 2021) as a defense strategy to group stereotyping.

The present research investigated this proposition. It extends to the literature on categorization processes and stereotype threat by identifying a novel mechanism that boosts ingroup *overexclusion* of undesirable targets: group-reputation threats elicited by stereotype-confirming targets.

In studies conducted with Black and non-Black individuals in two countries with marked interracial conflicts and stigmatization (i.e., Brazil and US; Guy & Marx, 1999), we show that being careful about whom one categorizes as a member of one's racial group is a strategy that individuals may use to protect their racial groups' reputation, when under stereotype threats. That is, perceivers from stereotyped racial groups may exclude from the ingroup targets who reinforce negative group stereotypes and threaten the group's public reputation. Precisely, we show that racially ambiguous individuals performing a stereotype-confirming behavior (a) elicit group reputation threats (GRTs) among perceivers from stereotyped groups and (b) lead them to *overexclude* these targets from the ingroup. We show that this impact on social categorization does not occur for groups where the negative stereotype does not apply. We also reveal cultural differences in the extent of the effect of GRTs on social categorization processes. We show that Black-Brazilians, in general, are more likely to engage in *overexclusion* of targets who confirm a negative stereotype of the group, while the same happens only with Black Americans more vulnerable to GRTs.

Our research also investigates motivated social categorization processes from a non-dominant perspective. We consider why perceivers might or might not include targets in an ingroup that is stigmatized by others. Yet this motivated psychological process is mostly centered on the psychology of a dominant or high-status group member who is protecting the privileges and advantages of

the ingroup (see Ho et al., 2011, 2020), and it has been predominantly investigated among members of dominant groups (e.g., Northern Italians, White-Americans), with few exceptions (Gaither et al., 2016; Ho et al., 2017).

We investigate our hypothesis in three main steps. First, to show that the hypothesized boost in *overexclusion* from the ingroup effect among Black perceivers is driven by GRTs elicited by stereotypical targets, we examine whether negative stereotypical targets elicit higher GRTs than negative non-stereotypical targets among Black and non-Black individuals in both countries. We also test whether the GRTs' magnitudes are higher for Brazilians than for Americans. Second, we examine whether Black perceivers' GRTs elicited by negative stereotypical targets are distinguished from non-Black perceivers, for whom the target does not confirm negative stereotypes of their racial group. Again, we also test whether the GRTs' magnitudes are higher for Brazilians. We show that racially ambiguous, stereotype-confirming individuals elicit GRTs among Black perceivers and to a much greater extent than Non-Black-perceivers. Then, we demonstrate the extent to which Black-perceivers in Brazil and in the US exclude racially ambiguous, stereotype-confirming individuals more than racially ambiguous individuals who behave in a negative stereotype-unrelated manner and those who behave in a stereotype-disconfirming manner. We compare results with non-Black individuals to show that the hypothesized exclusion effect occurs only among individuals under stereotype threat. Third, we compare results from Brazilians and Americans and discuss cultural differences in this reaction.

A pretest provided further evidence that the racial criminality stereotype of Black people—well-documented in the U.S.—is also present in Brazil. Study 1 tested our initial prediction that targets who confirmed negative stereotypes elicit greater GRTs among Black perceivers in Brazil and the U.S. It also reveals cultural differences in the magnitude of GRTs between Black-Brazilians and Black-Americans. Study 2 provided further evidence for Study 1 with a higher and more balanced sample, with a slightly different scenario and including the comparison between Black and non-Black participants' reactions to GRTs.

Studies 3, conducted in Brazil, tested our hypothesis that GRTs would affect Black perceivers but not non-Black-perceivers' categorization. We asked Black and non-Black Brazilians to categorize racially ambiguous targets who behaved in *negative stereotypical* (vs. *negative non-stereotypical* vs. *stereotype disconfirming*) ways. Finally, Study 4, conducted in the U.S., replicated Study 3 with Black and non-Black Americans. This study also tested whether levels of vulnerability to GRTs moderated the results.

By doing so, we integrate the literature on stereotype threats (Chaney et al., 2019; Purdie-Vaughns et al., 2008; Rees & Boege, 2014; Wooten & Rank-Christman, 2019), discrimination (Durante et al., 2017; Jacob et al., 2022; Reutter et al., 2009), and social categorization processes (Castano et al., 2002; Chen et al., 2018, 2019a; Martinangeli & Martinsson, 2020). While past research in social categorization shows that perceivers are less likely to categorize ambiguous race targets as ingroup members when they receive any negative information about them (Castano et al., 2002; Leyens & Yzerbyt, 1992), our research shows that the type of negative information matters.

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When Being Irrelevant is Relevant: How Relative Relevance of Brands' Social Media Posts Impacts Brand Perception

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EXTENDED ABSTRACT

We find that brands posting product-irrelevant content along with product-relevant one on social media increases brand preferences. We propose perceived relationship strength and warmth as serial mediators. Hence, balancing product-relevant and product-irrelevant posts may be a powerful strategy to enhance brand reactions as well as build strong relationships with consumers.

About 90% of companies in the U.S. use social media for marketing purposes (Statista 2019). Although brands generate tons of content on social media, there is a lack of research which explores the effective types of content that prompt consumers to build a strong relationship with the brand and exhibit enhanced brand preferences. In this research, we examine how relative relevance of brands' social media posts to the underlying product at hand impacts consumers' brand perception, preferences, and behavioral intentions.

Consumers make fundamental judgments of warmth with respect to other people and firms alike (Aaker, Vohs, and Mogilner, 2010). Warmth judgments involve perceptions of kindness, sincerity, helpfulness, thoughtfulness, and trustworthiness (Aaker and Maheswaran, 1997; Judd et al. 2005; Yzerbyt, Provost, and Corneille, 2005) as well as being other-focused (Cuddy et al., 2008). Brands posting information only/strictly about themselves or their products may seem to be excessively focusing on sales or company benefits. However, adding product-irrelevant content to the brand's social media mix might make consumers think the company is trying to genuinely communicate or interact with its customers, not "push" their products on them.

Study 1 assessed consumers' perception of the brands that post some product-irrelevant information along with relevant information on their social media account. Students ($N = 257$) viewed a local bakery's Instagram account which was manipulated to either have a mix of 7 posts that included two product-irrelevant and five relevant ones or seven posts with product-relevant information only. As predicted, participants perceived greater warmth ($F(1, 255) = 7.25$; $M_{\text{irrelevantincluding}} = 6.00$, $SD = 1.00$, $M_{\text{relevantonly}} = 5.66$, $SD = 1.04$, $p = .009$) and stronger relationship ($F(1, 255) = 4.37$; $M_{\text{irrelevantincluding}} = 3.92$, $SD = 1.36$, $M_{\text{relevantonly}} = 3.57$, $SD = 1.32$, $p = .037$) with the bakery when the bakery's posts included product-irrelevant posts.

Study 2 examined how combining product-irrelevant posts with the product-relevant ones (vs. only viewing product-relevant posts) in the brand's social media account impacts consumers' behavioral intentions in another product category and using a different ratio of posts. In Study 2, MTurk volunteers ($N = 201$) viewed a smartwatch brand's social media posts. Respondents indicated a marginally greater intention to follow the brand's social media account when some posts (3 out of 7) were manipulated to include product-irrelevant information compared to when all posts were strictly product-relevant ($F(1, 198) = 3.09$; $M_{\text{irrelevantincluding}} = 4.22$, $SD = 2.22$, $M_{\text{relevantonly}} = 3.73$, $SD = 1.98$, $p = .080$).

Study 3 replicated the core effect and examined the underlying psychological mechanism. Students ($N = 107$) participated in the identical study to that of Study 2. Again, adding irrelevant posts increased the smartwatch brand's purchase intentions ($F(1, 105) = 5.14$; $M_{\text{irrelevantincluding}} = 4.36$, $SD = 1.47$, $M_{\text{relevantonly}} = 3.67$, $SD = 1.70$, $p = .025$). Importantly, there was a serial mediation via relationship strength and perceived warmth (Model 6; Hayes, 2017). Specifi-

cally, participants perceived a stronger perceived relationship with the brand, in turn leading to greater brand warmth when they viewed some irrelevant posts versus only the relevant posts, thereby increasing purchase intentions ($B = .05$; 95% CI: .00, .13).

Study 4 further examined the underlying process via the moderating role of perceived relationship strength. This study employed a 3 (Relationship Strength: High vs. Low vs. Control) \times 2 (Post Relevance: Irrelevant Including vs. Relevant Only) between-subjects design. First, students ($N = 279$) read a scenario about their relationship with a sunglasses brand as a manipulation task. Next, participants viewed either posts including both product-relevant and irrelevant information (4:4) or only the posts featuring relevant information. Planned contrasts revealed that exposure to irrelevant including posts increased participants' interest in the brand ($M_{\text{irrelevantincluding}} = 2.61$, $SD = 1.40$, $M_{\text{relevantonly}} = 2.04$, $SD = 1.26$, $p = .048$) only when the brand is perceived to have neither a strong nor weak relationship with them. There was no difference when the brand was perceived as high or low in terms of relationship strength ($ps > .230$). Importantly, there was a moderated mediation effect (Model 7; Hayes, 2017). Specifically, participants perceived greater brand warmth when they viewed some irrelevant posts versus only the relevant posts and subsequently displayed a greater interest in the brand only when their relationship strength was manipulated as neither strong nor weak ($B = .24$; 95% CI: -.47, -.02).

In Study 5, to enhance the external validity of our findings, we used a web scraping approach and examined the effect of brand posts' product relevance on brand preferences using the real-world data. The dataset included 11,119 brand-generated tweets on Twitter by 96 brands in the coffee industry. The tweets with product-irrelevant content received more likes ($M = 184.7$, $SD = 1537.2$) than the ones relying on product-relevant content ($M = 98.8$, $SD = 623.0$; $F(1, 11112) = 12.36$, $p < .001$). Consumers likewise generated more comments on the tweets with product-irrelevant content ($M = 21.9$, $SD = 197.8$) than in response to the tweets with product-relevant content ($M = 10.3$, $SD = 127.1$; $F(1, 11111) = 4.63$, $p = .031$). Similarly, more tweets which were irrelevant to the brand's product or brand ($M = 41.5$, $SD = 488.7$) were retweeted compared to the tweets with content relevant to the brand's product or the underlying brand ($M = 16.9$, $SD = 135.1$; $F(1, 11114) = 14.63$, $p < .001$).

Taken together, our findings add to an understanding of the development of consumer-brand relationships (Aaker, Fournier, and Brasel 2004; Fournier 2009; Park and MacInnis 2018) by showing that reliance on less product-relevant social media posts may help early establishment and development of a brand relationship with a new or less familiar brand. Time after time, marketers exhibit a tendency to focus on product features, attributes, characteristics, and functions in their brand and marketing communications on social media (Forbes 2016; Moorman 2018; Neumeier 2015). Against this background, our findings imply that a more actionable strategy for brand marketers would be to intersperse relevant posts about features, attributes, characteristics, and functions with less product-relevant posts that go beyond the product information itself.

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The Value of Engagement: The Effect of Repeated Attempts on Product Quality in a Peer-to-Peer Marketplace

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EXTENDED ABSTRACT

Consumers often make repeated attempts to achieve a goal, however, it is unclear how repeated attempts impact downstream behaviors. The analysis of 20,762 peer-to-peer loans and a controlled experiment reveals a curvilinear effect of repeated attempts on repayment. This research contributes to motivation theory in the domain of financial decision-making.

Each year, nearly half of all Americans apply for a new personal loan (Bourassa, 2019). Because loan applications are often rejected (Brown, 2018), it is common for people to submit additional applications after their first attempt (i.e., repeated attempts). In response, this research makes the following contributions by investigating the effect of repeated attempts on loan repayment. First, a field study and a controlled experiment provide evidence for a curvilinear effect of attempt count on loan repayment (Inzlicht et al. 2018; Zhang et al., 2011). Second, we apply regulatory engagement theory to understand the process by which repeated attempts affect loan repayment and find that expected value mediates the effect of repeated attempts (Higgins, 2006; Higgins & Scholer, 2009). Third, we find an increase in financial and societal value by providing loans to individuals with initial application failures (Fernandes et al., 2014; Netzer et al., 2019).

Hypothesis Development

Regulatory engagement theory proposes that greater strength of engagement during goal pursuit affects motivation in a subsequent activity by increasing the value of a target (Higgins, 2006). One cause of an increase in the strength of engagement is the opposition to interfering forces.

An individual who fails on their first loan application and submits their first repeated attempt is responding to an interfering force. This second attempt represents persistence in goal pursuit (Bagozzi & Dholakia, 1999) and, relative to a successful first attempt, an increase in engagement. Thus, because engagement increases the expected value of a goal (Zhang et al., 2011), we predict that one repeated attempt will increase the likelihood of loan repayment (H_1).

Regulatory engagement theory provides two reasons for a reversal in the effect of attempt count. First, a second rejection suggests that someone is unable to oppose an interfering force and may be giving up rather than overcoming an obstacle (Bagozzi & Dholakia, 1999). Second, consistent with an effort-value association (Inzlicht et al., 2018), repeated failures decrease the perceived likelihood of goal success, leading people to be unlikely to fully engage in what they are doing (Higgins & Scholer, 2009). Thus, due to the demotivating effects of repeated failures, we predict that multiple repeated attempts will decrease the likelihood of loan repayment (H_2).

Based on regulatory engagement theory and evidence that greater involvement in a task increases value (Norton et al., 2012), we expect that an increase in the monthly payment of a loan during a repeated attempt is a signal of the greater expected value of a loan. If so, then changes to the monthly payment will positively relate to the likelihood of loan repayment (H_3).

Field Study Data, Models, and Results

We use data from Prosper from February 2006 (the start of this platform) through December 2010. Our final data set includes 20,762 loans, of which 13,285 required multiple attempts.

To examine how repeated attempts relate to the likelihood of loan repayment, we use a probit model with robust standard errors to test the relationship between loan repayment and the number of attempts before loan acceptance controlling for verified seller credit information, loan parameters, and year and month dummies. Our main interest is whether there is an inverse U-shaped effect of attempt count (i.e., H_1 and H_2) on loan repayment likelihood. In addition, we estimated a probit model to test the relationship between changes in monthly payment and loan repayment. We expect a positive relationship between changes and loan quality (H_3).

In support of H_1 , the estimate for *AttemptCount* is positive and statistically significant at the 0.01 level. In support of H_2 , the estimate for *AttemptCountSquared* is negative and statistically significant at the 0.01 level. In support of H_3 , the effects of *MonthlyPaymentChange* are all positive and statistically significant at the 0.01 level. We find support for these results using an instrumental variable approach, propensity score matching, and robustness tests.

Controlled Experiment to Test Causal Effect of Repeated Attempts

We conducted a controlled experiment to further examine the causal effect of a repeated attempt on people's predictions of loan repayment likelihood and to test the underlying process.

This pre-registered study had a 2 (repeated attempt: Person X vs. Person Y) by 3 (scenario type: single repeated attempt vs. multiple repeated attempt vs. negative value) between-subjects design. The first factor, repeated attempt, randomized whether Person X or Person Y requires additional application attempts to receive a P2P loan. The second factor, scenario type, manipulates the scenario information to test different aspects of our theory. Participants answered questions after the scenarios to measure expected value and repayment likelihood.

We recruited 301 Prolific panelists. In accordance with our pre-registration, we excluded participants with incorrect responses to the manipulation checks, leaving a sample of 291 (73.5% female, 23.0% male, 2.0% prefer to self-describe, 1.5% prefer not to disclose; $M_{age} = 34.21$).

In support of H_1 , the main effect of repeated attempt on repayment likelihood was positive in the single repeated attempt condition ($\beta = 0.6051$, $t(285) = 4.27$, $p < .0001$). In contrast, and in support of H_2 , the main effect of repeated attempt was nonsignificant in the multiple repeated attempt condition. Also, in support of regulatory engagement theory, the main effect of repeated attempt was nonsignificant in the negative value condition. We found consistent results with expected value as the outcome variable. Finally, a moderated mediation model found that expected value completely mediates the effect of a single repeated attempt.

GENERAL DISCUSSION

We apply regulatory engagement theory (Higgins & Scholer, 2009) in a consequential domain and demonstrate: (a) that repeated

attempts can have a positive effect on actual product quality after an initial goal pursuit; (b) a curvilinear effect of the number of repeated attempts on subsequent product quality, suggesting that the expected value of a goal levels off and even decreases as the number of repeated attempts increases; and (c) how an individual signals their subsequent motivations through the expected value attributed to a goal during initial goal pursuit.

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To Delay or Not to Delay: When Delayed Attributes Are Overweighted In Consumer Evaluations

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EXTENDED ABSTRACT

As marketers design shopping experiences, they often make decisions about whether to delay certain attributes. Across 5 studies, we examine how delaying information shapes product evaluations. We find that delaying an attribute can both augment or diminish its effect on evaluations, contingent on how determinant it is to the consumer.

As purchasing environment formats become increasingly diverse online and in-store, marketers must decide not only what product information to present but *when* to present it. One key design choice is whether or not to delay certain product information, such that an attribute is only presented *after* the consumer is first exposed to a product. Such delays are common both online and in-store: consumers need to click into another page, flip the package around, or find the tag, before seeing certain attributes. Despite their ubiquity, it remains unclear if and how delays affect the way consumers evaluate products. We suggest that the implications of delaying an attribute may depend on how *determinant*, i.e., how important and differentiating (Myers & Alpert 1968), the consumer considers the attribute to be.

Prior literature suggests that delaying information may cause a primacy effect, such that the delayed attribute is used less in evaluations (Bond et al. 2007; Carlson et al. 2006; Russo, Medvec, and Meloy 1996; Shrift et al. 2018). While often true, we suggest that the opposite occurs when an attribute is determinant. We argue that delaying a determinant attribute creates *curiosity*, which makes consumers attend to and process the attribute more, and increases its influence in evaluations. This augmenting effect of curiosity can subsume primacy effects, reversing the implications of delaying information. In five studies, we examine the effects of delaying attribute information, and test this contingent augmentation.

In Study 1A (N = 111) and 1B (N = 89), we examine how delaying price affects its use in product evaluations. Both employ a 2 (presentation time: immediate vs. delayed) x 2 (price: high vs. low) x measured price determinance between-subjects design. Participants imagined planning a beach trip, and evaluated the attractiveness of a flight. In the flight's announcement, price was either delayed or shown immediately. As proxies for determinance, we measured concern with one's budget in Study 1A among students, and income in Study 1B among MTurkers.

As predicted, in Study 1A there was a 3-way interaction between presentation time, price, and determinance (budget concern) in predicting product attractiveness ($b = -1.03, p = .008$). When determinant, the effect of price was stronger when delayed ($b = -1.84, p = .018$) than when presented immediately ($b = -0.30, p = .36$). However, when not determinant, there was no effect of price when shown immediately nor at a delay. Study 1B replicates these results. We again observed a 3-way interaction ($b = 0.39, p = .012$). When determinant (low income), price's effect was stronger when delayed ($b = -1.85, p < .001$) than when shown immediately ($b = -0.41, p = .323$). However, when not determinant (high income), price's effect was directionally weaker when delayed ($b_{\text{delayed}} = -0.62, p = .180$) than when shown immediately ($b_{\text{immediate}} = -1.58, p < .001$). Thus, in both studies, delaying price augmented its influence only when determinant.

In the next two studies, we manipulate attribute determinance, and use a trade-off paradigm: participants evaluated two products, one cheaper but without a specific desirable feature and another more expensive but including that feature. Our rationale predicts that when a determinant feature is delayed, it becomes more influential. Thus, the product with the feature becomes more attractive despite being more expensive. Both studies use a 2 (presentation time: immediate vs. delayed) x 2 (beneficial feature: yes vs. no) x 2 (attribute determinance: yes vs. no) design, with the beneficial feature manipulated within-subjects.

In Study 2, students (N = 191) imagined shopping for headphones, and evaluated a \$70, *not noise-cancelling* pair of headphones and \$85 *noise-cancelling* pair. Noise cancelling information was either delayed or shown immediately, and manipulated to be determinant or not. We again observed a 3-way interaction of factors in influencing product attractiveness ($b = -1.11, p = .001$). When determinant, the effect of noise-cancelling was stronger when delayed ($b = 1.52, p < .001$), than when presented immediately ($b = 0.85, p < .001$). When not determinant, the pattern was the opposite ($b_{\text{delay}} = .80, b_{\text{immediate}} = 1.23$), demonstrating a marginal primacy effect.

In Study 3, we test our proposed curiosity mechanism. Participants (N = 252) imagined shopping for athletic shirts and evaluated two visually identical shirts: a \$25, Dri-Fit shirt, and a \$20, regular shirt. While price was always visible, Dri-Fit information was on the shirts' hangtags, and either immediately readable or temporarily tucked-in and delayed. We again observed a 3-way interaction ($b = 1.01, p = .002$) with the same pattern as prior experiments. In support of our theorized process, delaying the determinant attribute had a significant indirect on its role in evaluations (Attractiveness_{Dri-Fit} - Attractiveness_{NotDri-Fit}) mediated by curiosity ($b = .245, CI = [0.08, 0.44]$), which was significantly stronger than the effect when non-determinant ($b = .107, CI = [0.02, 0.27]$).

Study 4 examines the role of informational cues in facilitating curiosity prevailing over primacy. We expected the curiosity effect to be stronger when paired with a cue of incoming information, which may block initial evaluations that drive primacy. We used a 3 (presentation time: immediate, cued delay, not-cued delay) x 2 (attribute level: unhealthy vs. healthy) mixed design. Mturkers (N = 279) imagined shopping for a healthy snack. Healthiness was made determinant for all participants. Participants evaluated two popcorn bags: a tastier but unhealthy option, and a less-tasty healthier option. As predicted, the role of healthiness in evaluations (Attractiveness_{Healthy} - Attractiveness_{Unhealthy}) was significantly greater in the cued-delay condition ($M_{\text{cueddelay}} = 1.56$) than in the immediate condition ($M_{\text{immediate}} = 1.00, p = .044$), while the not-cued delay condition was not greater ($M_{\text{not-cueddelay}} = 1.31, p = .257$). This effect of the cued-delay was again mediated by curiosity ($b = .30, CI = [0.086, .579]$). This suggests that cues are helpful in promoting the augmenting effect of curiosity.

Taken together, our results suggest that whether to delay or not delay an attribute greatly depends on understanding consumer's pre-existing preferences. Our research provides insights for managers making such decisions, and highlights the overlooked role of curiosity in consumer product evaluations.

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Are you speaking to me? The effect of first-person pronouns on decisions to unfollow influencers

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EXTENDED ABSTRACT

Influencer's language can affect audience perception of their shared connection, and these may be dynamic as the relationship evolves. We find following time and first-person pronoun usage interact over the duration of following, with increased first-person pronoun usage initially associated with decreased unfollowing, but this effect reverses after longer periods.

Social media influencers are motivated to acquire followers in effort to expand their potential reach, growing their sphere of influence and potentially their income. While considerable popular work provides guidance on how to build following on social media (Lanier, 2021; McCoy, 2021; Newberry, 2021) surprisingly little is understood about how influencers can *retain* their existing audience. We consider one potential driver of these decision by audience members, investigating the dynamic usage of personal pronouns and the impact this has on retention of followers.

Pronouns are useful in establishing the actors at the center of discussion (Sanford & Garrod, 1998). Pronouns can be used to reflect perceived distance between the speaker (influencer) and the receiver (audience; Semin, 2007). First-person singular pronouns have also been interpreted as indicative of a self-focus (for a review, see Pennebaker, Mehl, and Niederhoffer (2003)). Brands' use of pronouns also influences attitudes towards the brand, such that first-person pronoun usage improves attitudes towards the brand if consumers perceive themselves to be close to the brand (Sela, Wheeler, and Sarial-Abi 2012). Yet, for consumers that lack this closeness, this can backfire, leading to lower attitudes towards that same brand. This may be because referencing the audience without understanding it may seem inauthentic, due to the lack of a relationship (Chung & Pennebaker, 2007). Thus, there is evidence that optimal usage of pronouns might be conditional on relationship stage, and therefore dynamic.

When first engaging with an influencer's content, we posit that the audience prefers the usage of first-person. Because first-person pronouns are inherently self-focused (Pennebaker et al., 2003), they allow the influencer to convey information about themselves, helping form connections and portray an authentic self to the audience. This allows the audience member to begin developing a parasocial interaction relationship (Rubin & McHugh, 1987) with the influencer, which mirror the hallmarks of traditional interpersonal relationships, but are one-directional, without reciprocation by the influencer. As such, early in the influencer-audience relationship, we predict that increasing use of first-person pronouns decreases the likelihood of audience members unfollowing an influencer (H1).

However, as the relationship develops, the audience begins to learn about the influencer and update their impression. As such, it's possible that the motivation for following that influencer changes, and the audience *continues* to follow that influencer for a reason different than their initial reason for *choosing* to follow. As the connection between the influencer and the audience member forms, the repeated usage of first-person pronouns may communicate a lack of awareness of the relationship partner, signaling to the audience that their (para)social relationship with the influencer is inauthentic. We therefore predict that, in later relationship stages, the usage of first-person pronouns can *cause* attrition (H2).

To test our predictions, we examined microinfluencers on the Twitter platform. We acquired a list of 622 influencers, with focuses on business, education, sports and technology. We collected a list of all followers for each of the influencers, focusing on those individuals who we observed initially following (and potentially unfollowing) an influencer, totaling 3.7 million individuals. We simultaneously gathered data on all tweets that the influencers posted during this time, collecting 2.9 million tweets from the influencers.

Our unit of analysis was the individual-influencer-dyad-week. Our primary dependent variable was an indicator for if the individual had unfollowed the influencer in the week. To model the relationship between the influencers' language and unfollowing decisions, we adopted a discrete-time hazard approach (Chandrasekaran & Tellis, 2011; Singer & Willett, 1993). Using this approach, we can capture the probability that, in each time period, the follower would unfollow the influencer conditioned on them not having done so already, which we estimate using a linear probability model, with the key parameter being the interaction of the length of time following and the influencer's pronoun usage. We also include fixed to control for influencer- and time-specific heterogeneity. To measure the influencers' pronoun usage, we used the LIWC library (Pennebaker, Francis, & Booth, 2001) to categorize and tag tokens as pronouns. The number of pronouns were normalized by the total number of tokens in that week, which served as our measures of pronoun usage. Our focal independent variable is the normalized number of first-person pronouns, though we also constructed measures of second, third and impersonal pronouns to include as controls.

RESULTS

In the base model, we observe a significant, negative simple effect of time at risk (β), suggesting that as an individual follows an influencer for longer, they are less likely to unfollow. Second, we observe a negative simple effect of first-person pronoun usage (β), indicating that when an influencer increases their use of first-person pronouns, this decreases the likelihood of their followers unfollowing. This effect was qualified by a significant positive interaction with time at risk (β), such that at higher levels of time at risk, the effect of first-person pronoun usage reverses. Marginal effects analysis indicated that in the short term ($t = 1$ week), a 10% increase in pronoun usage above the mean was associated with a .5% decrease in the likelihood of unfollowing. However, after a long time of following ($t = 52$ weeks), a 10% increase in pronoun usage was associated with a .7% increase in the likelihood of unfollowing. We observe similar effects in models including additional types of pronoun usage.

Our results demonstrate for the dynamic impact of first-person pronoun usage on individuals' decisions to unfollow influencers. Initially, increases in first-person pronoun usage decrease the likelihood of unfollowing, consistent with the idea that individuals desire authentic presentations by influencers as they develop their connection. However, at later stages, we find that this pattern reverses, with increases in first-person pronoun usage associated with increased likelihood of unfollowing, suggesting there are limits to the effectiveness of first-person pronouns in building authentic relationships. Our results suggest that influencers must strike a balance when communicating with their audiences, finding a way to balance the com-

peting needs of new followers who demand authenticity and those who have been around for longer, who desire discussion beyond the influencer's self-focus.

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Phatic Brand Communication on Social Media: The Meaningfulness of Meaningless Communication

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EXTENDED ABSTRACT

We advance a conceptual framework of phatic brand communication, whose main function is creating an atmosphere of sociability with consumers rather than conveying substantive information. A field study of brand Tweets supports the proposed typology of phatic language, its effect on consumer engagement, and a moderating role of transactional content.

Language serves both transactional functions—the transmission of ideas, knowledge, and information—as well as relational ones (Brown and Yule 1983). Phatic communication uses the latter type of language to create an atmosphere of sociability (e.g., greetings, small talk; Malinowski 1923). Marketing research has mostly focused on the transactional component of brand communication, and there is a lack of theoretically based frameworks or empirical research addressing the phatic component, despite the significance of the social and relationship-building aspect of brand communication (Duncan and Moriarty 1998; Fournier 1998).

Thus, the purpose of the present research is to introduce the concept of phatic brand communication to marketing by integrating theories from diverse disciplines. We propose a typology of phatic language that expands the existing conceptualization of what “phatic” means. Next, we offer a conceptual framework of phatic brand communication—from message production to consumer outcomes—in the context of social media, which provides an ideal setting for this type of communication. We then test the proposed typology and framework using the data collected from Twitter.

Our typology of phatic language is organized into phatic content and phatic style, analogous to the distinction between content words and style words (Tausczik and Pennebaker 2010). Phatic content refers to the standardized or common expressions and topics that are intended to create an atmosphere of sociability; it is about *what* is being communicated. While all phatic content shares this primary function, it also serves three secondary functions: channel managing (e.g., greetings, backchannels), solidarity signalling (e.g., encouraging, well-wishing), and space filling (e.g., small talk, irrelevant jokes). The other component of phatic language is phatic style, which refers to the way messages are delivered using various narrative techniques (e.g., diction, figures of speech, textual paralanguage) to enhance their sociability; it is about *how* something is communicated.

Next, we define phatic brand communication as a type of brand communication that creates an atmosphere of sociability with consumers through sending and receiving brand messages containing phatic language. In this framework, when consumers receive a brand message, they extract various meanings, including the extent to which the message is phatic. Thus, in successful phatic communication, a brand message containing more elements or greater intensity of phatic language increases consumer perceived phaticity, which leads to various behavioural (e.g., engagement, sharing, choice) and psychological (e.g., attitude, brand perception, relational) outcomes. Moderators that influence the effect of phatic language are organized into message (e.g., presence of transactional content), consumer (e.g., buying stage), brand (e.g., product category), and channel (e.g., channel norms) factors, which will have a flow-through impact on the outcomes.

We tested our typology and framework using 11,443 Tweets of 28 popular brands. The Tweets were coded for the degree of perceived phaticity and the presence of phatic language and transactional content. Consumer engagement was measured by the like, reply, and retweet counts.

The results showed that 46.5% of the brand Tweets in the dataset included phatic content, with the encouraging and space filling types being the most common functional types (20.0%, 10.7%). Models testing the relationships between phatic language, perceived phaticity, and consumer engagement showed that both phatic content (and each of its functional subtypes) and phatic style significantly increased perceived phaticity, and perceived phaticity increased all consumer engagement metrics.

We further tested one of the most important moderators in the framework: transactional content, which 86.1% of the Tweets in the current dataset contained. Since transactional content was shown to have a negative effect on sharing of videos on social media (Tellis et al. 2019), the phatic effect of messages is likely to be diluted when they contain both phatic and transactional components. Indeed, our model showed a significant interaction effect of perceived phaticity and transactional content on consumer engagement, such that when a message contained both, it negatively affected engagement.

Our research contributes to the marketing literature by offering a new framework of phatic brand communication, outlining its components and consequences. In response to recent calls for research on phatics over semantics (Berger et al. 2020), this work offers a clear research agenda, providing impetus and rich opportunities for future research. The need for research on phatics is particularly true in social media marketing because social media is currently the most suitable and accessible channel for phatic brand communication. We also contribute to the linguistics literature by expanding and refining the concept of phatic language. The lack of typology or taxonomy of phatic language was noted in the discipline (Ward and Horn 1999), and we address this gap by developing a typology through a synthesis of prior works. Finally, we contribute by providing empirical tests of the proposed typology and the framework using field data.

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Capturing and Keeping the Customer Experience: The Effect of Photos on Remembered Enjoyment and Future Intentions

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EXTENDED ABSTRACT

The enjoyment of experiences often extends beyond the physical experience through the memories retained by customers. This research reveals that photo cues boost consumers' remembered enjoyment, repurchase intentions, and the likelihood of sharing experiences with others. Multiple technologies including virtual scenarios, eye-tracking, and key pressing are used in studies.

The creation of engaging and enjoyable customer experiences is important in many industries. While the physical experience is important, another key consideration is the customer's future memory of the experience (Pine and Gilmore 2017; Schmitt 1999). The retained memories may encourage consumers to become repeat customers and share their experiences with others, thus impacting the behavior of others, increasing firm revenues, and reducing marketing costs (Moore 2012; Chun, Diehl, and MacInnis 2017). This research explores how photo cues impact consumers' remembered emotions, future purchase intentions, and social communication.

Considerable research has shown that people's recollection of their past experiences is often different from the actual experiences (Kahneman 1999; Redelmeier, Katz, and Kahneman 2003; Wirtz, Kruger, and Napa-Scollon 2003), and it is the remembered experience that is most important in driving people's subsequent behaviors (Robinson 2014; Robinson, Blissett, and Higgs 2012). Memory researchers have found considerable support for the "peak-end rule," which predicts that the most intense moments (the peaks) and the final moments (the end) of an experience highly influence memory of the overall experience (Kahneman 1999; Redelmeier, Katz, and Kahneman 2003). Retrieval cues can play an important role in facilitating the recall of associated memories (Bettman 1979; Keller 1987). Based on the encoding specificity principle (Tulving and Thompson 1973), we expect that photos depicting unique moments of a past experience, especially "peak moments" that were highly engaging and emotional, will be effective memory cues since these photos will distinctly match the memory trace of the prior experience.

In Studies 1A and 1B, participants engaged in virtual experiences by watching first-hand VR videos displayed on a 6×20-foot panoramic display screen filled with images from two 4K laser projectors while wearing eye-tracking glasses. The visual attention data were used to identify "peak" scenes to be used as photo cues in the main studies.

Study 1A examined the effect of photo cues on remembered enjoyment. Students ($N=57$) were randomly assigned to one of two photo-cue conditions (present vs. absent). Participants experienced a virtual tour of Frankfurt and attended a virtual stage performance. Photo cues triggered a marginally significant boost in consumers' remembered enjoyment ($M_{\text{cue}}=5.30$ vs. $M_{\text{no cue}}=4.81$, $p=.07$).

Study 1B extends the findings of the first study by demonstrating the effect of photo cues on consumers' behavioral responses. Fifty-three students were randomly assigned to one of two photo-cue conditions (present vs. absent) where they engaged in a virtual experience of attending a campus festival. In a follow-up survey sent one week after the experience, participants exposed to photo cues had a higher interest in attending the festival in the future ($M_{\text{cue}}=4.15$ vs. $M_{\text{no cue}}=3.35$, $p=.058$), wanted to spend more time at the festival ($M_{\text{cue}}=32.93$ minutes vs. $M_{\text{no cue}}=24.00$ minutes, $p=.070$), and were more likely to share photos of the campus festival with others ($M_{\text{cue}}=3.33$ vs. $M_{\text{no cue}}=2.50$, $p=.090$).

Study 2 used participants' own experiences to enhance the external validity and generalizability of the findings. This study employed four different occasions (Christmas, birthday, vacation, college party) as a within-subject factor and two cueing conditions (photo cue present vs. absent) as a between-subject factor for a 4 × 2 mixed design. Students ($N=237$) were asked to recall the last time they experienced each occasion. In the photo-cue present condition, participants uploaded their own photos, which were later presented along with the survey questions. Across the four occasions, participants were more likely to remember positive emotions when they viewed their photos of the occasion ($M=5.91$) compared to when they did not ($M=5.51$, $p=.001$). Photo cues also increased participants' desire to do similar activities ($M_{\text{present}}=5.73$, vs. $M_{\text{absent}}=5.25$, $p=.001$) and share their experiences with others ($M_{\text{present}}=5.59$, vs. $M_{\text{absent}}=5.17$, $p=.009$).

In Study 3, participants ($N=225$) watched a first-person video of "Jurassic World - The Ride." Then, they were randomly assigned to one of three cue conditions: "peak," "non-peak but popular photo spots," and "no cue." The scenes for the cues were identified from two separate pretests using a key-press task. Participants who actually experienced the ride remembered the greatest surprise when the peak cue was presented ($M=5.30$) compared to the non-peak cue ($M=4.11$, $p=.081$) or no cue ($M=4.08$, $p=.047$) conditions. In contrast, the cueing manipulation was not significant for participants who had no real-world experience with the ride.

Study 4 explores whether photo cues can selectively trigger positive and negative memories of a past experience. Based on a pretest using a key-press task, positive peak cues and negative peak cues were selected. A sample of 249 subjects participated in the main study, which employed a 2 (video type: emotional vs. non-emotional) × 3 (cue: positive peak vs. negative peak vs. absent) mixed design. The results revealed that those who saw the negative peak cue ($M=4.50$) recalled less enjoyment compared to those who saw the positive peak cue ($M=6.32$, $p<.001$) or no cue ($M=6.28$, $p<.001$). On the contrary, the negative-peak cue ($M=5.42$) increased the remembered sadness compared to the positive-peak cue ($M=4.72$, $p=.009$) or no cue ($M=4.72$, $p=.008$). These effects carried over to the behavioral measures, with subjects being less likely to recommend or purchase the emotional video when shown a negative-peak cue compared to a positive-peak cue or no cue (all p values < .03). There was no difference between the cue conditions on any of the measures for the non-emotional videos (all p s > .43).

This research contributes to the growing literature on the customer experience by exploring how consumers can "capture and keep" their past experiences and the associated emotional reactions with photographic images. The findings suggest that photos can enhance people's remembered emotions and influence future purchase intentions. This work extends prior research, which has focused on factors that increase customer enjoyment during, but not after, the experience (e.g., Barasch, Zauberaman, and Diehl 2018; Diehl, Zauberaman, and Barasch 2016; Nardini, Lutz, LeBoeuf 2019). It also shines light on how consumers remember their emotional responses and identifies the specific kinds of cues that will be most effective at evoking remembered enjoyment and encouraging positive recommendations and future purchase intentions.

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Choice Architecture in Financial Allocation Decisions: The Effects of Budget Partitioning

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EXTENDED ABSTRACT

In 8 preregistered studies, we find that consumers save more when savings accounts are partitioned into multiple sub-categories. We demonstrate that these partitioning effects are distinct from goal-setting, and identify three conditions under which partitioning effects are strongest. Our results provide evidence for a nudge that can increase household savings.

Eight pre-registered experiments ($N = 4,860$) demonstrate how choice architecture (e.g., of a fintech interface) can dramatically effect on how much money people choose to save versus spend. Specifically, we show that partitioning savings into sub-categories, each with its own designated saving amount, can increase total money allocated to saving. We show that partitioning effects are both independent of and stronger than the effects of setting specific savings goals. We also attribute this phenomenon to diversification bias over categories into which money is allocated, and identify key moderators of this phenomenon, adding to our understanding of partition-dependence and enhancing the effectiveness of savings nudges based on partitioning.

As an initial demonstration that partitioning can influence saving, we told 412 online participants in Study 1 to imagine they received a 20% raise in annual income and then randomly assigned to one of three conditions. In the *spending partitioned* condition, participants were asked to allocate their raise between seven spending categories (i.e., food, housing purchases, shopping, personal care, transportation, travel, health, entertainment, and all other spending) and one superordinate savings category. In the *savings partitioned* condition, participants made choices between four savings categories (i.e., emergencies, upcoming expenses, retirement, and all other savings) and one superordinate spending category. In the *control* condition, participants chose between one superordinate spending category and one superordinate savings category. To hold information constant across conditions, all spending and savings sub-categories were listed in parenthesis alongside the superordinate categories. We find that participants allocated a significantly larger percentage of their raise to savings in the savings partitioned condition ($M=79\%$, $SD=18\%$) relative the spending partitioned ($M=42\%$, $SD=28\%$) and control conditions ($M=61\%$, $SD=24\%$), $F(2,409) = 87.8$, $p < .001$.

To demonstrate the robustness of partition dependence to real incentives, we recruited 930 online participants in Study 2 from across the income distribution. We told participants that some respondents would be selected at random to receive a real \$1,000 cash prize. We then asked them to allocate this money between a spending category (a check to be mailed within 2 days) and a savings category (a separate check to be mailed in 6 months, paying 10% interest). In the *control* condition, participants allocated \$1,000 across one spending category and one savings category. In the *savings-partitioned condition*, participants allocated \$1,000 across one spending category and six savings categories (emergency savings; savings for upcoming expenses or purchases; savings for a vacation; savings for investments; retirement savings; all other savings). To hold information constant across conditions, these the six savings categories were listed in parentheses under the savings category in the control condition. Results showed that, controlling for logged annual income, participants in the savings-partitioned condition al-

located an extra \$179 to savings, compared to those in the control condition ($M_{\text{savings-partitioned}} = \717 , $SD = 286$; $M_{\text{control}} = \$558$, $SD = 288$; $F(1, 929) = 70.96$, $p < .001$).

In Study 3, we test our account against a salience and memory explanation in which explicitly unpacking reasons to save increases the amount saved. We asked 239 online participants to allocate a 20% holiday bonus into their budget in one of three conditions: In the *control* condition, participants indicated how much of this bonus they would allocate to a single savings versus spending account. In the *goals* condition, participants first selected 3 savings goals (e.g., safety net, retirement, education) then chose how much of their bonus to allocate into one overall savings account (with chosen savings goals and a residual “all other savings” category listed in parentheses) and one spending account. In the *goals+partitioning* condition, participants selected three savings goals, then chose how much of their bonus to allocate across one spending account and four partitioned savings accounts: three accounts earmarked with their chosen goals and one account for “all other savings.” Results showed that drawing attention to multiple reasons for saving had no effect on subsequent allocations to savings, whereas budget partitioning had a large effect. The amount allocated to savings in the *goals+partitioning* condition ($M = 71\%$; $SD = 31\%$) was significantly higher than both the *goals* condition ($M = 54\%$; $SD = 28\%$), and the *control* condition ($M = 53\%$; $SD = 31\%$). The difference between the goals and control conditions was not statistically significant ($p = .85$, 95%, CI [-10.32, 8.55]).

Study 4 demonstrated the robustness of partition-dependence to an increasing number of savings categories: we asked 316 participants to select either 1, 3, or 10 savings goals from a list of 12 goals and allocate a 20% raise in annual income to spending and various numbers of savings accounts. We found that partitioning savings into a greater number of categories increases total allocations to saving, with all pairwise comparisons showing statistically significant differences.

Studies 5-8 examine key moderators of partition dependence that are consistent with a psychological account that is driven by a bias to diversify (spread) allocations of a fixed sum over categories that have been explicitly identified for simultaneous allocation. Thus, we show that partitioning effects are significantly stronger when (a) participants are asked to enter their total monthly income to be allocated to savings and spending (vs. are not explicitly reminded); (b) they are prompted to allocate over an exhaustive set of both savings categories and spending (versus a nonexhaustive allocation only to savings categories); and (c) participants are asked to allocate to all spending categories simultaneously on the same page (vs. sequentially to one savings category at a time). We find that partitioning influences injunctive social norms, hinting at the possibility that the effect may be partially driven by consumers’ inferences about how much they should be saving.

Together, our findings suggest that budget partitioning can be used as an effective and non-coercive nudge for increasing household savings across the income spectrum. Our findings have important implications for improving the design of digital budgeting tools.

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Consumers Experience Tasks as Faster When Estimated Completion Times Are Framed in Smaller Units

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EXTENDED ABSTRACT

Across four studies (total N = 4587) we show consumers have speedier experiences when tasks are framed with smaller increments (seconds vs. minutes). We rule out anchoring (consumers do not anchor on numeric values) in support of a brevity account (smaller units signal task brevity).

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“Likers” and Posters: How anticipated interaction and attention focus interact to activate self-view and affect luxury value perception

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EXTENDED ABSTRACT

This study proposes that “liking” and posting, in conjunction with anticipated interaction, will shape self-view (self-as-distinct-from-others vs. self-as-connected-to-others) and influence functional and social luxury value perception, using SEM, experiment and text analysis of YouTube data.

Researchers have paid ample attention to the roles in which consumers engage in communication: passive lurkers or active posters, and speakers with a small audience or speakers with a large audience (Barash and Burger 2014; Schlosser 2005). This role is crucial because it influences subsequent consumer attitudes and behaviors. This study examines another role of consumers: “likers” and posters - “likers” who provide social rewards such as “likes”, retweets, and shares vs. posters who comment and post their opinion, expecting to receive “likes”. The present research proposes that likers’ self-focus (vs. posters’ other-focus) can activate independent (vs. interdependent) self-view only when anticipated interaction (i.e., to what extent do you anticipate interaction with the audience) is high since anticipated interaction promotes a more systematic information process (Augustinova et al. 2005) and increased involvement shifts the sequence of communication impact from ‘cognition-behaviors-attitude’ to ‘cognition-attitude-behaviors’ (Krugman 1965; Ray et al 1973). We also propose that activated independent (vs. interdependent) self-view positively affect functional (vs. social) luxury value perception. This hypothesis is routed in the following ideas. “Like” is assumed to function as a social reward that drives social media behavior (Lindström et al. 2021). Thus, “likers” act as reward providers, while posters can act as reward recipients. Giving “likes” activates brain regions associated with autonomic processes, also known as ‘gut feeling’, while receiving likes activates brain regions associated with mentalizing others (Sherman et al., 2018). Also, individuals tend to seek information about others when the other person has the potential to reward and punish (Berger and Douglas 1981). Thus, “Likers” may have a self-attention focus, while posters may have an other-attention focus. From this point of view, facing a highly anticipated interaction would threaten likers’ sense of self-worth, increasing the need for differentiation (Brewer 1991), which consequently may activate independent self-view. However, facing a highly anticipated interaction would encourage the posters’ sense of security, increasing the need for assimilation with others, which consequently would activate interdependent self-view. Independent self-view is related with self-oriented luxury consumption to secure superior quality, usability, and uniqueness (i.e., functional luxury value), while the interdependent self is related to other-oriented luxury consumption to pursue status, prestige value, and impression management (i.e., social luxury value) (Wiedmann et al. 2009). In addition, an interdependent self-view increases the reason-based decision-making of consumers (Hong and Chang 2015), related to functional luxury value.

Study 1 (N=458 MTurk, 187 female), using SEM, showed that independent and interdependent self-views mediated the relationships between social media interaction and luxury value perception. Direct paths were not significant. Specifically, social media interaction is related positively to both self-views. Independent self-view related to functional value ($b = .42, p < .001$) more than social luxury value ($b = -.13, p = .001$), while interdependent self-view related to social value ($b = .58, p < .001$) more than functional luxury value perception ($b = .26,$

$p < .001$). Also, the group difference analysis between “likers” (N=148) and posters (N=76) ($p = .036$) showed that likers’ social media interaction positively impacted both self-views, while posters’ social media interaction positively impacted only interdependent self-view.

In study 2 (N=346 MTurk, 151 female), we provided participants with a Halloween Facebook post and asked participants to indicate their intention to click the “like” button in the “liking” condition. In contrast, we asked those in the posting condition to write their comment on K’s post. In addition, participants in the high anticipated interaction condition were given posts in which poster “K” responded to all comments. In contrast, participants in the low anticipated interaction conditions were given posts in which poster “K” was not responding to comments. They then answered the questions about social luxury value perception, independent and interdependent self-views. Manipulation checks confirmed likers have self-focus while posters have other-focus during their tasks. Dominant self-view was predicted by a two-way interaction between “liking” vs. posting and anticipated interaction. Under high anticipated interaction, likers have a dominant independent self, while posters have a dominant interdependent self ($F(1, 341) = 4.977, P = .026$). However, there was no significant difference in self-view under low anticipated interaction ($P = .46$). Also, a mediation analysis (Hayes model 7) revealed that the effect of “liking” vs. posting (self vs. other focus) on social luxury value perception was mediated by dominant interdependent self and moderated by anticipated interaction (95% CI, $[-.03, -.13, .06]; = .10, [.01, .18]$; index of moderated mediation = .13, 95% CI, $[-.01, .25]$). What’s more, two moderated serial mediation models (Hayes model 83) showed that in high anticipated interaction, posters (vs. likers) preferred the social value-superior option to the functional value-superior one and preferred the conspicuous choice to the inconspicuous choice.

In study 3, we examined the data set of 201 video subtitles exceeding 10,000 views about Louis Vuitton gathered on YouTube. We coded luxury value (functional and social) in subtitles, counted the number of “you pronoun” which is related to other-focus (Barasch and Berger 2014), “I pronoun”, related to independent self-view, “we pronoun”, related to interdependent self-view (Brewer and Gardner 1996), and gathered the counts of views, likes, dislikes of each video, and the number of subscribers of each video channel (i.e., each poster). In study 3, the number of subscribers was used as a measure of the anticipated interaction (Regression analysis showed that the number of subscribers was positively associated with the anticipated interaction such as views and “likes”). Mediation analysis by multiple regression shows that the poster’s interdependent self (We) partially mediates the impact of the interaction between anticipated interaction (subscribers) and other focus (you) on social luxury value perception. We also examined the liker’s luxury value perception. T-test result shows that likers are more likely to view video with social value than functional value and more likely to like and dislike video with social value than those with functional.

This study contributed to uncovering the mechanism that the self-view can be activated by social media behaviors and proving that activated self-view affects not only luxury value perception but also product choice. Our findings potentially inform the persuasive advertising messages for different social media users, “likers” and posters.

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Exploring an Alternate View of Co-Creation

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EXTENDED ABSTRACT

This paper examines price perception in co-creation. Our results suggest that co-creation does not really result in any perception of unfairness. Moreover, contrary to expectations, cueing the consumer with the cost incurred by the firm does not influence the perception that the firm is making higher profits.

Co-creation has emerged to be an important concept in management theory and practice. Academic research in innovation, marketing, operations, public policy, and corporate social responsibility is engaging important questions regarding co-creation (Atakan et al. 2014; Galvagno and Dalli 2014; Kull and Heath 2016; Voorberg et al. 2015). However, so far, extant research has ignored a significant ethical problem that co-creation raises. Since the customer also uses his resources in co-creation, it will not be ethical from the perspective of firms to ignore it. For firms to take action to remove this ethical problem, a good understanding of how customers perceive this ethical problem is essential.

Since customers use their resources in co-creation, they also experience costs with firms. Since money is the medium of exchange, both firms and customers form perceptions regarding the transaction in terms of costs and prices. Most of the transactions are valued and assessed by customers of their price in cost-plus profit terms. According to Dual Entitlement theory, customers believe that firms are entitled to a fair profit, and customers are entitled to a fair price. However, these perceptions of fair profit and a fair price are proportional to the costs or the resources used by each party in the transaction. Thus, customer perceptions of this ethical paradox due to customer resource utilization will be most evident in the fairness perception of prices and customer judgments regarding costs. Therefore, we look into co-creation using theories regarding price and cost to understand the nature of the ethical question that co-creation poses.

STUDY

We used scenario-based experiments to test the hypothesis. Experimental scenarios are considered valuable and used extensively in research on price and fairness (Campbell 1999; Collie et al. 2002; Kukar-Kinney et al. 2007; Nguyen and Meng 2013).

METHOD

We manipulated co-creation, in the same manner it has been manipulated in extant literature (Heidenreich et al. 2015; Sugathan et al. 2017a). We created an experimental scenario in which co-creation was manipulated while participants imagined that they had purchased a bicycle. In the low co-creation situation, the customer selected and assembled the bicycle parts on her or his own. In the high co-creation situation, the participant read a description of the various parts and then selected and assembled the parts on her or his own.

We measured participants' perceptions of the fairness of the price of the bicycle indirectly in a manner consistent with price-fairness literature (L. E. Bolton et al. 2003). We asked them whether the company was earning a fair profit. The perceived fairness of a price is influenced by the perceived cost of the product and the profits the company is perceived to have earned (Bearden et al. 2003; Thaler 1985). The design of the experimental scenario thus avoids the difficult question

of what a reasonable price is by focusing on consumers' perception of cost and the perception of profits the firm is entitled to. Dual Entitlement theory (Kahneman et al. 1986) suggests that consumers think firms are entitled to a reference profit. Using a cost-based measure for measuring price fairness has the added advantage of controlling for the effect of increased value judgment of the benefits to the consumer.

We also told participants we were interested in their impressions of the bicycle company's financial status. We asked them to estimate the proportions of the bicycle's price that was allocated to material costs and remaining costs and how much is left as profit. We expected that when participants, as customers, perceived that the company was exploiting them by failing to compensate them for their work, they would express their perception of the firm's unfairness by suggesting that it should receive less profits, which implies that the firms should lower the price. In other words, we expected that participants/customers would consider that fewer profits are fair when a product has been co-created rather than not co-created.

We also manipulated the set-ups costs with regard to the interaction of the effect of the triggering of set-up costs and customer fairness perception. We followed the procedure used in extant research for manipulating set-up costs (L. E. Bolton et al. 2003). The set-up costs were manipulated by cueing and including them on a separate line along with the breakup of costs and profits. When the set-up costs were not cued, any mention of them was omitted.

Sample

In study 1, 164 participants (84 females and 80 males, Mage = 35.79 years, SDage = 11.26 years) were recruited from Amazon Mechanical Turk (<https://www.mturk.com/>) for a small compensation. The sample size was predetermined to ensure that it had at least 90% power for determining a medium- to high-effect size (Cohen 1988). The participants were randomly allocated to one of the four conditions.

RESULTS

A two-way ANOVA with an interaction between co-creation and set-up costs was performed. We expected the interaction effect between co-creation and set-up costs to be significant. However, the results indicated no such effect ($F(1, 160) = 1.27, p = .26$), failing to reject the null hypothesis. In the absence of the interaction effect, we tested for the main effect of co-creation on perceptions of profit. We expected perceptions of profit to be lower in the co-created state. However, we did not find significant evidence of the differences in the perceptions of profit for the low co-creation (Mean = 27.67) and high co-creation (Mean = 27.27) states ($F(1, 162) = .035, p = .85$).

When all the results are taken into account, they do not suggest that participants perceived the firm to be unduly profiting from using consumer resources in co-creation. If they had had this perception, they would have indicated lower profits for the firm in the co-creation state. We also found that cueing the facility's set-up costs did not have an impact. In sum, perceptions of unfairness due to the feeling of exploitation may not have been present in the co-creation state.

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Romantic Rebuttals: Moralistic Tensions in Positive Marketing within the Online Dating Industry

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EXTENDED ABSTRACT

Combining mass media data with depth interviews from actively dating consumers ranging in sexual orientations and marketers of a leading dating app company, this research examines moralistic tensions that arise as consumers construct and reconstruct perceptions of “acceptable” dating practices against marketers’ deliberately inclusive product offerings and positive marketing messages.

Romantic Rebuttals: Moralistic Tensions in Positive Marketing within the Online Dating Industry

Positive marketing, defined as any marketing activity that creates value for the firm, its customers, and society (Lerman and Shefrin 2015), engages in cultural, political, or legal debates (Gopaldas 2015) and inevitably has fans and foes. Successful campaigns can build strong connections with targeted consumers and raise consumer skepticism towards marketers’ intentions and authenticity due to moral judgments of stigmatized businesses (Harmeling, Mende, Scott and Palmatier 2021).

What is considered morally “good” is culturally defined and thus contextually dependent, which is evident in institutionalized differences guiding what is considered acceptable or unacceptable (laws, religious or political values; Haidt 2013). Marketers can influence the acceptability of particular moral standards (Penaloza and Gilly 1999). Yet changing a morally accepted perception requires contradicting current prevailing worldviews and potentially isolating consumers who adhere strongly to these moral frameworks. To date, few studies examined how deliberately inclusive messaging aimed at challenging dominant cultural narratives to connect with marginalized consumers generates moralistic tensions in positive marketing.

Using online dating as a theoretically rich context for studying moral standards’ active negotiation, this research explores how moralistic tensions manifest at marketplace’s micro, meso, and macro-levels. This research examines (1) how market offerings and messaging shaped the evolution of “acceptable” romantic dating practices and (2) how marketers and consumers collectively negotiate “acceptable” dating practices through the resolution of arising moralistic tensions.

Context and Method

The marketplace has recently entered and influenced the previously sacred practice of identifying a romantic partner and engaging in a romantic relationship (Anderson et al. 2020; Hardey 2004). Online dating enables consumers to build profiles in which they present and market themselves to potential dating partners and view profiles of others allowing them to “shop” for potential partners.

To answer our first research question, we analyzed 561 dating-related newspaper and magazine articles published between 1989 and 2021 utilizing Nexis Uni database (Humphreys and Wang 2018; Berger et al. 2020). To answer our second research question, we partnered with OkCupid, a leading online dating app, to conduct online in-depth interviews with eight dating app users ranging in sexual orientations and gender identities recruited from an online panel (age-range= 22-38, average duration= 60 minutes) and three marketers from our partnering firm. Users answered semi-structured questions

about their dating experiences and marketers described marketing practices.

RESULTS

Evolution of Dating

Media data uncovered three distinct eras in the evolution of dating marked by tension in the portrayal of dating practices and coinciding with the infiltration of the marketplace into dating practices:

Glamorization and vilification of dating (1990s). While many articles chronicled and glamorized celebrity dating practices, others warned of risks of date rape creating a disconnect between the stylized and valorized celebrity dating and implied risks of layperson dating practices.

Legitimization vs. commoditization of dating (Early 2000s). In 1995, the first online dating website match.com was launched (Kauflin 2015). The media attempted to legitimize dating via different technologies (e.g., instant messaging), yet emerging hook-up culture’s descriptions threatened this legitimacy. Legitimizing articles provided suggestions on selecting proper partners and introduced specialized dating sites based on religion and occupation. Other articles focused on hook-up culture describing dating’s dilution to looks and the dating community as a commodity based “meat market.”

Diversification vs. politicization of dating (After 2010). Political dynamics, such as racial discussions, me-too movement and women’s marches, impacted how people dated. Although some articles highlighted dating’s growing diversity with discussions of multi-racial couples, dating for non-heterosexual people, and women’s empowerment in dating via technology via the help of better data analyzing and matching capabilities, other articles discussed how political divides influence dating culture.

Collective Negotiation of Acceptable Dating Practices

Interview data revealed three moralistic tensions that emerged from consumer and marketer practices in online dating:

Objectification of others vs. moral self-preservation. Informants often described their date selection criteria as based on looks while acknowledging this could be a shallow criterion. They also acknowledged their self-marketing practice during a dating interaction and simultaneously reflected on the diligence to appear authentic and genuine within the market paradigm generated in the app. Marketers discussed the challenges in calibrating app questionnaires to allow for consumers’ self-disclosure because of the conundrum they face in potentially offending users by the lack or conversely the presence of self-categorizing options. These practices demonstrate the tension between objectifying others and performing moral self-preservation.

Judging others vs. guarding the self. Marketers discussed app functions that enable users to share personal beliefs upfront in order to enhance their ability to match with other users. However, one informant lamented on the expectation of deep self-disclosure on the “first date” and suggested such discourse is potentially dangerous. Another informant discussed the choice of venue for his dates as establishing a “safe space” to guard against potential harm or deceit

from the matched user. Thus, our data suggest dating apps' attempts to enable and empower users toward a better matched romantic partner can be perceived as intrusive or a potential threat that triggers (sometimes elaborate) users' self-protective strategies.

Multiplicity vs. exclusivity. Marketers reported that dating apps allow users to match with multiple people simultaneously. However, informants had to deal with moral tensions between the inherent multiplicity of online dating and the cultural expectations of exclusivity. Our findings show that some informants embraced the multiplicity of the dating culture and play by its rules "for the casual type of phase", while others develop their own rules such as "focusing on one person at a time." Consumers prefer to customize their communication and behavior to protect their moral identities from the threat of encapsulation into the typical online dater stereotype.

DISCUSSION

This research highlights the collective negotiation of morally acceptable dating practices between marketers and consumers. Our research shows that positive marketing and activism-oriented messaging in a historically contested domain (e.g., sexuality and dating culture) give rise to moralistic tensions that must be navigated to appeal to more diverse segments in the market without isolating majority consumers.

REFERENCES CAN BE PROVIDED UPON REQUEST.

Non-use Neglect: How Permissive Parenting Shapes Product-use Efficiency in Adulthood

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EXTENDED ABSTRACT

We propose that parental permissiveness predicts adults' tendency to habitually neglect physical possessions when they do not serve a currently active goal or desire, a tendency we refer to as *non-use neglect*. We distinguish non-use neglect from other constructs, and show that it increases product replacement frequency.

Consumption behavior can have negative consequences. Companies are increasingly prioritizing efforts to mitigate these consequences by reducing the material product waste consumers generate (e.g., through sustainable packaging formats or upcycling programs), and the need to better understand what drives these consequences has generated a great deal of research. The present research departs from literatures showing how stable attitudes (Alwitt and Pitts 1996; Paul, Modi, and Patel 2016) and proximal "nudges" (Jung and Mellers 2016) shape sustainable behavior, by proposing that consumers also have different habits for how they possess objects, which are independent from beliefs and attitudes related to sustainability, and which predict consumers' chronic tendency to generate product waste (i.e., the waste occurring at the end of a possession's life span).

We introduce *non-use neglect*, a behavioral construct that describes the (in)efficiency of an individual's product usage during the period in which they possess a product. We explore the extent to which consumers habitually treat their possessions in a manner that threatens (versus ensures) the utility of their possessions when it comes time to use them; i.e., when a relevant need or want is activated. Consumers who possess products efficiently are able to use current possessions until their utility is exhausted, and must only purchase new products when necessary, leading to less wasteful, more sustainable consumption. In contrast, consumers who are relatively more neglectful of possessions that are not currently in use are more likely to (be forced to) engage in inefficient forms of consumption behavior when relevant needs or wants become activated, such as searching for misplaced possessions, or purchasing replacements for lost or damaged possessions, when a need or want is suddenly activated. As a result, non-use neglect predicts how wastefully (vs. efficiently) consumers use their products across the products' life spans.

The present research accomplishes three overarching goals. First, we develop a method for reliably measuring non-use neglect and assess its validity. Second, we show how individual differences in non-use neglect form. As non-use neglect describes habitual behaviors, these habits should develop based on patterns of reinforcement contingencies that consumers experience during childhood. Using the parenting styles framework (Darling and Steinberg 1993), we show that it is possible to predict a consumers' level of non-use neglect via information about how permissive the consumer's parents were when the consumer was growing up. Thus, a practical implication of our research is to help parents understand how their parenting strategies may result in long-term patterns of suboptimal consumption behavior, and potentially adopt strategies that result in more responsible behaviors by future generations. Third, we document downstream consequences and boundary conditions of non-use neglect. In particular, we show that children of more permissive parents are quicker to replace durable products and fast-moving consumer goods (FMCGs) than children of less permissive parents, and show that the effect of permissive parenting on these behaviors is eliminated when the utility remaining in one's current possession is diminishing.

Study 1 ($n = 299$) aimed to develop a self-report measure of the inefficient product-use behaviors linked to non-use neglect, and test whether permissive parenting is an antecedent of non-use neglect. Four (out of seven total) items emerged from factor analysis, which explained 56% of the overall variance, and had adequate reliability ($\alpha = .73$). The four items measured frequency of everyday behaviors reflecting negligence of possessions not in use, such as letting food go bad or misplacing one's keys/phone when not presently in use. The items formed the measure of non-use neglect, which was predicted by our permissive parenting measure (Buri 1991) even after controlling for environmental concern, frugality, materialism, budgetary constraints, and childhood SES ($b = .28$, $t(292) = 5.14$, $p < .001$).

Preregistered study 2 ($n = 198$) aimed to replicate study 1 using a measure of cognitive accessibility of one's possessions that are not currently in use, but are linked to regularly activated goals/needs. In the treatment condition, participants listed all the possessions they were not currently using, but would likely use over the next 24 hours. In a control condition, participants listed the possessions they remembered using over the past 24 hours. Permissive parenting interacted with the manipulation ($b = -2.19$, $t(194) = -2.59$, $p = .010$), negatively predicting the accessibility of one's possessions linked to goals/needs likely to be activated in the near future ($b = -1.23$, $t(194) = -1.96$, $p = .051$), but not the recall of possessions recently used ($b = 0.96$, $t(194) = 1.69$, $p = .092$).

Study 3 ($n = 199$) shows that permissive parenting predicts consumers' plans to upgrade their current everyday possessions, including their sunglasses, phone, and shoes ($b = .34$, $SE = .07$, $t(197) = 4.69$, $p < .001$), and that non-use neglect mediates this effect, even after controlling for materialism, childhood SES, parental warmth, and parental authoritativeness ($b = .06$; $SE = .03$; 95%CI = [.011, .140]).

In preregistered study 4A ($n = 599$), participants viewed various images of FMCGs (orange juice, toilet paper, hand soap), where in one condition the FMCGs were partially-consumed, and in the other condition they were nearly empty. Permissive parenting interacted with amount remaining in predicting participants' reported likelihood of opening a new version of the displayed product ($b = -.49$, $t(595) = -6.03$, $p < .001$); while permissiveness positively predicted replacement of the partially-consumed FMCGs ($b = .49$, $t(595) = 8.58$, $p < .001$), it did not predict replacement of the nearly-empty FMCGs ($b = .00$, $t(595) = -.07$, $p = .942$).

Study 4B ($n = 391$) conceptually replicated study 4A, but by having participants find real products (shampoo and toothpaste) they regularly consume in their house, and report their actual likelihood of replacing each product in the next consumption episode, as well as how much of each product remained. Permissive parenting interacted with amount remaining ($b = .01$, $t(383) = 3.40$, $p < .001$), whereby the conditional positive effect of permissiveness on replacement likelihood became nonsignificant when 47.8% or less of the products remained on average.

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Pious Consumption in Sacred Time as an Effortful Process

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INTRODUCTION

How do followers experience sacred time in religious sojourns? I rely on Eliade's argument of sacred time to uncover the idea that for particular Islamic movement participants the pathway to spirituality is not only an effort to recreate a utopian period of the past, but the re-creation process itself is laced with difficulties due to the modern environment that it is contained within.

Sacred Time

Mircea Eliade (1959) develops the concept of sacred time and place. He proposes that religions have notions of an original time around which myths are created and subsequent rituals constructed. This primordial time establishes the first instance of the sacred and establishes structure around which the religion and its practices are based. Traditional societies uphold that power emanates from this original sacred time (Eliade 1968). The original time sets the rules for propriety. Myth is an attempt to translate the sacred time to those living in the present which also introduces the idea of nostalgia in religions and the effort to recreate nostalgic moments (Eliade 1968). In essence, Eliade sees sacred heroes, actions, commandments, etc. being engrained in myth and these sacred models are templates to be copied by adherents in later times. Hence, the sacred is instrumental in giving religious believers purpose and direction towards attaining spirituality. It is in emulating the models of the sacred that an adherent has any value.

Eliade (1959) claims that by deserting mythical beliefs and accepting time as a linear, historical concept, man has incurred anxieties upon him- or herself. Traditional practitioners of religion through escapism into sacred time save themselves from such tensions by revisiting glories of times past and hence reject the linearity of time. Hence, time can be broken, non-linear, non-homogenous when it reminds one of the past (nostalgia). One brings the past to the present.

RESEARCH CONTEXT AND METHOD

The *Tablighi Jamaat* (TJ) is a revivalist Islamic movement that takes its roots in 1926 in India and spread globally. According to one estimate, the movement has more than 80 million adherents with a major chapter in Pakistan (Rauf, Prasad, and Razzaque 2018). TJ enables Muslims to recreate rituals and practices that are laid out in the Sunnah (or the Prophetic way) and passed on generationally through religious scholars and elders through narrations and documented in religious texts. Some of the rituals are mosque-based practices of textual reading, group consultation, preaching in neighborhoods around mosques and travelling in group sojourns to learn and practice the art of proselytization (Rauf, Prasad, and Ahmed 2018). Through these myths and rituals, TJ provides Muslims an identity and a sense of purpose in life.

The sojourns are a central component of the TJ program. TJ emphasizes adherents to perform these excursions as a means to relive the Golden era of seventh century Islam as well as empirically manifest the position of being non-committal to the material things of this world. Hence, the sojourns serve as a period of environmental isolation that may be considered dedicated time away from one's everyday profane duties to practice the sacred life of a nostalgic, historic, and sacred period.

This paper narrates in autoethnographic form my experiences as I partook a 40-day sojourn with the TJ. The method is suitable as it helps us understand the challenges one faces, from a first-hand

perspective, as one aims to participate in sacred time. Using both memory work and story-work, autoethnography explicates the narrative of the researcher's own life within the context of the site wherein it unfolds (Prasad 2019). Autoethnography directs the gaze of the researcher inward towards the self and seeks to explain how the researcher interacts with culture and vice versa.

On this tour, I was accompanied by my wife which in TJ circles is known as the men with ladies jamaat. The itinerary for the sojourn started from Lahore, Pakistan to Raiwind to the Chitral district and back.

Autoethnographic Vignettes

I divide the 40-day period into three phases, where I see differences in how the sacred and profane intermingle: an initial period, a middle period, and an end period. The occurrences are not exclusive to each time period, but can overlap; however, they represent significant mental and social process that were salient during the particular time of analysis.

DISCUSSION

This paper concludes that sacred time in a sojourn is a not a pure break from the mundane and requires continuous effort from adherents to keep the sacred pure from the profane. This study expands on Eliade's concept of sacred time by detailing a negotiated and variegated lived experience that indicates nuance in the concepts of the sacred and profane rather than a distinct dichotomous divide; one that involves constant negotiation both mentally and socially regardless of they inhabit the temporary enclave of a sojourn or are at home. In doing so, I animate the pathway towards attaining piety, one that is far from linear, does not rely only sacred space and is beset by constant challenges from the modern world within which the pathway is traversed.

Time is intricately linked to behavior, speech and mostly thoughts. One can detach oneself physically from the profane world, but that does not entail that one mentally does so as well or the habits that are engrained in you also suspend. The latter takes time; hence, TJ sojourns are a *sacralizing process* rather than pure sacred time.

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Special Sessions

Consumption Sacrifices in Relationships: When and Why Consumers Give Up Money, Time, and Preferences for Others

Chair: Peggy J. Liu, University of Pittsburgh, USA

Paper #1: The (In)Visibility of Consumption-based Sacrifice

Ximena Garcia-Rada, Texas A&M University, USA
Tami Kim, University of Virginia Darden School of Business, USA
Peggy J. Liu, University of Pittsburgh, USA

Paper #2: Choosing More Food for Others

Ignazio Ziano, Grenoble University, France
Peggy J. Liu, University of Pittsburgh, USA

Paper #3: When Mine Becomes Ours: Caregiving and the Effects of Choices Made for Others on Subsequent Choices for the Self

Kelley Gullo Wight, Indiana University, USA
Peggy J. Liu, University of Pittsburgh, USA
Lingrui Zhou, Duke University, USA
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SESSION OVERVIEW

Much consumer behavior research focuses on what individual consumers need or want for consumption and how they obtain such consumption themselves. Yet, this focus overlooks that consumers often willingly forego their own consumption-relevant resources (money, time, preferences) to help others address their consumption needs and wants across four choosing-for-others contexts: everyday favors, gift-giving, joint consumption, and caregiving (Liu, Dallas, and Fitzsimons 2019). Three papers thus examine “consumption-based sacrifice,” an important yet understudied aspect of consumers’ lives.

The first paper, a conceptual paper, proposes a new view on consumption-based sacrifice as oft-invisible across different choosing-for-others contexts. This view is contrasted with the prevailing consumer research view, which focuses on oft-visible consumption activities that consumers do for themselves. These authors delineate how consumption-based sacrifice can be made more visible to researchers, marketers, and sacrifice recipients, illustrating the array of sacrifices of different resources (time, money, preferences) along the customer journey. They offer a propositional inventory on relational factors motivating consumers to perform more (vs. less) visible sacrifices and factors shaping the visibility of such sacrifices to recipients.

The second paper examines portion size choices for others across multiple choosing-for-others contexts, examining whether consumers choose larger or smaller portions for others, compared to multiple benchmarks—(1) how much they choose for themselves, (2) how much others want to receive, and (3) predictions about how much others want to eat. Eight pre-registered studies show that consumers choose larger portions for others across three choosing-for-others contexts (Liu et al. 2019)—everyday favors, gift-giving, and joint consumption—even sacrificing their own portions. One driver is politeness considerations given uncertainty about others’ consumption. When responsibility considerations dominate instead, as in the fourth context of caregiving, consumers choose larger portions of healthy food, but smaller portions of unhealthy food, for others.

The third paper focuses on one specific choosing-for-others context, caregiving, examining how choices for dependents influence caregivers’ subsequent choices for themselves. While prior work has focused on a dichotomy, wherein choices for others (self) are based on other-needs (self-needs), this paper offers a theory regarding when and why even choices for self involve sacrificing one’s own preferences and considering other-needs. Four pre-registered studies test the effect of choosing for a child on parents’ choices-for-the-self, focusing on the role of potentially sharing choices-for-the-self with one’s child. Potential sharing increased parents’ likelihood of an unhealthy subsequent self-choice if they first chose a healthy option for their child (a “balancing” effect), but not if they first chose an unhealthy option or made no initial choice for their child. The balancing effect was driven by concerns about whether one’s child would consume healthy options chosen for them. Altogether, this research shows how caregivers sacrifice even when choosing for the self.

This session leverages diverse theoretical perspectives to offer insights on when, why, and how consumers make sacrifices for a wide range of relationships across four different contexts involving others. This session should appeal to a broad ACR audience, including researchers studying consumption within relationships, resource valuation, scarcity, food decisions, and sequential choices.

The (In)Visibility of Consumption-based Sacrifice

EXTENDED ABSTRACT

The prevailing lens through which consumer behavior researchers have studied “consumption” is by examining how much consumers value different attributes and products, and the utility consumers derive from their consumption (e.g., the enjoyment or the meaning they derive from their consumption experiences). One assumption embedded in much of this research is that consumption behaviors are visible to researchers and marketers; that is, observation of their occurrence reveals information about consumers’ valuation of and utility from products. However, we propose that there are many instances in which one’s consumption behaviors are “invisible” to researchers and marketers (i.e., they do not reveal information about one’s own valuation of and utility of products).

We propose that this invisibility is especially likely to occur when consumers make consumption decisions for or with others, ranging from one’s romantic partner to children to friends to colleagues (Simpson, Griskevicius, and Rothman 2012; Liu et al. 2019). In such situations, consumers often do *not* get what they need or want, but rather choose to willingly give up their own consumption-relevant resources—such as their time, money, or preferences—when making these decisions, for the sake of their relationship. We formally refer to these behaviors as “consumption-based sacrifices” and propose that despite often being invisible, they nonetheless warrant researchers’ attention.

Our conceptual paper opens by arguing that it is important to consider consumption-based sacrifices because they can change: (1) how we conceptualize consumption (i.e., consumption-based sacri-

fices involve consumption-by-omission activities), (2) how we measure consumption utility (i.e., consumer researchers need to expand beyond simply assessing the actor's satisfaction to fully capture the utility gained from consumption of both actors and recipients), and (3) how we consider relational implications of consumption (i.e., consumption-based sacrifices may benefit or harm the relationship). Indeed, this view of oft-invisible consumption-based sacrifices differs from two prevailing consumer research perspectives: (1) that of most consumer research, which focuses on consumption activities for oneself rather than consumption-by-omission for others, and (2) that of the relatively limited consumer research on close relationships, which focuses more narrowly on "visible" sacrifices of preferences within joint consumption.

To make consumption-based sacrifices more systematically visible to consumer researchers, marketers, and sacrifice recipients, our conceptual paper then showcases an array of different types of consumption-based sacrifices that consumers may make along all of the customer journey stages—pre-purchase, purchase, and post-purchase (Lemon and Verhoef 2016; Hamilton et al. 2021), involving three different consumption-relevant "resources": time, money, and preferences. Of note, we suggest that preferences, although not a traditional "resource," should be considered a resource in consumption, as people have preferences that they can use to help achieve their aims when making consumption decisions and as preferences are sometimes sacrificed in making consumption decisions within relationships (Garcia-Rada, Anik, and Ariely 2019; Wu, Moore, and Fitzsimons 2019).

Finally, we derive a propositional inventory from our (in)visibility of consumption-based sacrifice account, examining the factors that (1) motivate consumers to perform more (vs. less) visible types of sacrifices, and (2) shape the ultimate visibility of different types of sacrifices to sacrifice recipients. Specifically, we suggest that the visibility of consumption-based sacrifices to consumers in the recipient role likely varies by the consumption-relevant resource that is sacrificed (time, money, or preferences) and the customer journey stage (pre-purchase, purchase, or post-purchase). This differential visibility will not only shape how consumers choose to sacrifice—such that their actions become more visible to their recipients—but also have implications for relationship well-being. Thus, we offer a propositional inventory to study (1) how relational antecedents lead consumers to make sacrifices that are more versus less visible to their recipients and (2) how different sacrifice characteristics can shape recipients' recognition of sacrifice actions, with consequences for relationship well-being. Specifically regarding (1), we develop propositions around how three key relational dimensions—orientation, stage, and power—influence visibility motivations and thus shape the types of sacrifices consumers make at different stages of the customer journey. Regarding (2), we develop propositions around how different characteristics of sacrifice actions may shape the recipient's recognition of sacrifice actions via three key intermediaries: the extent to which recipients are (a) exposed to certain sacrifices, (b) pay attention to certain sacrifices, and (c) perceive certain sacrifices as genuine and costly.

Taken together, this conceptual paper advances a new view treating consumption-based sacrifice as often invisible, offering relevance to researchers studying consumption in multiple research streams, including on consumption within close relationships, resource valuation, scarcity, goal pursuit, and identity. Additionally, of relevance for consumers' well-being, we suggest that consumers' relationships can suffer when recipients fail to recognize the full range of consumption-based sacrifices that others engage in for them and prompt a more complete recognition. Finally, marketers can develop

and market more nuanced offerings sensitive to the needs of all consumers involved by leveraging a more complete understanding of how customer journeys are affected by consumption-based sacrifice dynamics.

Choosing More Food for Others

EXTENDED ABSTRACT

Consumers' portion size choices are important, because portion sizes are a major contributor to obesity (Ledikwe, Ello-Martin, and Rolls 2005) and can contribute to food waste (Block et al. 2016)^{1/2}/₄. Yet research has largely focused on consumers' portion size choices for themselves (Chandon and Ordabayeva 2009; Haws and Wint-erich 2013; Cornil and Chandon 2016; Haws et al. 2020), despite consumers often making portion size choices for others (e.g., for one's child, a partner, a guest as a dinner party host).

We examine portion size choices across four choosing-for-others contexts conceptualized by Liu et al. (2019): everyday favors, gift-giving, joint consumption, and care-giving. We ask: Do consumers choose smaller, similar, or larger portion sizes for others, compared to multiple benchmarks—(1) how much they choose for themselves, (2) how much others want to receive, and (3) predictions about how much others want to eat?

One possibility is that consumers choose smaller portion sizes for others (e.g., as they do in economic games in which they allocate less money for others Bolton, Katok, and Zwick 1998). Another possibility is that consumers choose similar portion sizes for others, believing that matching increases affiliation (Lowe and Haws 2014; Woolley and Fishbach 2017; Liu, McFerran, and Haws 2020). A third possibility, our focal account, is that consumers often choose larger portion sizes for others.

Our prediction builds on a model wherein we distinguish between choice and consumption stages. We suggest that when choosing for the self, these stages are tightly coupled: the portions consumer choose for themselves are typically what they will consume. By contrast, when choosing for others, the stages are decoupled: the portions consumer choose for others may not be what the other person actually consumes. Given this consumption uncertainty, we propose that politeness considerations (i.e., consideration of others' needs; Fukushima and Sifianou 2017) prompt consumers to choose larger portion sizes for others. The logic is that choosing too small of a portion for another person would be inconsiderate of the other's needs, causing hunger. By contrast, choosing too large of a portion for another person could mean that the other person overeats, wastes, or saves the food for later—none of which is necessarily reflective of a chooser being inconsiderate of the other's needs.

We propose that politeness considerations are one driver of choosing larger portion sizes in three choosing-for-others contexts in Liu et al. (2019) (everyday favors, gift-giving, joint consumption). In the fourth context, care-giving, responsibility considerations, rather than politeness considerations, are dominant (Benton 2004; Lindsay et al. 2006). Thus, we propose that when choosing food for dependent children, consumers will choose larger portions of healthy food, but smaller portions of unhealthy food, for others.

We present eight pre-registered studies. First, studies 1 (everyday favors), 2 (gift-giving), and 3 (joint consumption) show that consumers choose larger portion sizes of food for others in three choosing-for-others contexts. Studies 1-2 involved incentive-compatible choices. In study 1, lab participants (N=160) chose more baby carrots when randomly assigned to choose for another participant (M=5.39, SD=4.16) versus themselves (M=3.79, SD=2.86; $p=.005$). In study 2, lab participants (N=247) chose a gift bag with more brownie bites

when randomly assigned to choose for a friend ($M=3.07$, $SD=0.97$) versus themselves ($M=2.28$, $SD=1.25$; $p<.001$). In study 3, participants ($N=601$, MTurk) divided snacks between themselves and another person. They chose larger portion sizes for another person (vs. self) both when the snack was abundant (other: $M=5.32$, $SD=2.09$ vs. self: $M=4.14$, $SD=2.29$; $p<.001$) and scarce (other: $M=5.58$, $SD=1.59$ vs. self: $M=4.42$, $SD=1.59$; $p<.001$). Thus, the effect happens even when sacrificing one's own portion sizes.

Study 4 then showed that this effect generalizes across many different choice targets. Participants ($N=812$, MTurk) were randomly assigned to choose a snack portion size for themselves, a typical participant, a colleague, a family member, one's best friend, or a celebrity. As figure 1 shows, participants consistently chose a larger portion size for others than for themselves ($ps .077$ to $<.001$). Study 5 ($N=600$, Prolific) showed that choosing larger portion sizes for others is miscalibrated, as consumers want to receive portion sizes smaller than those chosen for them ($p<.001$).

Studies 6-7 tested politeness considerations as one driver of this broad phenomenon. Study 6 ($N=454$, Prolific) had a 2(choice for self vs. other) \times 2(politeness vs. rudeness) between-subjects design, finding a significant interaction ($p<.001$) wherein consumers chose larger portions for others (vs. self) when they had a politeness goal ($p<.001$) but smaller portions for others (vs. self) when they had a rudeness goal ($p<.001$). Study 7 ($N=449$, MTurk) had a 3(choice for self vs. other vs. other pays) design, wherein in the other pays condition, participants chose a portion size for another person and were told that the other person would have to pay per unit selected for them (such that choosing a larger portion size than this person would actually consume would no longer be considerate of their needs). Participants chose a larger portion size in the other condition than in either the self condition ($p<.001$) or the other pays condition ($p<.001$), which did not differ ($p>.10$).

Finally, studies 8a-8b examined the non-caregiving context (8a: $N=800$, Prolific) and the care-giving context (study 8b: $N=802$, Prolific parents of child(ren) ages 2-17). We also expanded to a new benchmark—comparing choices for others with predictions about how much others want to eat on that occasion. Both studies 8a-8b had a 2(choice for other, prediction about other's desired consumption) \times 2(healthy, unhealthy) between-subjects design. As figure 2a shows, when choosing for fellow adults (when politeness considerations are likely strong), consumers chose larger portion sizes for others (vs. how much they predicted others wanted to eat on that occasion) both for a healthy food ($p<.001$) and an unhealthy food ($p=.01$). By contrast, as figure 2b shows, when choosing for one's child (when responsibility considerations are likely strong), consumers only chose larger portions of healthy food for others ($p<.001$), whereas they chose smaller portions of healthy food for others ($p<.001$).

This research offers theoretical and practical contributions, identifying one potential cause of over-eating, food waste, or both.

When Mine Becomes Ours: Caregiving and the Effects of Choices Made for Others on Subsequent Choices for the Self

EXTENDED ABSTRACT

Caregivers make choices not just for themselves but also for others. This research asks: how does making an initial healthy choice for a child affect the healthiness of a caregiver's subsequent self-choice? We introduce the concept of blurring choices for the self and others, wherein caregivers' choices for themselves may sometimes also be shared with their dependents. For instance, although a child may have their own meal that was chosen for them

by their parent, a child may also eat from their parent's meal. This perspective diverges from a long-standing approach in the self-versus-other choice literature (e.g., Polman and Wu 2020), which views these choices as distinct, such that consumers choosing for themselves only consider their own needs and not others' needs.

However, we propose that caregivers often pre-emptively consider dependents' needs in anticipation of potential sharing with their dependents, thereby sacrificing their own preferences. We predict that, when the notion of potentially sharing one's self-choice is salient, caregivers will be more likely to "balance" by choosing the opposite (in terms of healthiness) for themselves as what they had chosen for their child. Importantly, we propose that this sharing possibility leads to a balancing effect only after having chosen a healthy option (but not an unhealthy option) for one's child. Our reasoning is that making healthy choices for a child raises concerns about whether one's child will enjoy the options chosen for them. Specifically, because healthy options often involve greater uncertainty in terms of the child's enjoyment (and even willingness to eat; Liu et al. 2015; Daniel 2016), we suggest that parents' subsequent unhealthy self-choices can be used as potential back-up options for their child if their child rejects their healthy meal.

Four pre-registered studies tested our theorizing. Study 1 employed a 3(Choice-for-Child: healthy, unhealthy, no-choice control) \times intention to share (measured) between-subjects design. Parents ($N=602$) imagined ordering lunch at a café. In the choice-for-child conditions, they first chose from either an all-healthy or all-unhealthy kid's menu for their child, depending on condition. Then, all participants imagined choosing for themselves from a mixed set of healthy and unhealthy entrée options (coded 1=unhealthy or 0=healthy). Finally, participants indicated how much they thought about sharing their own meal with their child as they made their entrée choice (1=*not at all*, 7=*very much so*). A logistic regression revealed that: 1) the interaction between healthy choice-for-child vs. no-choice-for-child and sharing was significant ($p=.014$); 2) the interaction between healthy-choice-for-child vs. unhealthy-choice-for-child and sharing was significant ($p=.007$); and 3) the interaction between no-choice-for-child vs. unhealthy-choice-for-child and sharing was non-significant ($p=.869$). Examining the pattern (see figure 1), parents who made an initial healthy choice for their child were more likely to choose unhealthy for themselves (i.e., a "balancing" effect) as sharing intentions increased ($p=.037$). Importantly, sharing intentions did not influence the self-choice in no-choice control condition ($p=.163$) and marginally had the opposite effect (i.e., a "matching" effect) in the unhealthy-choice-for-child condition ($p=.090$). These results highlight that parents may sometimes sacrifice their own consumption preferences to address the possibility that their child may not eat healthy food chosen for them. Study 2 replicated these results using a similar paradigm, except that we manipulated the ability to share food with one's child, instead of measuring intentions to share food with one's child.

Study 3 examined the underlying role of parental concern that one's child will not eat healthy food chosen for them. Parents ($N=792$) participated in this 2(Sharing Ability: yes, no) between-subjects study, in which they made ostensibly real meal selections as part of a research trial for a meal-planning service for which the trial would (vs. would not) allow them to share their meals with their child. All parents first chose a meal for their child from an all-healthy choice set. They then chose for themselves using a similar measure as in the prior studies. We then measured concern the child won't eat their healthy kid's meal using a two-item mediator measure ($r=.90$). A binary logistic regression was significant ($p=.002$),

indicating that parents were more likely to balance by choosing an unhealthy option for themselves when they had (vs. did not have) the ability to share their grown-up's meal with their child. This effect was mediated by concern that one's child would not eat the healthy food chosen for them (95% CI=[.142, .398]).

Study 4 examined a process-consistent moderator. We reasoned that if parents know their child relatively likes the healthy options, they should be less concerned about their child not eating healthy food chosen for them. Parents (N=1609) participated in this 2(Child Preferences)×2(Ability to Share) between-subjects study. They first indicated which healthy options their child likes the most and the least in the context of filling out a school survey for an upcoming meet-and-greet event. We used these responses to present them with either a child choice set with two of their child's relatively-liked healthy foods or with two of their child's relatively-disliked healthy foods. We then used a similar ability-to-share manipulation and similar choice-for-self and mediator measures as in the prior study. A binary logistic regression of 2(Child Preferences)×2(Ability to Share) on the healthiness of the choice for self revealed a marginally significant interaction ($p=.061$). Follow-up tests revealed that, when sharing one's own meal was possible, choosing from a relatively-disliked set of healthy foods for their child (vs. a relatively-liked set) led parents to be more likely to balance by choosing unhealthy for themselves ($p=.002$). By contrast, when sharing one's own meal was not possible, choosing from a relatively-disliked versus relatively-liked set of healthy foods for their child had no impact on the healthiness of parents' choices for themselves ($p=.419$). There was also significant moderated mediation by concern that the child won't eat their healthy kid's meal (95% CI=[.061, .206]).

Overall, we find that parents sacrifice their own preferences by choosing unhealthy self-choices to use as backup options for their child, out of parental concern that their child won't eat the healthy food chosen for them. This work contributes to the choosing-for-others and joint-consumption literatures.

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Receptiveness: Antecedents and Consequences

Chair: Mr. Mohamed Hussein, Stanford GSB, USA

Paper #1: Receptive Language Transmits Throughout Conversations and Improves Conflict Outcomes

Julia Minson, Harvard Kennedy School, USA
Michael Yeomans, Imperial College London, UK
Hanne Collins, Harvard Business School, USA
Francesca Gino, Harvard Business School, USA

Paper #2: How Partisan Identity Reverses the Benefits of Receptiveness to Opposing Views

Mohamed A. Hussein, Stanford GSB, USA
S. Christian Wheeler, Stanford GSB, USA

Paper #3: Ascribing Affective Attitude Bases Forestalls Political Word of Mouth: An Inference-Making Process Through Perceived Openness

Jacob D. Teeny, Kellogg School of Management at Northwestern University, USA
Richard E. Petty, Ohio State University, USA

Paper #4: (Mis)perceptions of Support-Oppose Framing for Message Senders Versus Recipients

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Zak Tormala, USA

SESSION OVERVIEW

People are more divided and less open to opposing views than ever before. For instance, Democrats and Republicans are growing further apart ideologically, acknowledge that they often fail to agree on basic facts, and increasingly report feelings of distrust and contempt toward members of the other party. It is thus no wonder that a growing literature aims to study the construct of receptiveness: people's willingness to seek out and consider differing or opposing viewpoints. This session aims to bring together four papers that examine the antecedents and consequences of receptiveness. Using a diverse array of empirical methods—including natural language processing algorithms, large observational datasets, conjoint studies, experiments, and longitudinal designs—these four papers pose and answer questions such as: How can we spark receptiveness in others? Under what conditions does exhibiting receptiveness have interpersonal benefits? When does it carry interpersonal costs? How do our beliefs about other people's receptiveness influence the ways in which we share our views and opinions with them?

The first paper in this session examines a novel strategy for sparking receptiveness in others during conflict: communicating one's own receptiveness. This paper finds that when people communicate their own receptiveness to their counterparts, their counterparts reciprocate and become more receptive. The second paper examines the conditions under which being receptive to opposing views has negative reputational consequences. Across various political and social issues, this paper finds that when indicators of partisan identity are salient, receptiveness can introduce interpersonal costs.

The third and fourth papers examine how our beliefs about other people's receptiveness influence the manner in which we choose to share our views with them. The third paper finds that people perceive others who hold attitudes based in feelings as less open and receptive compared to those who hold attitudes based in cognitions. As such, people indicate a greater willingness to share their political views with those who appear to have attitudes based in cognitions rather than feelings.

The fourth paper finds that people's desire to evoke receptiveness in their persuasion targets influences how they frame their persuasive messages. Specifically, people choose support-framing (e.g., support allowing abortions) instead of oppose-framing (e.g., oppose banning abortions) because they hold the lay belief that support-framing fosters greater receptiveness in message recipients. In contrast to this belief, message recipients are often *less* receptive to support-framed messages.

Together, these four papers provide timely insights into the construct of receptiveness, a critical topic given our increasingly divided and polarized world. In addition, this session echoes some of the conference's themes by bringing together different methodologies (e.g., natural language processing, conjoint studies, longitudinal studies, etc.) to investigate the antecedents and consequences of receptiveness. We believe that this session will be of interest to a broad audience of scholars and practitioners working on topics such as word of mouth, impression formation, political marketing, attitudes, and persuasion.

Receptive Language Transmits Throughout Conversations and Improves Conflict Outcomes

EXTENDED ABSTRACT

A pernicious problem confronting virtually all human societies is people's unwillingness to engage with views and opinions they do not share, particularly those they find antithetical to their most dearly held and identity-relevant beliefs. Lack of such willingness is particularly insidious because it prevents groups from effectively solving entire classes of *other* social-coordination problems that rely on thoughtful engagement with opposing views.

Recent research has identified "conversational receptiveness" – the use of language to communicate one's willingness to thoughtfully engage with opposing views (Yeomans et al., 2020). Conversational receptiveness has a specific linguistic signature that can be reliably identified by both humans and natural language processing algorithms, i.e., words and phrases that make counterparts in conflict feel that the other side is truly engaged with their point of view. Although conversational receptiveness consists of over 30 linguistic markers, a small subset is easily interpretable and learned. Namely, speech that is rated highly on conversational receptiveness contains markers of acknowledgement such as "I understand that you think..." Or "You told me that..." Additionally, receptive speech includes hedging words including "sometimes," "possibly" or "often." Finally, receptive speech is further characterized by use of positive emotion words and avoidance of negation.

Prior research has demonstrated higher use of conversational receptiveness improves interpersonal evaluations and willingness to collaborate in conflict. Counterparts whose speech is evaluated as high on receptiveness by a trained natural processing algorithm are seen as more reasonable and trustworthy. They are also more desired as partners for future interaction, even around controversial topics. Importantly, conversational receptiveness is easily trained by simply instructing people to incorporate the key linguistic markers into their speech (Yeomans et al., 2020).

A key question regarding conversational receptiveness is how can it be induced in naturalistic interactions. Here we propose and test a novel approach: in order to increase your counterpart's receptiveness to your perspective, you must first be receptive to theirs. In

four studies in the lab and in the field, using a variety of professional and lay participant samples, we examine how conversational receptiveness spreads between counterparts in the course of disagreement.

In Study 1, we randomly assigned government leaders ($N = 258$) participating in an executive education program to discussion partners who held opposing views on important policy topics. Each pair then engage in a five-round text-based discussion. We found that despite being randomly assigned to each other, partners converged in their level of conversational receptiveness over the course of dialogue as measured by our natural language processing algorithm. Importantly, conversational receptiveness strongly predicted participants willingness to collaborate with each other in the course of the program.

Study 2 replicates our effect in a dataset of discussions between students in an online course ($N = 1028$) on American government and policy. Students responded to instructor prompts on controversial topics. We found that the conversational receptiveness of the initial student post, predicted the level of conversational receptiveness of the responses later in the discussion thread. This effect held when we controlled for the average level of receptiveness of the other response in the thread, as well as the average level of receptiveness of other messages written throughout the semester by the same student. Similarly, Study 3 leveraged a dataset of paired discussion threads between Wikipedia editors (Zhang, et al., 2018). Each pair featured two threads matched for length and topic, one of which ended in a personal attack (a behavior sanctioned by Wikipedia), and the other did not. The level of conversational receptiveness exhibited by the first statement in the thread (as measured by our natural language processing algorithm) robustly predicted the probability of a personal attack at the end.

Finally, in Study 4, we experimentally induced conversational receptiveness to test whether participants will mimic the receptiveness of partners who received minimal training in this communication style. Participants from Prolific Academic read statements from disagreeing writers regarding controversial policy topics and wrote open-ended replies. Half of the writers had previously received brief training in using the cues of conversational receptiveness in their messages, and half were instructed to use their natural communication style. Participants who responded to writers who had been trained in receptiveness wrote more receptive replies in turn. They also evaluated their counterparts more positively and expressed greater willingness to interact with them in the future. These evaluations were in turn, statistically mediated by the level of receptiveness expressed by the writers.

Our data allow us to further examine whether receptiveness is reciprocated through simple linguistic mimicry -- people repeating the words and phrases that they hear from their partners -- or whether the increases in receptiveness we document reflect a deeper level of learning. The evidence supports the latter interpretation. When we individually analyze the different markers of conversational receptiveness identified by our algorithm (hedges, acknowledgement phrases, agreement phrases, expressions of positive emotions, etc.) we see that high use of one receptiveness marker by a conversation participant leads to an increased usage of that marker but also higher use of other markers by the counterpart. In other words, hedges lead to more hedges, but also to more acknowledgement and agreement phrases. This latter finding suggests that people are not simply repeating their counterparts' speech but to some extent taking on the receptive mindset that the speech conveys.

In sum, we find strong evidence that conversational receptiveness deployed by one individual in conflict affects the linguistic style used by their counterpart. Across multiple speech and labora-

tory samples we document that receptiveness is "contagious" across the duration of a conversation. To the extent that receptiveness can be learned and consistently practiced, these findings provide a new avenue for improving communication in conflict.

How Partisan Identity Reverses the Benefits of Receptiveness to Opposing Views

EXTENDED ABSTRACT

Past research has argued that we admire people who are receptive to opposing political views (e.g., Yeomans et al., 2020; Hussein & Tormala, 2021)—yet opposing political views are often seen as rooted in propaganda and bias, and those who hold them are seen as evil and unintelligent (Pew Research Center, 2017; Schwalbe et al., 2020). How can we reconcile these findings? We propose that prior research studying the interpersonal consequences of receptiveness to opposing views disregarded a critical factor—partisan identity—and that including this factor reverses its conclusions.

Across four studies ($N = 2,027$), we found that unreceptive individuals were rated more favorably than receptive individuals across a wide range of political issues, such as immigration and gun laws. Consistent with our proposition that partisan identity reverses past findings, this unreceptiveness finding was found when partisan identity was evoked but not when it was absent (Study 1). This effect was present for participants with well-defined identities (e.g., Democrats and Republicans) but not for participants with less defined identities (e.g., Independents; Study 2) and was present among those who reported high and moderate, but not low, identification with their partisan identity (Studies 3A & 3B).

In Study 1, participants ($N = 761$) evaluated a hypothetical target who was either receptive or unreceptive to opposing political views in a context in which partisan identity was either salient or not salient. Participants first indicated their position on a political issue (whether the US should boycott the Olympics in China). They then read about a fictitious target who holds the same views on the issue and was considering attending an event in which a speaker advocated for the opposite position. For example, if a participant believed the US should compete in the Olympics, they read: "During your conversation, John said to you: 'I heard about an event on China nearby. The speaker was Donald Trump. Trump was demanding we immediately boycott the Olympics in China. I ended up going to this event. I wanted to listen to this perspective and engage with it.'" We varied whether the target was receptive ("I ended up going to this event. I wanted to listen to this perspective and engage with it") or unreceptive ("I refused to go to this event. I did not want to listen to or engage with this perspective"). We also varied the identity of the speaker. In the Partisan Identity Salient condition, participants were assigned to a politician who belonged to the opposing party (Nancy Pelosi for Republicans and Donald Trump for Democrats). In the Partisan Identity Absent condition, participants read about an unnamed speaker ("The speaker was demanding ..."). After reading the vignette, participants rated their overall impression of the target: "Judging from what he said, what's your overall impression of John?" Unfavorable / Favorable, Very Negative / Very Positive. These two items were averaged into an overall impression index ($r = .85, p < .001$).

The results revealed a marginal main effect of unreceptiveness ($B = .23, t(752) = 1.85, p = .065, 95\% \text{ CI}[-.014, .47]$) and no main effect of the identity manipulation ($B = .16, t(752) = 1.27, p = .21, 95\% \text{ CI}[-.09, .40]$). Importantly, we found a significant interaction ($B = -1.36, t(751) = -5.59, p < .001, 95\% \text{ CI}[-1.94, -.88]$). When no identity cues were evoked, we replicated past findings showing that

receptive targets were rated more favorably than unreceptive targets ($B = -.46, t(370) = -2.83, p = .005, 95\% \text{ CI}[-.78, -.14]$). However, when identity cues were introduced, the opposite pattern emerged: participants rated the unreceptive target more favorably than the receptive one ($B = .90, t(381) = 4.98, p < .001, 95\% \text{ CI} [.55, 1.26]$). In other words, receptiveness carried interpersonal costs, not benefits.

Study 2 tested the robustness of the unreceptiveness finding using a conjoint study design. This allowed us to simultaneously vary multiple features of the vignette. We varied the target's receptiveness, the event format, the identity of the speakers at the event, and the issue under consideration. Varying these attributes allowed us to test whether there existed a positive overall effect of unreceptiveness to opposing views across 80 different possible combinations of stimuli. We focused on more polarizing political issues, such as climate change and immigration. In total, each participant read six vignettes and evaluated six targets, resulting in 4,922 observations from 823 participants. Replicating the results obtained in Study 1, we found support for the robustness of the interpersonal benefits of unreceptiveness. Across nearly all event formats, speakers, and issues, participants rated an unreceptive target more favorably compared to a receptive target ($AMCE = 0.15, SE = .069, p = .033, 95\% \text{ CI} [.012, .28]$). Moreover, this unreceptiveness effect was present among Democrats and Republicans, but not among Independents.

Study 3A used a new issue (gun control) and tested whether unreceptiveness finding would be moderated by the level of identification with one's political party. We found that, on average, participants reported a more favorable impression of the unreceptive target ($M = 5.51, SD = 1.67$) compared to the receptive target ($M = 4.84, SD = 1.81; B = .77, t(245) = 3.80, p < .001, 95\% \text{ CI} [.37, 1.17]$, Cohen's $d = -.48$) and that this effect was moderated by level of party identification ($B = .38, t(243) = 2.75, p = .006, 95\% \text{ CI} [.11, .65]$). For people who highly identified with their political party, the unreceptiveness target condition produced a more favorable impression ($ps < .001$). However, for people who reported low identification with their political party, there was no difference between receptive and unreceptive targets ($ps > .38$). Study 3B replicated these results using a different political issue (the Trump presidency).

These results suggest that our admiration of others who are open-minded to opposing views documented in prior work is more limited in scope than previously documented. While readers exposed to the existing literature might walk away with the impression that being receptive carries interpersonal benefits, when it comes to political matters implicating partisan identity, the opposite is likely to be true: Receptiveness to opposing views carries more interpersonal costs than unreceptiveness to those views.

Ascribing Affective Attitude Bases Forestalls Political Word of Mouth: An Inference-Making Process Through Perceived Openness

EXTENDED ABSTRACT

One of the most impactful forms of political marketing is to motivate one's own supporters to convince other voters to share their opinion (Pons, 2018). Although research in this area has generally focused on the individual differences (Saucier & Webster, 2010) or attitudinal factors (Cheatham & Tormala, 2015) that compel a supporter to engage in this behavior, the current work shifts that research focus to examine how perceptions of the supporter's potential targets affect this word of mouth likelihood.

Much less research has taken this lens to political word of mouth, wherein the general focus has been on perceptions of the target's *attitude extremity* and *certainty*: the more extreme and/or

certain a target seems, the more *difficult to change* they are inferred to be, reducing word of mouth (Ahkter & Wheeler, 2016; Bechler et al., 2020). Presently, we identify another perception of targets that influences this behavior, their *affective-cognitive attitude basis* (i.e., whether one's attitude is seemingly based more on feelings/emotions or beliefs/reasons; Crites et al., Petty, 1994). Specifically, when a target seems to hold an affective relative to cognitive attitude, it reduces the likelihood perceivers engage them in word of mouth, because perceivers infer these targets are not *attitudinally open* (i.e., whether a target will "hear out" or "listen to" the perceiver's views). Moreover, we show how this novel inference-making process provides greater explanatory power than perceptions of the target's attitude certainty, extremity, and difficulty to change for predicting word of mouth likelihood.

In an initial pilot study conducted during the 2018 U.S. Mid-Term elections, we assessed voters' perception of potential targets' affective-cognitive attitude bases (1 = Very much based on emotions and feelings; 7 = Very much based on thoughts and reasons), the degree to which they had engaged these targets in positive word of mouth about their preferred candidate (1 = Not at all; 7 = A great deal), and these targets' inferred attitudinal openness (likelihood to "actually consider" the perceiver's views; 1 = Not at all likely; 7 = Very likely). In line with predictions, the more targets were perceived to hold an affective relative to cognitive attitude, the less they engaged them in positive word of mouth ($B = -.19; t(213) = -2.00, p = .047$), because they inferred these targets would be less attitudinally open ($B = -.35, t(214) = -4.46, p < .001$).

In an experimental study 1, we presented participants with the profiles of ostensibly real people who provided their opinion on one of three topics (voter registration, a COVID-19 mandate, and defunding the police). These statements either communicated an affectively based attitude (e.g., "I have a lot of strong emotions on this topic") or a cognitively based attitude (e.g., "I have a lot of strong thoughts on this topic"), all else held equal. We then assessed the degree to which participants would engage them in word of mouth (1 = Not at all likely, 7 = Very likely) and the extent to which they inferred the target was attitudinally open (e.g., "genuinely listen to you;" 1 = Not at all likely, 7 = Very likely). With all findings equivalent across topics, we collapse results, finding that affective (vs. cognitive) targets elicited lower likelihoods for word of mouth ($M_{\text{affective}} = 3.38$ vs. $M_{\text{cognitive}} = 3.74; F(1,419) = 5.14, p = .024$) and were perceived to be less attitudinally open ($M_{\text{affective}} = 2.73$ vs. $M_{\text{cognitive}} = 3.50; F(1,419) = 41.33, p < .001$). Moreover, these inferences statistically mediated the effect of the target's attitude basis on word of mouth likelihood ($B = .14, SE = .04; 95\% \text{ CI} [.080, .218]$), even after controlling for perceptions of the target's attitude certainty, extremity, and difficulty to change.

In the final two studies, we use these findings to help marketers understand the primary obstacle preventing their candidate's supporters from going out to persuade counterattitudinal voters: the natural ascription of affect (relative to cognition) to counterattitudinal voters' beliefs. That is, in study two, we use a computer confederate to convince participants they are engaging with an actual individual who holds a countervailing belief (i.e., on kneeling during the national anthem). In study three, we use a longitudinal design around Thanksgiving 2020 to show how these processes affected engaging in political word of mouth on the outcome of the 2020 Presidential Election. In study two, we find that when targets are presented with a counter (vs. pro) attitudinal target, they naturally ascribe them more affective relative to cognitive attitude bases ($M_{\text{counter}} = 3.91$ vs. $M_{\text{pro}} = 3.01; F(1,116) = 11.13, p = .001$), which leads them to infer these targets are less attitudinally open ($M_{\text{counter}} = 4.12$ vs. $M_{\text{pro}} =$

4.59; $F(1,116) = 5.54, p = .020$). Together, this accounts for the lower likelihood of engaging counter (vs. pro) attitudinal targets in word of mouth (Hayes 2018, Model 6; $B = .02$; 95% CI: [.001, .058]). In study 3, we find convergent evidence for these processes: voters naturally ascribe more affect relative to cognition to those they disagree with, which leads them to infer those targets will be less attitudinally open, which reduces the actual word of mouth toward them (Hayes 2018, Model 6; $B = .08, SE = .05$; 95% CI: [.010, .192]). Notably, all of these effects emerge above and beyond perceptions of targets' attitude certainty, extremity, and their difficulty to change.

Altogether, these findings point to a new focus in motivating one's voters to spread positive word of mouth: find ways to promote the belief that counterattitudinal targets will seem attitudinally open. Indeed, in an additional study using a sample nationally representative of the United States, concerns about attitudinal openness (vs. five other perceptions; e.g., difficulty to change, eliciting emotional discomfort) was rated as the most important perception in determining whether to engage a counterattitudinal target. The present research, then, suggests that marketers should try to get their voters to focus on the cognitive bases underlying these targets' attitudes, as this should make these targets seem more attitudinally open, promoting positive word of mouth.

(Mis)perceptions of Support-Oppose Framing for Message Senders Versus Recipients

EXTENDED ABSTRACT

Receptiveness is key to persuasion and depolarization: Receptive individuals attend more to disagreeing content, evaluate arguments more impartially, and consume more bi-partisan information (Chen et al., 2010; Minson et al., 2019; Yeomans et al., 2020). Yet receptiveness is relatively understudied in persuasion. This paper explores the effects of support-oppose framing (Catapano & Tormala, 2021; e.g., "I support allowing abortions" versus "I oppose banning abortions") on receptiveness.

In 5 preregistered studies ($N = 5266$), we find that people use suboptimal framing when attempting to persuade disagreeing others. Persuaders think that support-framed messages will lead to greater receptiveness, which leads to greater persuasive intent for support- than oppose- framed messages (Studies 1 and 2). This effect occurs because support framing feels more value- congruent for message writers—in essence, persuaders would be more receptive to support framing and they project this receptiveness onto recipients (Study 2). However, we find that disagreeing message recipients are actually *less* receptive to support- than oppose-framed messages, because they view support-framed messages as less value-congruent than oppose- framed messages (Studies 3 and 4). This mismatch does not occur for message recipients who already agree with the persuader (Study 5).

Study 1 examined the basic relationship between support-oppose framing and predicted receptiveness. We began by asking participants to select which statement best characterized their attitude toward Universal Basic Income (UBI) ("Implementing a UBI would be (beneficial/harmful) to the US"), then randomly assigned participants to two conditions. In the support-framing condition, participants were asked to answer questions about the statement they supported (the one they selected). In the oppose-framing condition, participants were asked to answer questions about the statement they opposed (the one they did not select). In both conditions, participants were asked about an attitude position that was consistent with their own view. For example, a participant who indicated that UBI would be beneficial was randomly assigned to answer questions about their

support for the beneficial statement or their opposition to the harmful statement. Thus, all participants answered questions about their own stance on UBI framed in terms of either the position they supported or the position they opposed.

Participants indicated their likelihood of trying to persuade someone who disagrees with them to their position ($\alpha = .89$), and wrote a message to the disagreeing other. Participants also indicated how receptive they thought the message recipient would be ($r = .79$). Support-framing led to greater perceived receptiveness, $t(877) = 2.66, p = .008$, which predicted greater persuasion intentions, $t(877) = 6.46, p < .001$; indirect effect $ab = .04, Z = 2.44, p = .01$.

Study 2 tested the proposed value-congruence mechanism. We manipulated attitude- framing as described in Study 1, for the issue of same-sex marriage. After indicating their persuasion intentions and predicted receptiveness, participants indicated how value-congruent the position they were arguing for felt to them and how receptive they themselves would be to the message that they wrote. Support framing led to greater value-congruence, $t(945) = 11.92, p < .001$, which predicted greater message writer receptiveness, $t(945) = 12.53, p < .001$. The message writer's receptiveness, in turn, was associated with greater predicted receiver receptiveness, $t(945) = 4.24, p < .001$. There was a significant indirect effect through this pathway, $ab = .02, Z = 2.77, p = .006$. Predicted receptiveness was associated with greater persuasion intentions, $t(945) = 6.58, p < .001$.

In Study 3, we tested the accuracy of the intuition that support-framing promotes receptiveness. We randomly assigned participants to a corresponding individual from Study 2 who disagreed with them on the issue. Thus, participants in the support-framing condition read messages that disagreed with them from message-writers in the support-framing condition (view was presented in terms of what the writer supported) whereas participants in the oppose-framing condition read messages that disagreed with them from message writers in the oppose-framing condition (view presented in terms of what the writer opposed). After reading a message from one of the Study 2 message writers, participants reported their own receptiveness toward the message. Contrary to the predictions of the message writers, message receivers who read a support-framed message were *less* receptive to the message than message receivers who read an oppose-framed message, $t(892) = -2.75, p = .006$.

In Study 4, we tested the proposed value-congruence mechanism for message recipients. The design for Study 4 mimicked Study 3, using a different issue (abortion) and controlled experimenter-generated arguments. After reading the assigned message, participants reported their own receptiveness toward the message and indicated how value-congruent the message was. Oppose-framing, relative to support, led to greater perceived value-congruence, $t(752) = -4.59, p < .001$, which predicted greater receptiveness, $t(752) = 13.01, p < .001$; indirect effect $ab = .14, Z = -4.89, p < .001$.

In Study 5, we aimed to provide further evidence for the proposed process using a moderation approach. If the mismatch between message writers and recipients is due to value- (in)congruence, the effect should reverse for agreeing message recipients, who share the same values. To this end, in Study 5 participants were randomly assigned to read either a message that they agreed with or one they disagreed with. We found a significant interaction between framing and whether a message was proattitudinal or counterattitudinal on receptiveness, $F(1, 1174) = 22.21, p < .001$. For counterattitudinal messages, support-framing led to less receptiveness than oppose-framing; however for proattitudinal messages, support- led to *greater* receptiveness than oppose-framing. The index of moderated mediation was significant, $\beta = .39, Z = 6.65, p < .001$.

Taken together, these studies suggest that one contributor to polarization and decreasing levels of receptiveness between disagreeing groups may be the framing that individuals use: Individuals incorrectly believe that support-framing will facilitate receptiveness and thus use suboptimal framing in their persuasion attempts with disagreeing others. Future research is necessary to understand how to facilitate the use of framing that will enhance, rather than inhibit, receptiveness.

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On ethics and sludge: Consumers' perceptions of and reactions to the use of behavioral science by organizations

Chair: Ms. Daniella Turetski, Rotman School of Management, University of Toronto, Canada

Paper #1: Why Do People Condemn and Appreciate Experiments?

Burcak Bas, Bocconi University, Italy
Rachele Ciulli, University of Pennsylvania (Wharton), USA
Joachim Vosgerau, Bocconi University, Italy

Paper #2: An Experimental Investigation Into Whether Choice Architecture Interventions Are Considered Ethical

Daniella Turetski, Rotman School of Management, University of Toronto, Canada
Renante Rondina, Rotman School of Management, University of Toronto, Canada
Bing Feng, Rotman School of Management, University of Toronto, Canada
Dilip Soman, Rotman School of Management, University of Toronto, Canada

Paper #3: Everyday Administrative Burdens and Inequality

Lucie Martin, University College Dublin School of Economics and Geary Institute for Public Policy, Ireland
Liam Delaney, London School of Economics Department of Psychological and Behavioural Science, UK
Orla Doyle, University College Dublin School of Economics and Geary Institute for Public Policy, Ireland

Paper #4: Obfuscation and Choice Architecture in Online Donations

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Kellen Mrkva, Hankamer School of Business, Baylor University, USA
Andrey Simonov, Columbia Business School, USA
Eric J. Johnson, Columbia Business School, USA

SESSION OVERVIEW

Behavioral science and its methods has been increasingly used by governments and businesses to influence choice (e.g., a pharmaceutical company running trials to determine marketing messages, or a political party making a donation the default option). However, this growth is accompanied by ethical red flags that could hamper the growth of applied behavioral science. Understanding the perceived ethicality of behavioral science involves answers to two sets of questions; 1) Why do people resist choice behavioral interventions, and 2) What are the effects of interventions that reduce consumer welfare (e.g., sludge, Sunstein 2021) and the resulting reputational harm to the field. This session studies *four different dimensions* (Cowen, Kannan & Soman, 2021) – reactions to a) experimentation on humans, b) choice architecture and perceived ethics, c) sludge (in the form of administrative frictions), and d) dark patterns (nudge-for-bad) that impedes consumers.

The first paper studies *experimentation* and tackles a seeming paradox in which consumers often object to experiments using humans as participants, but then approve of the implementation of the experiments' treatments (i.e., experiment aversion). Using a series of preregistered studies, the paper provides empirical support for both experiment aversion and appreciation and offers guidelines on how individuals/ companies/organizations can increase consumers' acceptance of experiments.

The second paper takes on an empirical approach to studying consumers' acceptance of *choice architecture interventions* across different domains. In two experiments, the authors manipulate the domain in which the intervention is employed, the specific intervention, as well as different ways of explaining the benefits of the intervention. Results showed that acceptability ratings differed significantly by domain, the type of nudge, and the way in which the implementation was of the intervention was explained.

The third paper investigates the consequences of *sludge* – excessive or unjustified behavioral frictions such as paperwork burdens. Data from over 2,000 UK adults show that burdens impose significant time and emotional costs that vary by domain. Most importantly, those that are vulnerable (in poor health or financially insecure) feel these burdens disproportionately.

The fourth paper investigates *dark patterns* (nudge-for-bad) in political donation requests designed to mislead consumers to donate to a political campaign by obfuscating the true nature of the donation and making donations the default via a pre-checked box. Using an analysis of archived data, the authors show that these unethical interventions systematically increase donations. The authors further find that vulnerable consumers are more susceptible to these unethical nudges and discuss implications for distributive justice and consumer welfare.

For behavioral interventions in marketing and public policy to be effective in enhancing consumer welfare, they have to be ethical and also be perceived as such. This session documents four areas in which this is not the case and discusses consequences and remedies. The session should be of interest to researchers who are interested in consumer ethics in general, as well as researchers and practitioners who are using behavioral interventions to change consumer behavior and increase consumer welfare. All four research projects are completed, and the authors have consented to presenting in person.

Why Do People Condemn and Appreciate Experiments?

EXTENDED ABSTRACT

Despite the crucial role that experiments play in improving human welfare (Cho, 2019; Taubman et al., 2014), recent research suggests that people are averse to experiments in the medical and public policy realm (Heck et al., 2020; Meyer et al., 2019). This so-called "experiment aversion" constitutes a paradox as people have been shown to judge an experiment that tests the comparative effectiveness of two treatments as inappropriate while judging the implementation of either of its treatments as appropriate. For instance, respondents rated a physician's treatment of patients with hypertension as equally acceptable, regardless of whether s/he prescribed all patients Drug A or prescribed all patients Drug B. However, respondents were opposed to the physician conducting an experiment in which s/he prescribed half of the patients Drug A and the other half Drug B.

If people objected to experimentation on humans in general, it would be difficult to develop and establish evidence-based practices in medicine, public policy, and elsewhere (Meyer, 2014). Fortunately, experiment aversion is not universal. Thousands of volunteers around the world have voluntarily taken part in so-called "human challenge" trials and consented to scientists injecting them with the coronavirus (Cohen, 2020). Likewise, when corporations run experiments on their clients, people view these experiments as acceptable

as their worst treatment but never as less acceptable (Mislavsky et al., 2020)

We contend that whether people condemn or appreciate an experiment depends on their beliefs in the existence of a normative standard of best practice – abstract ideas that an established set of principles or practices exist that decision-makers/experts are morally obliged to adhere to (we call these standards “normative” because their adherence is perceived as morally required). People may have little to no knowledge at all what such principles and best practices look like, what is important is that they believe that they exist (Hellman & Hellman, 1991; Lantos, 2020; Lynch et al., 2020).

We test our hypotheses in a set of studies in which we operationalize experiment aversion (versus appreciation) as an experiment being rated as less (versus more) appropriate than the minimum (versus maximum) of its treatment arms. All materials can be accessed here: https://researchbox.org/188&PEER_REVIEW_passcode=EQISHC.

Study 1 (N = 200) tested whether people believe in the existence of a normative standard of best practice for three scenarios where experiment aversion had been previously observed (Meyer et al., 2019), and five scenarios in which no experiment aversion had been observed (Meyer et al., 2019; Mislavsky et al., 2020). As predicted, for the former scenarios, participants indicated stronger agreement that a normative standard of best practice exists than for the latter scenarios (all pairwise scenario_{experiment aversion} vs. scenario_{no experiment aversion} comparisons $t(199) > 3.5$, $P < .001$, $d > 0.25$).

Study 2 (N = 300) provides another test of our hypothesis that perceived violations of normative standards of best practice are responsible for experiment aversion. We predicted that experiments employing within- (versus between-) participant manipulations would be perceived as more aversive because they imply that a normative standard is violated for every participant (versus half of the study participants). We tested this with 6 scenarios tested in Study 1. Participants were told that an experimenter was trying to decide which experimental design to use, a within- or a between-participant design. For the three scenarios for which experiment aversion had been previously documented, the majority of participants chose the between- over the within-participant design as more acceptable ($\chi^2(2)_{\text{best drug}} = 60.41$, $P < .001$; $\chi^2(2)_{\text{charity}} = 19.04$, $P < .001$; $\chi^2(2)_{\text{teacher well-being}} = 13.04$, $P = .001$). In contrast, for the three scenarios for which no experiment aversion had been previously observed, neither experimental design was preferred ($\chi^2(2)_{\text{product recommendation}} = 0.42$, $P = .81$; $\chi^2(2)_{\text{ride-sharing}} = 3.74$, $P = .15$; $\chi^2(2)_{\text{social networking}} = 2.69$, $P = .26$).

Study 3 (N = 776) tested whether experiment aversion will be attenuated when it is pointed out that extant normative standards of best practice are not perfect and can be further improved. To this end, we used the three scenarios in Study 1 for which experiment aversion had been previously documented. A2 (explanation: control vs. extant standards are not perfect) x 2 (evaluation: experiment vs. treatment) ANOVA with scenario as a repeated factor yielded the predicted interaction of explanation and evaluation, $F(1, 772) = 15.65$, $P < .001$. In the control condition, we replicated experiment aversion – experiments were rated as less appropriate than their least acceptable treatments – for all three scenarios, $t(388)_{\text{best drug}} = 7.26$, $P < .001$, $d = .74$; $t(388)_{\text{charity}} = 2.82$, $P = .005$, $d = .29$; $t(388)_{\text{teacher well-being}} = 5.12$, $P < .001$, $d = .52$. In the ‘extant standards are not perfect’ condition, no experiment aversion was found in any of the three scenarios, $t(384)_{\text{best drug}} = .93$, $P = .35$, $d = .09$; $t(384)_{\text{charity}} = .157$, $P = .118$, $d = .16$; $t(385)_{\text{teacher well-being}} = .60$, $P = .55$.

A final experiment (N = 400) tested whether experiment appreciation occurs when an experiment is designed to discover a new standard of best practice. We modified the drug scenario such that Dr. Jones was treating Covid-19 patients by administering Drug A or

Drug B. As predicted, when the drugs had been previously approved by the FDA, participants rated the experiment ($M = 4.41$, $SD = 1.59$) as less acceptable than the minimum of the two treatment arms ($M = 5.54$, $SD = 1.28$); $t(198) = 5.53$, $P < .001$, $d = 0.78$, indicating experiment aversion. When no drugs had been approved yet for treating Covid-19, in contrast, participants rated the experiment ($M = 4.51$, $SD = 1.71$) as more appropriate than the maximum of its treatment arms ($M = 3.56$, $SD = 1.66$), $t(198) = 4.02$, $P < .001$, $d = 0.57$, indicating experiment appreciation.

Our empirical results suggest that people can appreciate experiments. Policymakers can thus enhance the public’s appreciation of experiments by expounding the ways in which experimental results will help improve or discover standards of best practice.

An Experimental Investigation Into Whether Choice Architecture Interventions Are Considered Ethical

EXTENDED ABSTRACT

Many countries use behavioural insights to improve policies and programs in areas including health, finance, and sustainability (OECD 2017). Some of these policies take the form of laws, incentives, and information provision. More recently, choice architecture interventions (“nudges”) that could increase welfare without restricting freedom of choice have grown in popularity. These interventions include defaults, framing, social norms, salience, and reminders (Thaler & Sunstein 2008). However, despite one of the major pillars of choice architecture being the preservation of autonomy, they face criticism for relying on strategies that influence behaviour without the target necessarily being aware of it (Conley 2012; Bubb & Pildes 2014; Haplem 2015).

Our goal is to examine the acceptability and perceived threat to autonomy of a variety of choice architecture interventions in different domains. Critically, whereas previous studies have tied nudges to the domain in which they were applied (e.g., Hagman et al. 2015; Jung & Mellers 2016; Sunstein et al. 2017), we aim to systematically examine the perceived ethics of each nudge in different domains. This will also allow us to examine the effects across domains – for instance, are choice architecture interventions in health viewed as more or less acceptable than in financial or environmental domains. We also investigate how explicitly stating that the intervention will be implemented and what it intends to accomplish may improve perceived its ethicality. Additionally, we will test whether the perception of a nudge can be affected by different ways of explaining the implementation of the intervention, including: 1) framing its purpose in terms of costs and losses, 2) emphasizing that the nudge can be resisted, 3) making explicit one’s ability to exempt themselves from the nudge, and 4) highlighting the nudge’s expected effectiveness.

We conduct two experiments. In Experiment 1, participants (N=149) were invited to participate in an online survey study in which they were presented with five scenarios to read in which an organization or government was attempting to nudge their customer or citizens. They were told that a nudge is a way of presenting choices and information to encourage people to select the option or behave in a way that promotes their best interests or general welfare. After reading each scenario, participants were asked to indicate how much they agree or disagree with the following statements on a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree): “I find the proposed changes acceptable”, “The proposed changes do not threaten my autonomy or freedom of choice”, and “I believe the proposed changes will successfully produce the intended effects”.

We used a five-factor Latin Cube design with Domain, Intervention-Type, and Group as three blocking variables, and Treatment (the explanation of the nudge's implementation) as the analytical variable. Each factor has five levels, and each scenario was structured in a similar way with three paragraphs. For **Domain**, the scenario described a government or organization, the behaviour of the citizens or customers that they were trying to change, and the intended positive outcomes of the behaviour change (Organ Donation, Retirement Savings, Flu Shots, Flood Insurance, Electric Vehicles). The second paragraph described one of five **intervention-types** (Defaults, Incentives, Salience, Reminders, Social Proof). The third paragraph described one of five **Treatments**; different ways of explaining the implementation details of the intervention (Control, Effectiveness, Choice, Loss Aversion, Resistibility).

Scenarios were constructed such that each level of each variable was randomly assigned to each level of the other two variables exactly once, with no pairing occurring more than once. Five versions of the second and third paragraphs were created for each level of Nudge and Treatment so that they would be compatible with the level of Domain that they were assigned to. This produced 25 unique scenarios that were randomly and evenly assigned to one of five Groups such that each factor appeared once in each Group.

An analysis of acceptability ratings revealed a main effect of Domain ($F_{(4,583.02)} = 3.15$, $p = 0.01$, partial eta-squared = 0.02) with the largest difference between Flood Insurance ($M=5.71$, $SD=1.27$) and Retirement Savings ($M=5.41$, $SD=1.46$). There was also a main effect of Nudge ($F_{(4,583.02)} = 10.78$, $p < 0.0001$, partial eta-squared = 0.07) with the largest difference between Reminders ($M=5.83$, $SD=1.22$) and Defaults ($M=5.15$, $SD=1.58$). Finally, there was a main effect of Treatment ($F_{(4,583.02)} = 5.93$, $p = 0.0001$, partial eta-squared = 0.04) with the largest difference between Resistibility ($M=5.82$, $SD=1.24$) and Control ($M=5.38$, $SD=1.48$).

An analysis of autonomy ratings revealed a main effect of Domain ($F_{(4,583.18)} = 2.52$, $p < 0.04$, partial eta-squared = 0.02) with the largest difference between Flood Insurance ($M=5.64$, $SD=1.43$) and Retirement Savings ($M=5.23$, $SD=1.66$). There was also a main effect of Nudge ($F_{(4,583.18)} = 11.35$, $p < 0.0001$, partial eta-squared = 0.07) with the largest difference between Salience ($M=5.68$, $SD=1.43$) and Defaults ($M=4.89$, $SD=1.69$). There was also a main effect of Treatment ($F_{(4,583.18)} = 2.67$, $p < 0.05$, partial eta-squared = 0.02) with the largest difference between Resistibility ($M=5.66$, $SD=1.42$) and Effectiveness ($M=5.30$, $SD=1.56$).

An analysis of success ratings revealed a main effect of Domain ($F_{(4,583.23)} = 3.10$, $p = 0.02$, partial eta-squared = 0.02) with the largest difference between Organ Donation ($M=5.50$, $SD=1.29$) and Electric Vehicles ($M=5.16$, $SD=1.46$). There was also a main effect of Nudge ($F_{(4,583.23)} = 5.49$, $p < 0.001$, partial eta-squared = 0.04), with the largest difference between Incentives ($M=5.62$, $SD=1.27$) and Social Proof ($M=5.10$, $SD=1.44$).

Experiment 2 is designed to replicate these results by fully crossing all of the domains, intervention-types, and treatments, creating 25 unique counter-balanced groups for participants to be randomly allocated to with five unique scenarios in each. We also collect demographic information and include an attention check at the end of the study.

Overall, we do find that acceptability of intervention differs by domain, type of intervention used, and the way in which the nudge's benefits and implementation are explained. Ours is the first experimental investigation that adds an empirical lens to recent literature and debates about the acceptability and ethical issues surrounding choice architecture.

Everyday Administrative Burdens and Inequality

EXTENDED ABSTRACT

"Sludge", the excessive or unjustified behavioral frictions that make it more difficult for people to do what they want (Sunstein 2019; Soman 2020), exists in many aspects of daily life, for example as lengthy or frustrating "administrative burdens" (Herd and Moynihan 2019) when signing up for insurance, switching electricity suppliers, returning goods, or managing health appointments. Sludge is particularly concerning from an ethical standpoint if it collectively costs people a significant amount of time or negatively impacts their emotional well-being or decisions. Furthermore, sludge is unacceptable if it disproportionately harms vulnerable groups in society. The impact of administrative burdens on consumer outcomes has been studied in domains ranging from health (Fox, Stazyk, and Feng 2020) and education (Dynarski et al. 2021) to housing (Andersen et al. 2020) and subscriptions (Letzler et al. 2017), and several studies suggests that these burdens disproportionately prevent vulnerable groups such as those who are older, sicker, or poorer from accessing essential services or switching to better deals (Bhargava and Manoli 2015; Citizens Advice 2018; Deshpande and Li 2019; Finkelstein and Notowidigdo 2019).

However, the costs of sludge to society are not well-understood. Most evidence comes from policy case studies analyzing the effect of specific burdens on individuals' choices and outcomes (e.g. Fox, Stazyk, and Feng 2020). This leaves three gaps in our understanding. First, it does not allow for observing cumulative burdens in everyday life, across both public (citizen) and private (consumer) contexts. Case studies usually focus on policy processes, while consumer processes are studied as sludge or transaction costs (Shahab and Lades 2021). Yet both types involve similar costs and implications. As the combined effects of public and private burdens are rarely studied, information on comparative costs, total administrative workload, and potential trade-offs between tasks is missing. Second, focusing on choices and outcomes means little is known about people's everyday experiences of administrative burdens, such as the time they spend on them or how they feel during them. Yet experiences are crucial to understanding administrative burdens and inequality. Burdens are defined as costly experiences (Herd and Moynihan 2019), and involve time and emotional costs (Sunstein 2021; Hattke, Hensel, and Kalucza 2020) which are seldom accounted for. Furthermore, theoretical literature suggests vulnerable groups may have more time-consuming or emotionally draining administrative experiences (Herd and Moynihan 2019; Christensen et al. 2020; Sunstein 2021). More generally, choices often do not reflect "true" preferences due to bounded rationality, hence experiences provide useful information about these preferences (Kahneman and Krueger 2006). Third, experiences provide contextual factors relevant to decision-making which are typically not observed when analyzing choices, as those who have more costly experiences may be less likely to complete burdensome tasks. Overall, while specific instances of sludge and their effects on outcomes are well researched, we are missing crucial information on cumulative everyday experiences across society.

This study uses original survey data from 2,243 UK residents to measure everyday administrative experiences, focusing on time and emotional costs across ten domains: income and tax, retirement, government benefits, bills, goods and services, savings and investments, debt, health, childcare, and adult care. The survey is adapted from the Day Reconstruction Method (Kahneman et al. 2004) and asks participants how much time they spent on various tasks in each domain over the past day or month, and how they felt while completing these tasks across various emotions. This is followed by an ex-

periment measuring the effect of sludge on choices. Participants are shown two hypothetical scenarios: applying for a government benefit and claiming a phone bill refund. They are randomly assigned to a high or low-burden version of each scenario. The low-burden versions involve a short form, and the high-burden versions, a lengthy process or an unpleasant interaction (government benefit), and added complexity or a delay (phone bill). Participants report how likely they would be to complete the task in the scenario.

The results provide new insights on sludge and inequality. People spend about one hour per day on administrative tasks; tasks relating to bills, shopping, and saving take up the most time on average. However, there is substantial heterogeneity: the minority of people who report engaging in tasks relating to benefits and child- or adult care incur significant time costs. Emotional costs vary significantly depending on the type of task conducted, with the highest costs associated with benefits, debt, and tax, while the most positive emotions are associated with tasks relating to children, shopping, and saving. The study explores distributive effects, focusing on older age, poor health, and financial insecurity. It finds that disadvantaged groups' experiences differ from the rest of the population. They are more likely to engage with domains salient to them (e.g. health, debt, benefits), but less likely to engage with saving and, except for older people, retirement. Emotional costs are higher for those with poor health or low financial well-being, across all domains, but especially those relevant to their disadvantage (e.g. benefits). The choice experiment finds that sludge increases outcome inequality. As expected, participants' choices are negatively affected by administrative burdens. They are less likely to complete a (hypothetical) beneficial task in high-burden scenarios. Furthermore, being in poor health increases the negative effect of these burdens. This suggests that disadvantaged groups' experiences may inform their choice to engage with burdensome tasks, hence results may underestimate inequality in time and emotional costs due to biased selection into tasks.

Overall, this study makes several contributions. It is the first to empirically document everyday administrative experiences across domains, and it accounts for time and emotions, which are central to the theoretical sludge literature yet seldom captured in empirical research. Furthermore, the choice experiment allows for interpreting individuals' decisions to engage with administrative tasks in the context of their real-life experiences (e.g. their time or emotional costs). Through this approach, the study shows that sludge imposes higher costs on some groups, suggesting that it may foster inequality via both experiences and choices. Hence this study suggests that sludge such as paperwork burdens creates significant ethical issues.

Obfuscation and Choice Architecture in Online Donations

EXTENDED ABSTRACT

We examine the impact of website design on consumers' donation behavior. Specifically, we examine the addition of pre-checked boxes that cause donors to opt into repeating weekly donations and the addition of text obfuscating the effect of these pre-checked boxes.

Most work on how decisions are presented to consumers examines how the presentation of a decision (known as *choice architecture*) can help consumers make decisions in their or society's best interest. Helpful changes to choice architecture such as having default options, sorting choices so the best one at the top of the list, or removing bad options, are called *nudges* (Thaler and Sunstein, 2008). Scholars have examined how nudges can increase consumers' retirement savings (Beshears et al., 2009), increase their likelihood of donating their organs (Johnson and Goldstein, 2003), cause them

to eat healthier (Cadario and Chandon, 2018), or cause them to select environmentally friendly products (Pichert and Katsikopoulos, 2008). However, choice architecture can have a dark side. Just as organizations can nudge consumers to make decisions that are good for themselves, for others, or for society, they can obfuscate choices to make consumers choose options that may hurt them but benefit the person designing the choice architecture. Some call these "dark nudges" or "evil nudges" (Newall, 2019; Thaler and Sunstein 2008), while UX designers call these "dark patterns" (Gray et al., 2018).

We examine the effect of nudges during the 2020 election cycle, where campaign donation websites tried to get consumers to opt into weekly recurring donations. We also examine how the effects vary by age. There is evidence of heterogeneous nudge effects (Mrkva et al., 2021) and older donors' lower fluid intelligence and higher crystallized intelligence suggests that these interventions may affect them differently than younger donors (Bugg et al., 2006; Li et al., 2015).

Throughout the United States 2020 election cycle, donation pages for campaigns such as Donald Trump's presidential campaign, the Republican National Committee, and others, implemented several nudges. In early September 2020, the Trump campaign replaced a prechecked box opting donors into monthly repeated donations with a box opting donors into *weekly* repeated donations. The box said: "make this a recurring weekly donation until 11/3." If consumers left this box checked when making their donation, their donation repeated every week until November 3rd, 2020. In September and October, the campaign added obfuscating text distracting from the checkbox's function and making the original text less noticeable (see figure 1). Throughout, we will call checkboxes with obfuscating text before the key information *obfuscated defaults*, while we will call checkboxes without the obfuscating text simply defaults. Some other campaigns implemented these dark patterns as well, though all later than the Trump campaign.

The overlapping changes of the campaigns' website design allows for a field examination of the influence of both obfuscated and non-obfuscated defaults using difference-in-differences estimation. We hypothesize that a campaign's initial addition of the weekly donation default will increase the proportion of donors donating identical amounts weekly. These weekly repeated donation chains will persist for longer after the default is added than before. In addition, we expect obfuscated defaults to have a larger effect than non-obfuscated defaults. We further hypothesize that these effects will be larger for retirees than non-retirees.

We combine publicly available data from the Federal Election Commission (FEC) with screen captures of the campaign websites donation pages from archive.org to examine our hypotheses. Our FEC dataset contains every donation by individuals to a Political Action Committee (PAC) that used WinRed (a right-wing political fundraising platform) to raise money during the 2020 election cycle. The data includes identifying information for each donor, as well as the amount they donated and who they donated it to. It also includes whether the donor was employed or retired. The screen captures from Archive.org allow us to examine changes and donation patterns to a PAC before and after its associated website's design changes.

We compare donations to the Trump campaign, which used the default, to donations to the top 10 Republican donation recipients that did not use the default. We use a difference-in-differences regression to examine the increase in likelihood of starting a weekly repeating donation. We include fixed effects for donors, and cluster standard errors at the donor level. We find that the Trump campaign exhibits a 2.8 percentage point increase in the likelihood of starting a repeating donation chain from the pre-default to post-default period than other

campaigns do ($t = 17.47, p < .001$). This is a 116% increase over the predefault period, in which the likelihood was 2.4%. Non-retirees who donated to the Trump campaign exhibit a 2.0 percentage point increase ($t = 10.04, p < .001$), while retirees exhibit a 3.6 percentage point increase—80% greater than non-retirees ($t = 2.56, p = .01$). After the campaign adds the default, weekly recurring donations account for 10%-30% of the money donated to the campaign daily. Before the default is added, weekly donations account for less than 4% of donations (see figure 2). Throughout the campaign, weekly donations account for approximately \$44 million donated. In addition, we find that the default increases the probability that people start longer donation chains. After the default is added, the probability of people starting weekly donation chains that last more than 4 weeks or more increases by 12 to 21 percentage points, depending on the length of the donation chain. Finally, changing a default to an obfuscated default increases people's propensity to start donation chains by a further 3.0 percentage points -- this is in addition to the increases due to the initial addition of the default.

Though most researchers, firms, and policymakers want to use choice architecture for good, bad actors can use it to trick consumers into spending money. When people realized they had inadvertently been donating weekly, they asked for their money back. The Trump campaign ended up issuing almost six times as much money in refunds as the Biden campaign to its donors (New York Times, April 3, 2021).

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Social Phenomena and Marketplace Signaling in a Changing World

Chairs: Jared Watson, New York University, USA

Evan Weingarten, Arizona State University, USA

Paper #1: The Upsides and Downsides of Gatekeeping

Evan Weingarten, Arizona State University, USA

Rachel Gershon, University of California, San Diego, USA

Amit Bhattacharjee, University of Colorado, Boulder, USA

Paper #2: Sexual Misconduct, Scientific Fraud, and Citation Penalties

Giulia Maimone, University of California, San Diego, USA

Gil Appel, George Washington University, USA

Craig R. M. McKenzie, University of California, San Diego, USA

Ayelet Gneezy, University of California, San Diego, USA

Paper #3: George Floyd's Murder and Yelp: Product Reviews as a Compensatory Process

Siddharth Sharma, Indian School of Business, India

Justin Frake, University of Michigan, USA

Jared Watson, New York University, USA

Paper #4: Racial-Justice-Branding and Racial Privilege

Broderick Turner, Virginia Tech, USA

Esther Uduchi, University of Washington, USA

SESSION OVERVIEW

Social movements have become increasingly prevalent to the national discussion in the last decade amidst perceived violations of rights, ethics, and norms. Protests by members of such groups as Occupy Wall Street, #MeToo, and Black Lives Matter have attracted attention and focused marketplace discussion around remedying inequality and the differential experiences of those of various social identities and groups.

While there has been research in marketing that address foundational issues regarding inequality and social identity and its relevance to marketing, many questions remain unanswered. What is the impact of denying access to a social identity or group? What is the impact of social movements on sales of products or experiences? When do people prefer products or experiences about social movements? How does violating social norms have an impact on transgressors' success in the marketplace, and how does the way in which norms are violated matter?

This session discusses these relevant questions and more. In the first talk, the authors explore how gatekeeping (i.e., deciding who has access to a social group or identity) influences gatekeeper likeability and commitment. In five studies, they find that while gatekeeping (i.e., being exclusive) hurts likeability (vs. being inclusive), it helps the gatekeeper's perceived commitment depending on applicant fit and sacred values. Relatedly, one form to exclude others who do not cohere with group expectations is through differential citations. The second research team examines how violating norms of ethical scientific conduct and sexual conduct influence citations of scientists using citation counts from Web of Science and a laboratory study. That is, while scientists faced lower citation counts (relative to controls) following their misconduct becoming public, the negative impact was greater for sexual misconduct than for scientific misconduct. Participants in the laboratory study similarly thought the penalty for sexual misconduct should be greater.

But, people do not merely punish negatives; they also sometimes compensate groups. The last two papers address when people attempt to make up for transgressions. The third research team ad-

resses the impact of social movements on sales: they use difference-in-difference empirical estimation to show how George Floyd's death had an impact on reviews of Black-owned businesses. Notably, the average rating of these businesses rose, with a positive association between White population percentage in local areas. Finally, in three studies, researchers find that support for products with racial justice branding (e.g., Starbucks cups with the word "Justice") increases with acknowledgement of racial privilege. They find this pattern operates through peoples' system justification beliefs.

This session should appeal to researchers and practitioners interested in retailing, identity, racial and social justice, reviews and ratings, inequality, and branding. The session contributes to a deeper discussion of modern issues facing the marketplace in light of the last few years of public discourse over rising inequality and identity-based targeting in the marketplace. This session also coheres with the conference theme (Together) by employing multiple theoretical perspectives (e.g., sociological, psychological) and methodologies (e.g., field data, laboratory studies) regarding questions of import to managers and to researchers.

The Upsides and Downsides of Gatekeeping

EXTENDED ABSTRACT

You're not a true gamer if you only like mobile games. If you're motivated by health rather than animal rights, you're not a real vegetarian. Social media platforms are replete with examples of *gatekeeping*, or excluding another's access to a community or identity. A pilot study found most participants have witnessed gatekeeping, indicating its prevalence. But is it an *effective* social strategy? An additional study using field stimuli from two Reddit communities that discuss examples of gatekeeping (*r/gatekeeping*) versus inclusivity (*r/gatesopencomeonin*) suggests that it may be decidedly ineffective: gatekeeping was consistently rated as less likeable than being inclusive. So why is gatekeeping so pervasive?

We argue that while gatekeeping does make individuals seem less likeable, it can also signal their devotion to a community. That is, because inclusivity towards outsiders with diverging views might dilute the values that define a group's identity, gatekeeping can signal one's commitment to protecting the group (Bellezza and Keinan 2014; Berger and Heath 2008; Skitka et al. 2005).

We present six preregistered studies exploring how gatekeeping affects one's perceived likeability and commitment to a group. Our findings highlight a tension between being exclusive enough to preserve group value purity, yet inclusive enough to extend group reach. Accordingly, we find two key moderators that determine the social benefits of gatekeeping. First, perceptions of the gatekeeper's commitment depend on the applicant's fit with group values (i.e., gatekeeping only helps when candidates are a bad fit). And second, the appeal of gatekeeping increases as individuals define groups more in terms of sacred values (i.e., values deemed absolute, non-negotiable, and forbidden to compromise; Tetlock et al. 2000).

Our first study demonstrated the basic reversal for gatekeepers on perceived liking and commitment. In a 2-cell (Include/Exclude) between-subjects design, participants (N=306) read about a Meetup group organizer who either rejected (Exclude) or accepted (Include) a candidate named Cameron into an unspecified group. Cameron

was described as having “goals and interests that do not perfectly match the goals and interests of the group.” Participants rated the Meetup organizer on three Likeability measures and three measures of “Commitment” to the group, with order counterbalanced. Consistent with our predictions, gatekeeping (vs. including) Cameron made the organizer seem less likeable ($F=174.42, p<.001$) but more committed to the group ($F=28.58, p<.001$).

In a second study ($N=382$), we showed that these results depend on whether the candidate is considered a good fit for the group. We used a 2(Include/Exclude) \times 5(Candidate Fit: Very Bad, Bad, Middle, Good, Very Good) \times 2 (Dependent Measure) mixed design with Likeability and Commitment measures rated between-subjects to prevent potential carryover effects. This time, participants read a Veganism context across separate Meetup group organizers judging candidates varying in their fit with the group. Gatekeeping reduced liking, even more dramatically when the candidate was a better fit ($F=104.56, p<.001$). Moreover, its effect on perceptions of commitment weakened and ultimately reversed as the candidate became a better fit ($F=104.56, p<.001$). That is, gatekeeping a bad or very bad candidate was considered less likeable but more illustrative of group commitment, but gatekeeping a good candidate was both less likeable and less illustrative of group commitment.

A third study explored the moderating role of individual-level sacred value beliefs. Participants ($N=662$) were assigned to one of four between-subjects cells in a 2(Include/Exclude) \times 2(DV: Liking/Commitment) design. They provided either liking or commitment ratings for a group organizer who either included or excluded a (bad-fit) candidate. More importantly, they did so across two different within-subjects Meetup group contexts (Climate Change, Animal Rights), before rating the extent to which they saw each group as defined by sacred values. As before, gatekeeping reduced likeability ($t=5.11, p<.001$). However, we also found an interaction ($t=-4.98, p<.001$), whereby this effect attenuated as the issue became more of a sacred value. Conversely, gatekeeping increased perceived commitment ($t=-13.50, p<.001$), and this effect strengthened as the issue in question became more of a sacred value ($t=-6.33, p<.001$).

Building on these insights, our fourth study found that when a community centers around a sacred value, constituents become more likely to support leaders who favor gatekeeping (vs. inclusivity). Participants ($N=517$) were randomly assigned to either read about a Film Buffs group (less of a sacred value) or a Sustainability group (more of a sacred value) looking for a new president. They were then asked to vote between a candidate interested in broadening the reach of the group (inclusivity) to help the group achieve its goals versus one who believes that keeping the group selective (gatekeeping) is essential to help achieve its goals. Though participants overwhelmingly avoided voting for the gatekeeping candidate in a Film Buffs group that was less related to sacred values, a slight majority preferred the gatekeeping candidate for a Sustainability group more defined by a sacred value (19% vs. 53%, $z=7.79, p<.001$).

Finally, our fifth study demonstrated the implications of these findings on real donation behavior. Participants ($N=699$) were randomly assigned to read about either gatekeeping or inclusive behavior from a World Wildlife Fund (WWF) director in response to a potentially beneficial partnership offer from an organization of questionable fit (one that advocated trophy hunting). Participants were given the opportunity to donate a portion of their \$0.20 bonus to the WWF, and then asked to indicate the extent to which they regarded these issues as related to a sacred value. We observed an interaction between gatekeeping and sacred values on donations ($t=-2.63, p=.009$): participants who saw ending trophy hunting as more of a

sacred value donated more when the WWF director chose to gatekeep.

These findings demonstrate that beyond its individual-level social costs, gatekeeping can be best understood by considering its group-level implications. This work points to a fundamental trade-off between purity and reach that may help characterize the public discourse in countless value-laden group contexts (e.g., Should Black Lives Matter change its messaging? Should the Democratic National Committee run more moderate candidates?), and thus warrants further study.

Sexual Misconduct, Scientific Fraud, and Citation Penalties

EXTENDED ABSTRACT

In this paper we compare the consequences of allegations of sexual misconduct and of scientific fraud on the accused scholars' citation rates. Surprisingly, research published by scholars accused of sexual misconduct incurs a *larger* citation penalty than research published by scholars accused of scientific fraud.

The MeToo movement has not spared academia (e.g., Tenbrunsel et al., 2019). While sexual misconduct allegations are dealt with by the accused harasser's employer, the legal system, or both, it is unclear whether they negatively impact the citation rates of the accused scholar's published work. On the one hand, because citations serve to promote scientific advancement and acknowledge the contribution of past research (e.g., Catalini et al., 2015)—and sexual misconduct accusations do not question the validity of the accused scholar's work—such allegations could have no impact on the citation rates of the accused. On the other hand, citations could be negatively affected if researchers prefer to avoid being associated with the accused or if they desire to punish their behavior (e.g., Haidt, 2020).

To provide context, we compared changes in citation rates of scholars accused of sexual misconduct with those of researchers accused of scientific fraud, such as data fabrication and falsification (Steneck, 2007). We chose this benchmark because publications found to be fraudulent should not be cited at all, given that they no longer offer scientific evidence. By extension, the integrity of the entire portfolio of a researcher accused of scientific fraud could be questioned.

Our data consist of Web of Science citations over 13 years for 6,258 publications authored by 30 accused scholars and 30,682 publications authored by 142 control scholars, spanning 18 different fields, totaling 480,220 observations.

The accused scholars included in our sample were active researchers in the natural or social sciences with a minimum of 200 citations, accused of misconduct in 2017 or earlier (to allow for three years of data post-accusation), and their allegations were described in online news articles.

All analyses control for publication year, total citations per paper, number of authors, field, rank, gender, the year the accusations became public, and the natural trend in citations over time (e.g., Mingers, 2008). First, we compare citation rates of researchers accused of sexual misconduct, scientific fraud, and of the controls. A difference-in-difference analysis comparing citation rates of these three groups before and after news of the allegations broke shows the citation rates for scholars accused of sexual ($b = -1.73, t(480,188) = -9.45, p < .001$) and scientific ($b = -1.08, t(480,188) = -6.15, p < .001$) misconduct decreased substantially after the accusations became public, compared with the citation rates of control scholars. Interestingly, the citation rates of researchers accused of

sexual misconduct decreased significantly *more* than those of researchers accused of scientific fraud ($b = -0.66$, $t(480,188) = -2.72$, $p = .007$). To account for potential unobserved differences between the two accused groups (sexual vs. scientific), we compare changes in citation rates between each group and its respective controls. Our analysis revealed a three-way interaction of misconduct type (sexual vs. scientific), accusation (accused vs. control), and time (pre- vs. post-accusation; $b = -0.98$, $t(480,186) = -3.70$, $p < .001$), such that, compared with each accused group's respective controls, researchers accused of sexual misconduct suffered a *larger* citation penalty than those accused of scientific fraud. We replicate these results using a variety of robustness checks.

The pattern observed in our data could be driven by oversensitivity to sexual misconduct, insufficient sensitivity to scientific fraud, or both. To test whether such differential sensitivity is at play, we presented individuals ($N=231$) with definitions and examples of both scientific and sexual misconduct in academia. Participants indicated which of the two types of misconduct is (a) more deserving of punishment, (b) more disgusting, and (c) worse than the other. Consistent with our findings, the overwhelming majority of participants deemed sexual misconduct in academia as more deserving of punishment (76.2%, $\chi^2(1) = 63.38$, $p < .001$), more disgusting (90.5%, $\chi^2(1) = 151.40$, $p < .001$), and worse (75.8%, $\chi^2(1) = 61.30$, $p < .001$) than scientific fraud, showing people do experience differential sensitivity to these two types of misconduct. Participants' gender had no effect on any of the measures ($ps > .40$). The pattern observed in the survey suggests citation decisions might be influenced by scholars' emotional reactions to the type of accusations made against a researcher.

Our findings suggest that citation decisions are sensitive to factors unrelated to a publication's scientific merit (see also Bornmann & Daniel, 2008), and contribute to recent discussions concerning research practices (Nelson et al., 2018), editorial decisions (Siler et al., 2014), and the integrity of scientific research (e.g., Komić et al., 2015).

George Floyd's Murder and Yelp: Product Reviews as a Compensatory Process

EXTENDED ABSTRACT

George Floyd, a black man, was murdered by Derek Chauvin, a white police officer, on May 25, 2020. In the wake of his murder, support for the Black Lives Matter (BLM) social movement reached unprecedented heights. On May 31, days after his death, a national survey found that 52% of Americans surveyed supported BLM. Merely five months earlier, support was only at 41%. Thus, there was a 25% increase in the number of supporters in a relatively short time period. George Floyd was not the first Black man to be murdered by a White police officer, so what made this instance different?

We posit that the video evidence of George Floyd's murder provided a challenge to individuals' system justification (Watson and Clark 1984; Jost and Banaji 1994), resulting in potential cognitive dissonance and negative feelings for overlooking and justifying so many murders and acts of oppression before this. System justification can be defined, in part, as the "process by which existing social arrangements are legitimized" (Jost and Banaji 1994). And while a more nuanced definition can be derived by integrating literatures on ingroup biases (Allen and Wilder 1975; Brewer and Campbell 1976; Tajfel and Turner 1986) and their consequences (Fiske 1993; Mullen, Brown, and Smith 1992) with social dominance theory (Jost and Thompson 2000), a more pragmatic interpretation of system justifi-

cation is simply that individuals seek to rationalize the status quo to regulate their affective state.

But what happens when individuals cannot rationalize the status quo? The authors posit that they might engage in compensatory consumption to regulate the negative affect incurred. Sharma et al. suggest that many individuals incurred feelings of guilt (a negative affective state), and thus, sought to support the Black community, like Black-owned businesses, to self-signal distance from the oppressive system.

In the context of this research, the authors investigate how George Floyd's death impacted the reviews of Black-owned businesses. They web-scraped reviews for 7,406 self-identified Black-owned businesses across four major metropolitan areas over the 12-week period surrounding the death of George Floyd. Using a standard difference-in-differences (DID) approach to estimate the model, they find that the average rate of reviewing for Black-owned businesses increased after the death of George Floyd ($\beta = .812$; $p < .001$) as did the average rating of each review ($\beta = .262$; $p < .001$).

Yet, compensatory processes do not often result in sustained change. Once the negative state is removed, and a neutral or positive state is restored, the behavior also dissipates. To provide justification for a compensatory process, the authors introduced two variables. They utilized U.S. Census data to introduce zip code-level Black population percentage and White population percentage. The intuition underlying these variables were such that Black individuals were less likely to incur guilt by group-level association with the offender relative to White individuals, and thereby less likely to engage in a compensatory process. Two major findings emerge on the local level. First, as the Black population percentage increases there is a reduction in the rate of reviewing for Black-owned businesses after George Floyd's death ($\beta = -1.079$; $p < .001$). This may result from a ceiling effect due to both the Black community demonstrating a high level of support for their own community and a shifting of resources from patronizing businesses to visible demonstrations. They also find that as the White population percentage increases, there is a large increase in the average rating of Black-owned businesses in these areas after George Floyd's death ($\beta = .861$; $p < .001$), finding evidence for the outsized support coming from the White population.

Next, the authors investigated the temporal dynamics of their model. If George Floyd's death resulted in systemic change, they might expect a simple exogenous shock with a new baseline level of support after his death. If this is merely a compensatory process however, they would expect to see the effect decay quickly once the affective state is regulated. Indeed, when comparing ratings of Black-owned businesses immediately after his murder to just seven weeks later, they find that the ratings are significantly lower ($p < .01$), and not significantly different than immediately before his murder ($p > .10$). When considering the frequency of reviews, they again find that this is significantly lower just seven weeks after his murder than one week after ($p < .01$). Yet here they find that it is still significantly higher than before ($p < .05$), suggesting that part of the review frequency effect could be due to attention rather than mere compensatory consumption.

Overall, the authors find that the death of George Floyd led to a significant increase in the number of reviews Black-owned businesses received as well as the average ratings of their establishments, though this effect was short-lived (about seven weeks). They posit that his death served as a challenge to the system justification of many Americans, resulting in a compensatory process that manifested in changes to how Black-owned businesses were reviewed on Yelp. Yet, while the effect may be short-lived, the reviews live on in permanence and may, thus, yield significant returns in perpetuity.

Racial-Justice-Branding and Racial Privilege

EXTENDED ABSTRACT

Racial-justice-branding is a burgeoning marketing tactic in which brands signal a commitment to reducing racial injustice by producing and promoting products that adopt a political stance that indicates the current racial hierarchy is unjust. For example, Ben & Jerry's created new ice cream flavors with social justice messaging including "Justice ReMix'd (Marquis 2020), Netflix added a Black Lives Matter genre to their film and television offerings (Hibberd 2020), Starbucks created "Black Lives Matters" t-shirts for employees and had baristas enscribe social justice phrases including "Race Together" on coffee cups (CBS Chicago 2020), Snapchat released a filter for Juneteenth (Lyons and Newton 2020), and Uber's app featured a banner that read "Support Black-Owned restaurants" and provided customers a list of nearby restaurants (Schlatteger 2020). However, less than 27% of CMOs believe it is appropriate to make changes to products or services over political issues (Moorman 2021). This current research may counter this hesitancy as it finds that consumer who acknowledge racial privilege have an increased preference for racial-justice-branding, by way of system justification beliefs. The relationship between racial privilege and racial-justice-branding is most prevalent among White (vs. Nonwhite) consumers.

This research considers there exist a de-facto racial hierarchy exist in the US (Bonilla-Silva 1997; Feagin 2014; McDermott and Samson 2005) in which those who identify as White (vs. Nonwhite) enjoy a priority status which includes benefits such as a better health-care, cleaner water, healthier grocers, preferential housing, and longer, healthier lives (Williams and Mohammed 2009; Williams, Neighbors, and Jackson 2003). A contingent of Americans recognize the prioritized position of White people in this hierarchy is unearned. We term this unearned prioritization *racial privilege*. Equity theory (Adams 1963; Adams and Freedman 1976) posits that people seek parity in the ratio of their efforts to rewards. Racial privilege, as it is unearned, violates this ratio. Moreover, acknowledging racial privilege delegitimizes the system that created the inequity. To capture this delegitimization the authors turn of measures of system justification (Kay and Jost 2003) which captures the belief that one's position within a social system is just. Taken together, the present model suggests that as racial privilege increases, justification of the existing system decreases, and ultimately people can signal their commitment to changing this system through racial-justice-branded products.

In each study, participants made a series of choices in which they chose a between a normative-branded product versus a racial-justice-branded product. As examples, these might be Nike AF1 shoes that were or were not Black History Month-related, Justice or Peace Starbucks cups, or equality or tranquility-labeled Coca-Cola bottles. In Study 1, 180 Non-Hispanic White participants first chose between these products and then indicated their agreement to a scale of racial privilege (Swim and Miller 1999). As the greater the acknowledgement of the concept of racial privilege increased the greater the support for racial-justice-branded products ($t=9.07$, $p<.001$). Moreover, racial privilege beliefs explained support for racial-justice-branded products better than political ideology ($t=2.19$, $p=.03$) or socio-economic status ($t=1.47$, $p=.14$).

Studies 2 and 3 enacted racial privilege beliefs through an innocuous writing prompt. Participants either responded to a racial identity prompt about how their race impacted their lives, or a control condition about their day-to-day life. To account for participant's racial privilege, two research assistants marked if a person acknowledged their racial-identity conferred them unearned rights, benefits,

advantages or immunities. The coder agreement was 91% across both studies.

Study 2 (N=402 White Americans) found that endorsing racial privilege increased support for racial-justice-branding (62%), while not endorsing racial privilege decreased social justice branded (38%) relative to Control (52%). The total effect of racial privilege on racial-justice-branding preference through system justification beliefs ($t=5.30$, $p<.001$) was strengthened relative to the direct effect of racial salience on social justice branding preference ($t=3.59$, $p<.001$).

Study 3 (N=382 White Americans, 423 Nonwhite Americans) determined if the effect of racial privilege on racial-justice-branding was qualified by the race of the consumer. Only 6% of nonwhite Americans (vs. 47% of White Americans) acknowledged racial privilege. Moreover, this acknowledgement had no effect on their support of racial-justice-branded products. However, White Americans who acknowledged racial privilege increased support for racial-justice-branding even higher than Nonwhite Americans.

This work contributes to marketing theory by considering how racial privilege operates in the marketplace. This work demonstrates that as privilege increases so does support for racial-justice-branding, by way of the delegitimization of the current social system. Moreover, for CMOs and other marketing executive this work suggests that hesitantly in taking racial-justice stances with products may be displaced, especially if the marketing is aimed at White Americans who acknowledge racial privilege.

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Gift-giving-Dynamics That Do Not Fit the Mold—Challenges and Resolutions

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Paper #1: Self-Gifting Hesitation

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Paper #2: Constraining the Unconstrained: Gift Versatility and Financial Perceptions

Lingrui Zhou, Duke University, USA
Denny Huynh, Duke University, USA
Keisha Cutright, Duke University, USA
Eugenia Wu, University of Pittsburgh, USA

Paper #3: The “I Hear You” Effect: Support-Givers’ Inflated Preference for Consolation Gifts that Signal Non-Avoidance of Support-Seekers’ Struggle

Soo Kim, Nanyang Technological University, Singapore
Lauren Min, University of Kansas, USA
Kate Min, Wheaton College, USA
Helen Chun, Cornell University, USA

Paper #4: Givers Can Handle the Truth: Givers React to Recipients’ Honesty About Disliked Gifts Better Than Recipients Expect

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Gift-giving-Dynamics That Do Not Fit the Mold—Challenges and Resolutions

SESSION OVERVIEW

A “typical” gift-giving occasion revolves around cheerful occasions, in which gift-givers make decisions for other people undergoing positive life experiences (e.g., birthdays, weddings, graduations). Often, the gifts are assumed to be relatively well-received by recipients, whose circumstances are assumed to not differ vastly from givers. However, life introduces a variety of gift-giving occasions not fitting this mold—the recipient may not be another person (but rather, oneself); the giver may learn of the recipient’s distinctive circumstances (e.g., their finances); the gift-giving occasion may not be a cheerful one; or the giver may learn that their gift was not well-received. This session investigates the unique challenges that arise in such out-of-the-mold gift-giving occasions, with one common theme emerging: Both gift-givers and recipients often over-analyze the potential financial and relational outcomes of their gift-giving decisions in ways that lead to suboptimal outcomes.

The first paper examines a gift-giving occasion in which the gift-recipient is not another person but rather, oneself. The authors find that consumers exhibit self-gifting hesitation, whereby they are not only less willing to self-gift (vs. other-gift) but also budget less for self-gifts (vs. other-gifts), even when the occasion that calls for a gift is identical. One driving factor behind “self-gifting hesitation” is consumers’ disproportionately-heightened consideration of opportunity costs associated with their potential self-gift (vs. other-gift) spending.

The second paper examines a situation in which gift-givers learn of gift-recipients’ distinctive financial circumstances. The authors show that when gift-givers discover that the gift-

recipient is financially unconstrained (vs. constrained), they choose gifts that are less versatile than preferred by such recipients. This miscalculated preference for non-versatility stems from gift-givers’ increased concern about finding high-status gifts that are perceived to be more appropriate for these recipients who seem to have it all.

The third paper examines a non-cheerful gift-giving occasion—consolatory gift-giving—wherein the authors identify a misalignment in support-givers’ and support-seekers’ gift-giving preferences. Across different domains of struggle-disclosure by different support-seeking populations, support-givers exhibit an inflated preference for consolation gifts that affirm support-seekers directly in the domain of their struggle (vs. an alternative domain). The authors highlight support-givers’ preoccupation with signaling their non-avoidance of support-seekers’ disclosed struggle as a factor underlying the observed consolation gift preference-misalignment.

The fourth paper closes the session by examining situations in which gift-givers encounter gift-recipients’ honest reactions to disliked gifts. The authors find that gift-recipients tend to hide their honest feedback, thinking that their honesty would damage their relationship with gift-givers. Surprisingly, however, gift-givers exhibit little negative change in their post-honest-feedback perception of their relationship and react more negatively to realizing that recipients hid their honest reactions. The authors conclude by noting that, if gift-giving-misalignments happen, gift-recipients can temper their concern and rest assured that their honest negative feedback will not result in detrimental relational outcomes.

Altogether, these four advanced-stage papers offer a novel perspective on gift-giving-dynamics beyond typical gift-giving occasions. This session should appeal to a broad ACR audience, from consumers interested in making better gift-giving- and financial-decisions to scholars investigating gift-giving-behavior, relationships, self-other differences, financial decisions, and judgment and decision-making.

Self-Gifting Hesitation

EXTENDED ABSTRACT

Imagine that a good friend has made a certain accomplishment—completion of a long project at work or victory at a tennis match. In such situations, it is not difficult to imagine ourselves searching for ways to celebrate the friend’s accomplishment, possibly opening our wallets for a celebratory gift for her. However, what happens if we switched who the accomplished protagonist was? Would we be as willing to spend on a celebratory self-gift if it were we who had made such accomplishments? In this research, we hypothesize no.

According to prior literature, consumers impose significant personal meaning on self-gifts and treat self-gifts as special indulgences (Mick and DeMoss 1990), often requiring self-justifications for why one deserves a self-gift (Kivetz and Simonson 2002; Mick and Faure 1998). Our hypotheses are built upon this strong self-imposed demand for justification associated with self-gifting, coupled with the notion that consumers tend to consider a broader set of personal objectives (e.g., both indulgence and self-control) when making choices for themselves (vs. others) (Fishbach and Dhar 2005; Laran 2010). We hypothesize that, when consumers consider self-gifting

(vs. gifting to others), the many alternatives one could spend on instead (i.e., opportunity costs, Spiller 2011) to fulfill their varying objectives will become more salient. As a result of this increased opportunity-cost salience, we further hypothesize that consumers will be less likely to spend on a self-gift (vs. other-gift) to celebrate an identical achievement.

Seven pre-registered studies ($N=3,801$) tested our hypotheses. Studies 1a-1b first examined the full range of the gift-giving process, wherein participants first decided whether to gift or not and, depending on their decision, decided their gifting budget. Study 1a was a field experiment wherein pairs of friends were recruited to make incentive-compatible budgeting decisions. Within each dyad, one friend was randomly assigned to share via chat their recent achievement (“sharer”) and the other, to listen to their friend’s achievement (“listener”). They then faced a decision, wherein the “sharer” decided whether to give themselves a celebratory gift (self-gifting) and the “listener” decided whether to give their unsuspecting “sharer” friend such a gift (other-gifting) (yes vs. no). “Sharers” and “listeners” who indicated “yes” proceeded to determine how much they would spend from a \$30 gift-card they would be receiving if they were to win the bonus-affle. As predicted, participants were not only less willing to self-gift (vs. other-gift) (54%_{self-gift} vs. 97%_{other-gift}; McNemar’s $\chi^2=37.53$, $p<.001$), but also budgeted less for self-gifts (vs. other-gifts) ($M_{\text{self-gift}}=8.23$ vs. $M_{\text{other-gift}}=19.57$, Wilcoxon signed-rank test $p<.001$).

Study 1b demonstrated that this self-gifting hesitation generalizes to when self- versus other-gifting decisions are made within dyads of newly-acquainted participants where gifting norms are less established (choice-to-gift: 46%_{self-gift} vs. 78%_{other-gift}; McNemar’s $\chi^2=17.80$, $p<.001$; budget: $M_{\text{self-gift}}=4.94$ vs. $M_{\text{other-gift}}=8.97$, Wilcoxon signed-rank test $p<.001$). Having observed self-gift hesitation across the full range of the gifting-decision process, the remaining studies focus on the more financially-relevant decision of budgeting for self-gifts versus gifts for others.

Study 2 tested the robustness of self-gifting hesitation by varying the size of the available funds. Participants imagined their (or their friend’s, random assignment) successful completion of a project and indicated how much they would spend on themselves (their friend) in its celebration. The size of the available funds differed based on condition (\$50, \$100, \$150). Self-gifting hesitation occurred across all three budget amounts (\$50-budget: $M_{\text{self-gift}}=26.84$ vs. $M_{\text{other-gift}}=31.73$, $t(400)=-3.42$, $p<.001$; \$100-budget: $M_{\text{self-gift}}=44.57$ vs. $M_{\text{other-gift}}=49.82$, $t(396)=-1.89$, $p=.059$; \$150-budget: $M_{\text{self-gift}}=50.93$ vs. $M_{\text{other-gift}}=60.10$, $t(397)=-2.54$, $p=.012$).

Study 3 tested the underlying role of opportunity-cost salience via mediation. Participants indicated how much they would spend on themselves or on a friend (random assignment) to celebrate an identical achievement from a \$50-budget and responded to two items measuring opportunity-cost considerations. Consistent with our theorizing, the occasion to self-gift (vs. other-gift) heightened opportunity-cost considerations, which decreased participants’ gifting-budget (mediation: $CI_{95}=[-2.64, -.80]$).

Studies 4a-4b tested for further process evidence using moderation, either by reducing opportunity-cost salience for those considering a self-gift (s4a) or by heightening opportunity-cost salience for those considering an other-gift (s4b). In study 4a, besides the baseline self-gift and other-gift conditions, a third condition (self-gift/from-list) was introduced, wherein participants first listed items they need/want to purchase anyway (i.e., items that would become opportunity costs if they spent money on a different celebratory self-gift). Then, they indicated how much they would spend on themselves in celebration if they were to buy something from this (potential opp-

portunity-cost) list to celebrate their achievement. Baseline conditions replicated self-gifting hesitation: participants budgeted less on self-gifts (vs. other-gifts) ($M_{\text{self-gift}}=17.35$ vs. $M_{\text{other-gift}}=20.49$, $t(443)=-2.80$, $p=.005$). However, when prompted to consider self-gifting from their potential opportunity-cost list, participants budgeted more on self-gifts ($M_{\text{self-gift}}=17.35$ vs. $M_{\text{self-gift/from-list}}=22.69$, $t(443)=4.78$, $p<.001$), reversing self-gifting hesitation ($M_{\text{self-gift/from-wish-list}}=22.69$ vs. $M_{\text{other-gift}}=20.49$, $t(443)=1.96$, $p=.051$).

In study 4b, the third condition asked other-gifting participants to first consider five things they need to do/buy (i.e., opportunity costs of spending on an other-gift) before indicating how much to spend on a gift to a friend. Again, baseline conditions replicated self-gifting hesitation ($M_{\text{self-gift}}=30.66$ vs. $M_{\text{other-gift}}=36.53$, $t(553)=-3.86$, $p<.001$). However, when opportunity costs of other-gifting were made salient, self-gifting hesitation no longer persisted ($M_{\text{self-gift}}=30.66$ vs. $M_{\text{other-gift/OC-salient}}=32.43$, $t(553)=-1.16$, $p=.245$), as participants budgeted less on other-gifts, compared to when opportunity costs were not made salient ($M_{\text{other-gift/OC-salient}}=32.43$ vs. $M_{\text{other-gift}}=36.53$, $t(553)=-2.67$, $p=.008$).

Finally, study 5 tested for theory-consistent moderation by individual differences in spendthrift-tightwad tendency (Rick et al. 2008). As relative tightwads (vs. spendthrifts) are more likely to spontaneously consider opportunity costs of their spending (Frederick et al. 2009), we predicted that relative tightwads (vs. relative spendthrifts) would exhibit self-gift hesitation more. As expected, we observed a significant interaction between gifting occasion and participants’ spendthrift-tightwad tendencies ($B=.74$, $t(797)=3.41$, $p<.001$): While relative tightwads (vs. spendthrifts) tended to budget less in general, they budgeted disproportionately less for self-gifts than other-gifts (simple slopes of tightwad-spendthrift tendency: $B_{\text{self-gift}}=1.12$, $t(797)=7.62$, $p<.001$; $B_{\text{other-gift}}=.37$, $t(797)=2.31$, $p=.021$), exhibiting stronger self-gifting hesitation.

Altogether, we document the relative hesitation consumers exhibit when faced with an opportunity to self-gift (vs. other-gift). It so happens that the alternatives they can spend on instead become much more salient when consumers consider self-gifting (vs. other-gifting).

Constraining the Unconstrained: Gift Versatility and Financial Perceptions

EXTENDED ABSTRACT

People spend over \$573 billion annually on gifts (Wonder 2020). In doing so, they often base their selections on knowledge about the recipients, such as their culture (Green and Alden 1988) and preferences (Aknin and Human 2015; Gino and Flynn 2011). In the current research, we investigate an understudied aspect of gift giving: how the recipient’s financial situation affects the giver’s selections.

Consumers can readily detect people’s financial situations (Kraus et al. 2017) which leads to inferences about their preferences (Monsivais and Drewnowski 2009; Snibbe and Markus 2005; Veblen 1973). We examine how the recipient’s financial situation influences the type of gift the giver selects. We focus specifically on the distinction between versatile and non-versatile gifts.

A versatile gift is a product that can serve many functions or be used in many contexts (e.g., all-in-one coffee machine). Conversely, a non-versatile gift is a specialized product that has less functions or is used in fewer contexts (e.g., espresso machine). We propose and find that consumers see non-versatile gifts as being of higher status than versatile ones.

We predict that when the gift recipient is financially unconstrained (constrained), the giver will be more (less) likely to choose a non-versatile product (i.e., a martini glass versus a general cocktail glass), even when product prices are equivalent. We hypothesize that this effect is driven by the desire to give something of higher status (e.g., a product that confers social prestige to the owner; Berger and Ward 2010) to the financially unconstrained recipient.

In study 1a (all studies pre-registered), we examine our hypothesis using a 3-cell design (recipient's finance: unconstrained, constrained, control). Participants first wrote about a friend that was either financially unconstrained, constrained, or about a friend's general characteristics (control). Then, participants chose between either a pre-structured notebook (non-versatile) or a notebook with an open layout (versatile) as a gift for their friend (gift price held constant in all studies). Studies 1a and 1b were incentive compatible in that participants were told some winners would be chosen to have their selected gift sent to the recipient on their behalf. We find that 46.4% in the unconstrained, 26.2% in the constrained, and 27.3% in the control conditions chose the non-versatile gift. Using a binary logistic regression, we find that those who chose for an unconstrained recipient were significantly more likely to pick the non-versatile gift compared to those who chose for a constrained recipient ($\beta=.89$, $SE=.30$, $Wald-\chi^2(1, N=299)=8.65$, $p=.003$) and to the control condition ($\beta=.84$, $SE=.30$, $Wald-\chi^2(1, N=299)=7.57$, $p=.006$). There was no difference between the constrained and control conditions ($\beta=.05$, $SE=.32$, $Wald-\chi^2(1, N=299)=.03$, $p=.86$).

Study 1b replicates these results using gift cards. Participants chose between a \$50 gift card to a specific store (non-versatile) or a \$50 Visa gift card (versatile) for a financially constrained or unconstrained friend. We find that 32.0% of those who chose for an unconstrained friend, and 16.2% of those who chose for a constrained friend, chose the non-versatile gift ($\beta=.89$, $SE=.24$, $Wald-\chi^2(1, N=401)=13.32$, $p<.001$).

Study 2 uses a 2 (role: giver, recipient) x 2 (recipient's finance: unconstrained, constrained) study design to investigate whether financially unconstrained (constrained) recipients' preferences match what givers give them. Those in the giver condition wrote about a friend who was financially unconstrained or constrained. Those in the recipient condition wrote about feeling financially unconstrained or constrained themselves. Then, participants were told to imagine they were either planning to purchase a gift for the friend (giver) or expecting to receive a gift from a friend (recipient). Finally, participants chose between either a martini glass (non-versatile) or a general cocktails glass (versatile) for their friend/themselves. We find a marginal interaction between gift role and recipient's finances ($\beta=.39$, $SE=.23$, $Wald-\chi^2(1, N=399)=2.98$, $p=.08$). Replicating prior findings, we find that givers were more likely to choose the non-versatile gift for unconstrained recipients compared to constrained recipients ($\beta=.38$, $SE=.15$, $Wald-\chi^2(1, N=399)=6.19$, $p=.01$). However, we find that recipients in both the unconstrained and constrained conditions preferred the versatile gift to the non-versatile gift ($\beta=.007$, $SE=.17$, $Wald-\chi^2(1, N=399)=.002$, $p=.97$). Lastly, we find a significant mismatch between givers and recipients in the unconstrained condition, such that givers were more likely to choose the non-versatile gift than recipients would like ($\beta=.80$, $SE=.31$, $Wald-\chi^2(1, N=399)=6.65$, $p=.01$).

We test for mediation through desire to give a gift of higher status in study 3 (2-cell: unconstrained, constrained). Participants chose between an espresso machine (non-versatile) or an all-in-one coffee machine (versatile) for either a financially unconstrained or constrained friend. We find that 32.0% of those in the unconstrained, and 16.2% of those in the constrained conditions, chose the non-

versatile gift. Those in the unconstrained condition were more likely to choose the non-versatile gift compared to those in the constrained condition ($\beta=1.61$, $SE=.35$, $Wald-\chi^2(1, N=197)=21.73$, $p<.001$). We also measured givers' desire to give something of higher status and find that it mediates the effect of financial situation on gift choice ($ab=.92$, 95% CI [.4457, 1.5783]).

We provide further evidence for the mechanism via moderation in study 4 (2 (recipient's finance: unconstrained, constrained) x 2 (gifts framing: control, status)). Participants chose between a martini glass (non-versatile) or a general cocktails glass (versatile) for a financially unconstrained or constrained friend. We then manipulated the gift descriptions such that they were either similar to prior studies (control) or we added information that the versatile item was limited-edition to boost its perceived status. We find an interaction ($\beta=1.11$, $SE=.57$, $Wald-\chi^2(1, N=402)=3.75$, $p=.05$) such that we replicate effects with the control framing ($p=.002$) but see an attenuation with the status framing ($p=.74$).

In conclusion, we find that knowing that the recipient is unconstrained (constrained) financially leads givers to choose less (more) versatile gifts, and that this effect is driven by givers' desire to give a gift of higher status for the recipient. In doing so, our work contributes to the research on gift-giving, financial (un)constraint, and product status and versatility.

The "I Hear You" Effect: Support-Givers' Inflated Preference for Consolation Gifts that Signal Non-Avoidance of Support-Seekers' Struggle

EXTENDED ABSTRACT

Over the past two years, we have witnessed people close to us face uncharted challenges. As witnesses to their struggle, our inherent motivation to support those close to us during times of distress (Collins and Ford 2010) led us to vigilantly search for ways to better support them. In this search, many turned to gift-giving. Reflecting this trend, Google's in-depth interviews with U.S. consumers during 2020 highlight consumers' increased intent for consolatory gift-giving, with interviewees reporting that they turned to gifts more to show their support during the pandemic than in previous years (Marinho 2021).

However, choosing a responsive consolatory gift is a difficult task. While selecting a good gift in general is rarely easy (Galak, Givi, and Williams 2016) those who are struggling may be especially ambiguous in expressing their preferences, due to the sensitivity of their difficult situation or the emotions surrounding it (Barbee, Rowatt, and Cunningham 1996; Jones 2011) such as attending to, understanding, receiving, and interpreting messages; (b. Furthermore, relational signaling motives, which often lead to unsatisfying gift-exchanges in non-consolatory settings (Liu, Dallas, and Fitzsimons 2019), may also color support-givers' consolatory gifting decisions. In fact, as providing effective support significantly impacts support-givers' relationship with support-seekers (Barbee et al. 1996), support-givers may be particularly motivated to search for gifts that strongly signal aspects of their supportiveness, such as their attentiveness to support-seekers' struggles.

Based on this idea, we posit that support-givers may exhibit an inflated preference for consolation gifts that directly relate to support-seekers' disclosed struggle as a way to signal their attentiveness, or non-avoidance, of the disclosed struggle. Indeed, prior research on conversation norms notes that absence of direct feedback on a disclosed topic is often identified as a strategy adopted by listeners who wish to avoid discussing the disclosed topic (Zimmerman and West 1975). In the context of support-giving, no well-meaning

support-giver would wish to signal disclosure-avoidance. Ironically, however, prior research suggests that support-seekers may not necessarily favor supportive communication directly related to their struggle, likely due to reasons such as feelings of dependency (Bolger and Amarel 2007) or insecurity-reminder concerns (Kim, Liu, and Min 2021).

Thus, we hypothesize a misalignment between support-givers' and support-seekers' consolation gift preferences. We propose that support-givers prefer to give consolation gifts that affirm support-seekers directly in the domain of support-seekers' disclosed struggle (vs. in an alternate domain) than support-seekers prefer to receive them, due to their preoccupation with signaling their non-avoidance of support-seekers' disclosed struggle.

Five preregistered experiments (N=1295) test our hypotheses. Experiment 1 provides initial evidence that support-givers prefer to give consolation gifts that affirm support-seekers in the domain of their disclosed struggle (vs. in an alternate domain) more than support-seekers prefer to receive them. Undergraduate students recruited in dyads made an incentive-compatible consolation gift choice. Participants in the support-giving role were led to believe that their accompanying friend had disclosed academic hardships in writing and chose a consolation gift for this support-seeking friend. Participants in the support-seeking role disclosed their academic hardships in writing, with the ostensible understanding that their disclosure will be shared with their friend and chose a gift they would prefer to receive from this support-giving friend. As hypothesized, support-givers (60.5%) were significantly more likely than support-seekers (27.1%) to choose a struggle-domain (academic capacity) affirming gift (a captioned mug) over an alternate-domain (positivity) affirming one, $B=1.41$, $SE=.44$, $p=.001$, $OR=4.11$.

Experiment 2a and 2b provide converging evidence in a different struggle-disclosure domain (motherhood struggles). Furthermore, by varying the population of support-givers (experiment 2a:fellow mothers; 2b:non-mothers) and offering consolation gift choices that are both relevant to support-seekers' current identities (mother and friend), experiments 2a-2b minimized the possibility that support-givers simply prefer options they believe matches either support-seekers' current identity or their shared identity, without necessarily considering whether the gift addresses support-seekers' disclosed struggle or not. Conceptually replicating the results of experiment 1, support-givers (2a:60.4%; 2b:74.7%) were significantly more likely than support-seekers (2a:46.5%; 2b:51.5%) to choose the struggle-domain (motherhood) affirming (vs. alternate domain: friendship-affirming) mug in response to support-seekers' motherhood-hardship disclosure, regardless of whether support-givers were mothers themselves (2a: $B=.56$, $SE=.29$, $p=.049$, $OR=1.76$) or not (2b: $B=1.02$, $SE=.31$, $p=.001$, $OR=2.78$).

Experiment 3 tests for our proposed mechanism via mediation. We examined whether the observed consolation-gift misalignment is driven by support-givers' belief that giving a consolation gift that does not affirm support-seekers in the domain of their disclosed struggle would be perceived by support-seekers as avoidance of the topic. Replicating our effect in yet another struggle-disclosure domain (physical feature dissatisfaction), support-givers (66.7%) were significantly more likely than support-seekers (44.9%) to choose the struggle-domain (physical attractiveness) affirming (vs. alternate domain: intelligence-affirming) mug, $B=.90$, $SE=.29$, $p=.002$, $OR=2.46$. Furthermore, this preference misalignment was mediated by support-givers' concern that giving the alternate-domain affirming mug would signal topic-avoidance, $b=.69$, $SE=.21$, 95%CI[.36, 1.16].

Experiment 4 provides further evidence for our proposed mechanism via moderation. We introduced an intervention condition whereby support-givers were led to believe that disclosers do not infer topic-avoidance when listeners redirect the conversation to other topics relevant to the discloser. If the observed consolation gift preference-misalignment is indeed driven by support-givers' non-avoidance signaling efforts, then altering such beliefs should mitigate this misalignment. Consistent with our theorizing, only support-givers in the baseline condition were more likely than support-seekers to choose the struggle-domain (professional capacity) affirming (vs. alternate domain: authenticity-affirming) gift (a captioned phone case) in response to support-seekers' disclosure about career concerns (support-giver_{baseline}:57.9%; support-seeker:41.3%), $B=.34$, $SE=.10$, $Wald\chi^2=11.06$, $p<.001$, $OR=1.40$. This misalignment no longer persisted between support-givers who received the intervention and support-seekers (support-giver_{intervention}:44.9%; support-seeker:41.3%), $B=.09$, $SE=.10$, $Wald\chi^2=.69$, $p=.406$, $OR=1.09$.

Overall, our investigation suggests a note of caution for support-giving consumers. Our results show that, ironically, support-givers' well-meaning intention to signal non-avoidance of support-seekers' disclosed struggle can misguide their choice of consolation gifts, prompting them to give consolation gifts that affirm their support-seeking close others directly in the domain of the disclosed struggle when these support-seekers do not particularly welcome such gifts. Thus, our findings call for easing of support-givers' preoccupation with non-avoidance signaling and consideration of consolation gifts that support support-seekers more as a holistic being than those singularly focusing on their disclosed distress.

Givers Can Handle the Truth: Givers React to Recipients' Honesty About Disliked Gifts Better Than Recipients Expect

EXTENDED ABSTRACT

Gift giving is as challenging as it is ubiquitous. Givers can spend significant amounts of time and money choosing the "best" gift for their recipients and still miss the mark (Flynn and Adams 2009; Steffel, Williams, and LeBoeuf 2015; Zhang and Epley 2012). Yet, compared to our understanding of a variety of gift-recipient mismatches, we know relatively little about the reactions gift recipients share with gift givers when they receive an ill-chosen gift, and whether gift givers recognize their mistakes. Across four preregistered studies, we show that recipients often hide their true reactions to bad gifts, and so givers fail to recognize how often they miss the mark. However, recipients could be more honest: sharing honest feedback about an undesirable gift does not necessarily harm the relationship between them and their givers. Instead, hiding the truth about bad gifts may be more likely to harm relationships.

In study 1, we investigated how often people give bad gifts, and how common it is for gift recipients to hide their true feelings when they receive undesirable gifts. We randomly assigned 200 participants to consider being either a Giver or a Recipient. Givers reported approximately how many gifts they gave in the past 12 months; what percentage of these gifts their recipients did not like; and of the undesirable gifts, what percent of the time their recipients let them know how they actually felt about the gift. Recipients likewise indicated how many gifts they received in the past 12 months; what percentage of these gifts they did not like; and what percent of the time they let the giver know how they actually felt about the disliked gifts. Givers underestimated how many undesirable gifts they gave to their recipients, $t(199)=-3.07$, $p<.01$, $d=.43$, and how often their recipients chose to hide their true feelings, $t(199)=-3.39$, $p<.001$, $d=.48$.

Recipients reported that 16% of the gifts they received in the past year were undesirable, and that 84% of the time they hid their honest feedback, which suggests that recipients frequently avoid being honest with givers when they receive ill-chosen gifts.

Why do recipients hide how they feel from givers? One reason could be that they believe honesty will make givers feel uncomfortable and thus cause interpersonal harm (Mayer 1957). Thus, in study 2, we examined whether the relationship between givers and recipients is affected by the recipient's honest feedback about an undesirable gift, and whether givers and recipients anticipate these effects. We randomly assigned 399 participants from Prolific to consider being either a Giver or a Recipient. Givers either remembered a gift they gave that was not really what the recipient wanted (in the Recall condition) or imagined they gave a gift that was not what the recipient wanted (in the Imagine condition); in both cases, the recipient shared their honest feedback about it with them. Similarly, recipients either remembered receiving an undesirable gift and sharing their honest feedback or imagined receiving an undesirable gift and sharing their honest feedback. Both givers and recipients then reported their feelings of closeness, connectedness, and relationship strength after the gift exchange. Givers reported little negative change in their relationships when recipients shared how they really felt both in the Recall condition (one-sample $p=.15$) and in the Imagine condition (one-sample $p=.21$). Recipients predicted that sharing the honest feedback would harm their relationships when imagining that they received an undesirable gift (one-sample $p<.001$), but in the Recall condition, they recognized that givers experienced little negative change in their relationships (one-sample $p=.8$). These findings suggest that sharing honest feedback about an undesirable gift does not necessarily harm the relationship between a giver and a recipient.

Study 3 investigated whether hiding the truth about bad gifts affects the relationship between a giver and a recipient. We randomly assigned 600 participants to consider being either a Giver or a Recipient. Givers remembered giving an undesirable gift and either the recipient shared their honest feedback (in the Sharing condition) or they suspected that their recipient hid their true reaction (in the Hiding condition). Similarly, recipients remembered receiving an undesirable gift and they either told the giver or did not tell the giver how they felt. Givers and recipients reported the same measures of relationship strength as in study 2. Givers experienced more negative change in their relationships when recipients hid the truth than when recipients shared honest feedback, $t(294)=-3.30$, $p=.001$, $d=.38$; recipients also experienced more negative change in their relationship with the giver when they hid their true reaction than shared it, albeit to a lesser extent, $t(302)=-1.44$, $p=0.15$, $d=0.16$. These results suggest that hiding the truth about bad gifts may be more likely to harm relationships than sharing it.

However, these findings do not mean that being honest with gift givers will never hurt their feelings and harm a relationship. In study 4, we examined whether the timing of the feedback would influence givers' feelings about recipients' honesty. We again randomly assigned 600 participants to consider being either a Giver or a Recipient. Givers imagined they gave an undesirable gift and the recipient either told them immediately (in the Now condition) or told them after three months (in the Later condition). Similarly, recipients imagined they received an undesirable gift and told the giver immediately or after three months. Givers experienced marginally less negative feelings in the Later condition than in the Now condition, $t(299)=-1.87$, $p=.06$, $d=.22$, although recipients believed that givers would be equally hurt in either case, $t(297)=1.42$, $p=0.16$.

Our studies demonstrate that people frequently give and get undesirable gifts, yet recipients often hide their true reactions to them.

However, it is not always hurtful to tell the truth: both givers and recipients experience little negative change in their relationships when recipients honestly tell how they feel about bad gifts, whereas hiding the truth is more likely to harm relationships.

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Religion and Consumer Behavior

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Paper #1: “This Is My Commandment, That You Love One Another”: The Interplay Between Cultural and Religious Orientation Predicts Prosocial Behavior

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Paper #2: Minimal or Universal: Religious Prosociality from A Political Ideology Perspective

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Carlos J. Torelli, University of Illinois at Urbana Champaign, USA

Paper #3: The Impact of God Salience on Algorithm Aversion

Mustafa Karataş, Nazarbayev University, Kazakhstan
Keisha Cutright, Duke University, USA

Paper #4: Science Denial: Rooted in Religious Intolerance and Lack of Religious Diversity

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Michael Morris, Columbia University, USA

SESSION OVERVIEW

A growing number of marketing scholars have recently begun to systematically examine the role of religion in consumer behavior (e.g., Grewal, Wu, and Cutright 2022; Hyodo and Bolton 2021; Mathras et al. 2016). This is an important area of research because consumers tend to behave and shop according to their beliefs and the salience of religion is highly prevalent in the American culture, including media (e.g., ongoing discussion about religious exemption in the pandemic), TV shows and movies, and arts and museums. Religious symbols (e.g., God, Bible) are featured on American currency and brands (e.g., Forever 21’s shopping bags, In-N-Out cups). Furthermore, religion is a salient identity for consumers. For example, 75% of the U.S. population is affiliated with a religion (Pew Research 2016) and 87% believes in God (Gallup 2017). Globally, only 7% of the world’s population are atheists and agnostics (Keysar and Navarro-Rivera 2017).

Because consumers are increasingly advocating their own identities, beliefs, and values, it is important for marketers and researchers to answer the following three questions:

1. How does the interplay between religion—one of the most important belief systems—and other belief and value systems affect different types of consumer behavior?
2. As a multidimensional construct, how do different religious components (e.g., benevolent God vs. punitive God) lead to divergent consumer behavior outcomes?
3. Are there new ways to look at religiosity when studying its effect?

Our session addresses these questions by investigating the effect of religion on consumer behaviors in the contexts and in general. The first two papers study how cultural and political specificities influence the internalization of religious belief and thus affect prosocial behaviors. The last two papers more generally study how the salience of religious belief (e.g., God) and how the diversity of religious beliefs in a region influence consumer attitude towards technology and science. Specifically, the first paper investigates

how cultural belief act as a filter that promotes the internalization of religious beliefs and its downstream consequences on prosocial behaviors. The second paper focuses on the divergent roles of punitive (vs. benevolent) God and examines the interplay of religious identity and political ideology on donations. The third paper studies how God salience impacts consumer attitude toward algorithm and the mechanism of the perceived human imperfection. The last paper investigates the different components of religion and their impact on consumer distrust in science. Over and beyond prior research on religiosity which has been documented to reduce belief in science, the authors find that the religious diversity in a given region or in one’s experience can predict religious intolerance thus leads to science denial.

Together, these four papers contribute to the literature by investigating the interplay between religious beliefs/identities and other belief and value systems (i.e., culture, ideology, technology, and science), documenting their important impact on consequential behaviors of consumers. Practically, they also hold significant implications for influencing consumer behavior that can improve consumer well-being and the social good.

“This Is My Commandment, That You Love One Another”: The Interplay Between Cultural and Religious Orientation Predicts Prosocial Behavior

EXTENDED ABSTRACT

The “religious prosociality” hypothesis (Norenzayan and Shariff 2008) suggests that religious people are more prone to benefit others at a personal cost. However, a review of the empirical evidence supporting the religious prosociality hypothesis suggests that the greater generosity of religious individuals is particularistic rather than universalistic, selectively directing prosocial actions toward in-group recipients but less so toward outgroup members (Galen 2012; Galen et al. 2011; Saroglou 2006). Then, what are the underlying cognitive mechanisms responsible for the complex relationship between religion and prosocial behavior? In this research, we suggest individuals’ cultural beliefs in the relationship with others (i.e., collectivism) shape how they interpret the will of God, which in turn determines the degree to which they engage in universal prosociality that extends beyond ingroups to target outgroup members.

Religion and culture can both be viewed as belief systems developed by societies to solve the problems of cooperation in large groups. Although past research acknowledges the complexity of the religion-culture interrelation (e.g., Atran and Norenzayan 2004; Cohen and Hill 2007), little is known about its impact on prosocial behavior. Past findings suggest that culture can drive people to embrace aspects of religion that are consistent with their cultural priorities (Sasaki and Kim 2011), and that religions (e.g., Catholic vs. Protestant) differ in their emphasis on community- vs. personal-related aspects (Cohen et al. 2016). Extending these past findings, we propose that cultural orientation moderates the effect of religion on people’s prosocial behaviors (H1: Studies 1, 2, and 4), by the selective internalization of culturally consistent beliefs emphasized by religions (H2: Study 3). More specifically, we argue that certain religions (e.g., Catholicism) emphasize more prosocial religious beliefs (i.e., God’s will is for the believer to help undifferentiated others) than other religions (e.g., Protestantism, with its emphasis on God’s

will to have a personal relation with the individual without intermediaries). We further propose that people from more collectivistic cultures that prioritize interpersonal relationships and sociability will internalize more the prosocial religious beliefs (i.e., consistent with the cultural priority) emphasized more by certain religions (e.g., Catholicism vs. Protestantism). However, this effect will be attenuated among people from less collectivistic cultures in which sociability is less of a concern. In turn, the greater internalization of prosocial religious beliefs will result in a higher likelihood to engage in universal prosocial behaviors (H3).

Study 1 assessed the moderating role of collectivism on the universal prosocial behaviors of Catholics and Protestants (H1). Using U.S. data, at the state level, about donations to non-religious charities (dependent variable), prevalence of Catholics in the state (independent variable: ratio of Catholics/Protestants), and level of collectivism (moderator: state index, Vandello and Cohen 1999), we found a significant religion by culture interaction on donation amount, $b = 1.18$, $t(43) = 2.65$, $p = .011$. For high collectivistic states, those with a higher proportion of Catholics/Protestants showed a greater amount of donations ($p < .001$), whereas the effect dissipated for low collectivistic states ($t < 1$).

Study 2 replicated the findings in a more controlled environment by recruiting Catholic/Protestant participants ($N=195$) from an U.S. online panel, who rated their endorsement of a collectivistic orientation (Triandis and Gelfand 1998), and indicated their attitudinal and behavioral intentions to support a cause benefitting outgroup members (i.e., Syrian refugees that differed in both culture and religion, Reed and Aquino 2003). Consistent with Study 1, for participants high in collectivism, Catholics (vs. Protestants) showed a greater likelihood to donate to a cause helping Syrian refugees ($p < .001$). However, no such difference emerged among those low in collectivism ($t < 1$).

Next, we investigated the process underlying the effects uncovered in the past two studies by conducting a series of experiments that demonstrate the proposed causal chain (Spencer et al. 2005). In a first experiment, we investigated how the religion \times culture interaction influences the internalization of prosocial religious beliefs (H2, Study 3A), and a second experiment showed how such internalization of prosocial religious beliefs in turn increases universal prosocial behavior (H3, Study 3B). In Study 3A, Catholics and Protestants ($N=130$) were presented with 10 pairs of familiar religious beliefs taken from the Bible, with each pair including one belief deemed more prosocial than the other (based on pretests). For each pair, participants chose the belief that was more personally meaningful to them. Next, participants rated their endorsement of a collectivistic orientation (Triandis and Gelfand 1998). An ANOVA on the number of prosocial religious beliefs chosen by participants yielded a significant religion \times culture interaction, $b = 1.13$, $t(126) = 2.70$, $p = .008$. For those high in collectivism, Catholics (vs. Protestants) chose a higher number of prosocial religious beliefs ($p = .002$). However, no such difference emerged for those low in collectivism ($t < 1$). In Study 3B ($N=144$) we indeed found that activating prosocial religious beliefs led individuals to engage in universal prosocial behavior benefitting outgroup members (i.e., support the decision to send vaccination doses overseas) ($p = .006$).

Study 4 aimed to further examine the process underlying the effects using statistical mediation. This study focused only on participants who self-identified as Catholics ($N=88$) that were asked to donate to the same charitable cause used in past studies. After that, they chose between the same 10 pairs of religious beliefs used in Study 3A, and rated their endorsement of a collectivistic orientation (same scale in Study 2). A mediation analysis revealed a significant indirect

effect of collectivism on donation intention through the number of prosocial religious beliefs chosen (Effect = .08, SE = .05, 95% CI [.01, .23], Hayes 2013, Model 4).

The present research uncovers the interactive effect of religion and culture on the internalization of prosocial religious beliefs and subsequent charitable behavior. The findings based on secondary data and behavioral intentions underscore the significance of religion, culture, and their interaction on international market segmentation and public policies. By revealing the interplay of religion and culture on consumption decisions, our research offers novel insights for consumer-based strategies that will enhance consumers' charitable giving and ultimately societal well-being.

Minimal or Universal: Religious Prosociality from A Political Ideology Perspective

EXTENDED ABSTRACT

In the United States, donations from individuals make up the largest source of charitable giving (\$281.86 billion, comprising 72% of total giving, Giving USA 2017). Of these personal donations, sixty-two percent of religious households donate compared to 46% of households with no religious affiliation (Giving USA 2017). Notably, the largest recipients of all charitable donations are religious congregations, which account for 32% of the total (\$122.94 billion, Giving USA 2017), more than double the next largest subsector, education. While these data suggest a positive link between being religious and prosocial behavior, it raises the issue that religious prosociality might be biased toward close ingroups such as those who are also religiously affiliated and away from distant outgroup beneficiaries. Prior research has been inconclusive on the relationship between religious identification and prosociality toward distant others (see Galen 2012 for a review).

We draw on theories of political ideology (Jost et al. 2003) and conceptions of God (e.g., Johnson et al. 2013) to argue for an interactive effect of religious identity and political ideology on prosociality toward distant (vs. close) beneficiaries. Specifically, we predict divergent prosociality patterns for religious conservatives and liberals according to their conceptualization of God (punitive versus benevolent God). We hypothesize that religious conservatives (vs. liberals) are more likely to believe in a punitive God, which in turn leads them to donate less to distant beneficiaries. A study with secondary data about the average household donations from 3,129 U.S. counties, along with six lab studies, provide empirical support for these predictions.

Study 1A-C ($N=661$) investigated our first prediction that religious conservatives (vs. liberals) are more likely to believe in a punitive God. We conducted three studies to test this hypothesis across a community sample, a college student sample, and an online sample. Along with a battery of other randomized scales, participants in all three studies completed the conception of God scale (9-item punitive God, e.g., controlling, restricting; 9-item benevolent God, e.g., helping, generous; Johnson, Okun, and Cohen 2015) and a 3-item political ideology scale (Kaikati et al. 2017). In studies 1A-B, we had balanced samples of believers ($N=102, 99$) versus nonbelievers ($N=92, 100$), and therefore used believing in God as a moderator for our prediction. Accordingly, we found significant interactions between believing in God and political ideology (1A: $b=0.23$, $t(189)=2.07$, $p=.04$, $\eta^2_p=0.02$; 1B: $b=0.38$, $t(195)=2.35$, $p=.02$, $\eta^2_p=0.03$). As expected, further decomposition of the interactions revealed a significant effect of endorsing a more conservative ideology on punitive God among believers (1A: $t=2.54$, $p=.01$; 1B: $t=2.85$, $p<.01$). However, this effect was absent among nonbelievers (1A: $t=-0.62$, $p=.54$;

1B: $t=-0.68, p=.5$). Building on studies 1A-B, study 1C preselected a religious sample through Prolific screeners (preregistered study) and replicated the positive effect of political ideology on beliefs about a punitive God ($b=0.11, t(276)=2.20, p=.029, \eta_p^2=0.02$).

Study 2 ($N=3,129$) used archival data to provide initial support for our second prediction that conservative (vs. liberal) religious believers are less likely to donate to distant beneficiaries. Specifically, we combined Simply Analytics donation data with data from the Association of Religion Data Archive (ARDA), and the 2016 Presidential Election votes (Townhall.com) to examine the interplay between religious identification (measured as religious adherent rates per county), and political identification (votes for the Republican minus Democrat) for impacting consumer donations to different beneficiaries (charity vs. church). We found significant three-way interactions for religious identity (indexed by both adherent rate), donation beneficiary, and political ideology ($b=-0.1, SE=0.02, t=-3.99, p<.001$). Spotlight analyses further showed that, for high religious counties (+1 SD), political identification is associated with less donation toward distant beneficiaries, and is unrelated to donation toward close beneficiaries. However, for low religious counties (-1 SD), political identification is not associated with donations to both distant and close beneficiaries.

Study 3 ($N=350$) used a controlled experiment to test the second prediction. Religious participants preselected from Prolific were reminded of their religious identity at the beginning of the study. Immediately after they were randomly assigned to a donation campaign either for local hungry kids or for hungry kids in a foreign country. With donation amount (\$0-\$10) as our dependent variable and household income as covariate, we found the predicted interaction between donation beneficiary and political ideology ($b=-0.41, t(345)=-2.08, p=.038, \eta_p^2=0.01$). Moreover, when participants donated to foreign recipients, the effect of endorsing a more conservative ideology was negative and significant ($b=-0.41, t=-2.88, p<.01$). But this effect was absent when donating to local recipients ($t=-0.05, p=.96$).

Study 4 ($N=205$) adopted a within-subjects design and instructed religious participants to recall the totality of their charitable donations in the last 12 months and report how they allocated the donation on a slider scale (-100 = 100% of my donations went to my local church/religious organizations, 0 = equally divided, 100 = 100% of my donations went to non-profit charitable organizations). We also assessed their belief in God using the same conception of God scale. Results revealed a significant negative effect for political ideology ($b=-14.61, t(202)=-5.28, p<.001, \eta_p^2=0.12$). Moreover, using Hayes' (2017) moderated mediation analysis, we found that belief in a punitive God, but not in a benevolent God, significantly mediated the effect of endorsing more a conservative ideology on religious believers' real donations to distant (vs. close) beneficiaries.

Study 5 ($N=394$) manipulated the salience of different God concepts (punitive, benevolent, or control) and examined its impact on people's donation behaviors toward foreign (vs. local) recipients. We measured donation allocation between foreign and local recipients. As predicted, we found a significant moderation of benevolent God (vs. control or vs. punitive God) on the effects of political ideology, such that a salient conceptualization of a benevolent God mitigated conservative believers' reduced donations toward foreign (vs. local) beneficiaries.

The current research provides a new perspective on the understanding of the minimal prosociality hypothesis by disentangling the interplay between religious identity and political ideology.

The Impact of God Salience on Algorithm Aversion

EXTENDED ABSTRACT

People are frequently exposed to concepts related to God. Despite the ubiquity of exposure to God-related ideas in consumers' daily lives, the research on the impact of God-related thoughts on consumer behavior is scarce. In the current research, we examine how God salience influences algorithm aversion.

Extant research has shown that the salience of God, which is conceptualized as an all-encompassing and vast supernatural entity across cultures (Atran and Norenzayan 2004), evokes feelings of being small (Preston and Shin 2017). The experience of a smaller self is associated with feelings of humility (Piff et al. 2015; Stellar et al. 2018), which involves accepting the limitations and flaws of humans (Chancellor and Lyubomirsky 2013). Based on these findings, we argue that the small-self invoked by the salience of God will result in relatively stronger beliefs that humans are flawed and imperfect, which in turn will weaken the extent to which consumers favor humans over algorithms.

In Study 1, we randomly assigned participants into one of two God salience conditions. We manipulated God salience via a writing task in which participants wrote either about their day (low salience) or what God means to them (high salience). Next, participants rated their relative likelihood of taking advice from a human expert or an algorithm for 24 different tasks. A one-way ANOVA on an index computed by taking the average of participants' responses showed that participants in the high salience condition reported a significantly higher preference for the algorithm ($p=.001$). This effect held after controlling for task objectivity, task consequentialness, and the importance of uniqueness for completing the tasks.

In Study 2A, which employed the same God salience manipulation as in Study 1, we asked participants to make a choice between two hypothetical mutual funds with comparable performance in the past. We informed participants that a human expert recommends one of the funds while an equally competent algorithm recommends the other. The preference for the mutual fund recommended by the algorithm was significantly higher in the high salience condition (49.5%) than in the low salience condition (36%; $p=.036$). Study 2B replicated this effect in a relatively more subjective domain (i.e., song preference) for a consequential task. Participants were asked to choose one of two songs to listen to and evaluate. More participants in the high salience condition (44.6%) picked the song recommended by the algorithm than in the low salience condition (31%; $p=.009$). In Study 2C, we manipulated the salience of God via environmental cues, and we replicated the effect among a sample from a predominantly Muslim population. More participants who were recruited in front of a mosque (high salience; 34.9%) chose a snack recommended by the algorithm than those recruited nearby the mosque with no mosque view (low salience; 20.6%, $p=.003$).

In Study 3, we tested our process prediction and ruled out alternative explanations based on mood effects, determinism, and perceived riskiness of the decision. After the same God salience manipulation as in Studies 1-2B, we measured participants' sense of small-self, belief in human imperfection, mood, and deterministic beliefs. Next, participants imagined choosing between two dental treatments, one recommended by a dentist and one by an algorithm. After indicating the perceived riskiness of the decision, participants made their choice. The preference for the treatment recommended by the algorithm was significantly higher in the high salience condition (44.3% vs. 33.5%; $p=.042$). A serial mediation test using PROCESS Model 6 (Hayes 2013) supported our process prediction ($b=.03, CI_{95\%}=[.0005, .0817]$). Specifically, God salience heightened feelings

of a smaller self ($p < .001$), which resulted in stronger beliefs in human imperfection ($p < .02$). The belief in human imperfection, then, significantly increased the relative preference for the algorithm's recommendation ($p < .05$). The direct effect of God salience was no longer significant ($p > .11$), suggesting full mediation. Separate mediation analyses also showed that the effect is not mediated by mood, determinism, or perceptions of riskiness.

In Study 4, we documented further process evidence by showing that God salience weakens algorithm aversion only when God-related thoughts imply God's perfection but not when they imply how perfect humans are. Participants were randomly assigned to one of three conditions (God salience: low, high-God perfection, high-human perfection). In the low salience condition, participants from a predominantly Muslim population wrote about a neutral quote. In the other two conditions, participants wrote about a verse from the Quran regarding 1) how flawless God is or 2) the perfection of the human form, as created by God. Next, they chose one of two cryptocurrencies ostensibly recommended either by the most winning traders or by the most winning algorithms. The preference for the coin recommended by algorithms was significantly higher in the high salience—God perfection condition (49.3%) than in both the low salience (34.6%; $p = .009$) and the high salience—human perfection (36.5%; $p < .03$) conditions. The relative preferences did not differ across the low salience and the high salience—human perfection conditions ($p > .7$).

In Study 5, we tested another alternative explanation based on the perceived similarity of the decision-making process of God and algorithms in terms of mysteriousness. The study employed a 2(algorithm: mysterious vs. non-mysterious) × 2(God salience: low vs. high), between-subjects design. Participants in the mysterious (vs. non-mysterious) algorithm condition read an excerpt describing algorithms as a “black box” making their own decisions (vs. as agents making decisions by following exact rules defined by their developers). Next, we manipulated God salience using the writing task in previous studies. Finally, participants indicated their preference between two hypothetical funds on a 101-point scale, with a higher score representing a higher preference for the fund recommended by the human expert. An ANOVA resulted in a significant main effect of God salience ($p = .003$), and the main effect of mysteriousness and the interaction term were insignificant (p 's $> .8$). God salience significantly reduced algorithm aversion both when the algorithm was mysterious ($M_{God} = 48.01$; $M_{control} = 55.72$; $p = .028$) and when it was not ($M_{God} = 47.37$; $M_{control} = 55.47$; $p = .037$).

Together, these studies enhance our understanding of the impact of God on consumer behavior by showing that God-related thoughts make consumers less averse to algorithmic advice.

Science Denial: Rooted in Religious Intolerance and Lack of Religious Diversity

EXTENDED ABSTRACT

Science denial—the rejection of scientific findings and their implications—is a psychological puzzle and a practical problem. Beyond mere skepticism, denial involves refusing to consider scientific evidence or to act on its implications—even when one's life depends upon it. In global challenges like epidemics and climate change, science denial even by a small minority can undermine effective collective action.

Past research has examined social and cognitive preconditions of science denial, in particular faith and the motivation to preserve core beliefs (Kahan 2012). That is, intense religious or political commitments can conflict with the conclusions of science. For instance,

Christian fundamentalists reject the theory of evolution more than they reject nuclear technology, because evolution directly conflicts with the Bible (Pew Research Center 2015). Similarly, climate-change denial has been traditionally strong among rightwing industrialists (McCright and Dunlap 2011), and vaccine refusal, strong among leftwing bohemians (Bricker and Justice 2019). In these cases, science denial protects an axiomatic belief of the community (i.e., *God made man in his image, Economic growth is good, Natural cures are better*; Lewandowsky and Oberauer 2016). But science denial sometimes arises where there is no conflict, such as in the Christian fundamentalist opposition to Covid vaccines. In other words, faith and motivated reasoning theory can explain selected cases of science denial but not other cases.

Religiosity (intensity of religious commitment) correlates with some cases of science denial, such as rejection of evolution and of stem cell research, more highly than political orientation or any demographic factors (Jelen and Lockett 2014). However, *which* religion also matters (Granger and Price 2007; Scheufele et al. 2009). Quakers have been overrepresented in British science for two centuries. Jews were overrepresented in 20th century science throughout Europe (Pew Research Center 2016). The difference between these sects and Southern Baptists is not religious intensity so much as religious intolerance. In this work, we propose that religious intolerance independently contributes to science denial. Dismissal of other religions acts as a cognitive template for the denial of science.

We propose that it's a function of social experience; tolerance arises in part from the social experience interacting with people of other religions (Oishi 2014). Individuals embedded in a network of high religious diversity develop the ability and habit of acknowledging different perspectives. A study of ministers' social networks found that greater religious diversity correlated with greater religious tolerance (Dowd 2011). More generally, we propose that people who live in religiously diverse countries and regions tend to have greater religious tolerance.

We report seven studies—with different religions in different regions—that test these effects on science denial, both rejection of conflicting claims and general disengagement. We find that religious intolerance predicts science denial over and above the effect of religiosity (Studies 1 and 2). We also find that (both objective and experienced) low religious diversity predicts science denial through religious intolerance (Studies 3 and 4). Evidence for this path comes from correlational analyses as well as experiments that manipulate religious intolerance (Studies 5 to 7). We also find that (both objective and experienced) religious diversity predicts science denial through religious intolerance.

Study 1 examines whether objective religious diversity in the U.S. counties (N=3,093) influence residents' practice of social distancing at the beginning of the COVID-19 pandemic. Study 2 expands the scope of science denial and tests its consequences on a country's emphasis on science education (Study 2a, N=71) and innovation performance (Study 2b, N=141). Study 3 further tests the proposed effect using worldwide data from 58 countries and 62,599 believers within various religious groups. Study 4a (N=396) and 4b (pre-registered, N=390) test whether a Christian individual's experienced religious diversity influences their plan and celebration behaviors during the Easter Sunday 2020 that follow the social distancing recommendation. Study 5 validates (N=493) the scales of measurement such as religiosity, religious tolerance, and science denial attitudes, as well as tests (N=598) the proposed mediation process within Christians, Muslims, and Hindus. Study 6 (N=400) tests the proposed mechanism by experimentally manipulating participants' religious intolerance and thus provides causal evidence for its effect

on science denial. Since policy interventions to change objective or experienced religious homogeneity are nontrivial, Study 7a (N=388) and Study 7b (N=12,520) examine the relationships between attitude to religious diversity (as a general measure of tolerance even for nonbelievers) and acceptance of science (COVID-19 vaccine acceptance).

As an example, Study 1 measures science denial in the form of ignoring precautions for COVID-19. Just before April 2020, many U.S. states began implementing stay-at-home and social distancing orders. Adherence varied from place to place. We examine whether this form of science denial depended on the local level of religious diversity, using the aggregated cellphone location data to measure the degree of social distancing in each of the U.S. counties. We use county-level data from the U.S. Religion Census and compute an index of diversity following Shannon's procedure, based on the probabilities of one particular believer subscribing to each religion (i.e., Evangelical Protestant, Black Protestant, Mainline Protestant, Catholic, Orthodox, and Other) within a county.

We find that greater county-level religious diversity predicts more social distancing ($N = 3,093$, $B = 13.51$, $SE = .59$, $t(3,091) = 22.97$, $p < .001$, $d = .146$) in April 2020. The effect holds ($t(3,081) = 6.47$, $p < .001$, $d = .013$) when controlling for the percentage of residents who are religious believers ($t(3,081) = -6.36$, $p < .001$, $d = .013$), religious congregation density ($t(3,081) = -5.24$, $p < .001$, $d = .009$), population density ($t(3,081) = 14.58$, $p < .001$, $d = .065$), percentage of male residents ($t(3,081) = 2.84$, $p = .005$, $d = .003$), percentage of residents older than sixty years ($p = .18$), percentage of college degree holders ($t(3,081) = 22.51$, $p < .001$, $d = .141$), median income ($t(3,081) = 5.93$, $p < .001$, $d = .011$), and mobility of the county ($t(3,081) = 3.65$, $p < .001$, $d = .004$).

Social environments with low religious diversity precipitate religious intolerance. While many dangers of this are well-understood, we have identified an additional nefarious consequence: science denial.

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The intersection of political ideology and social identity: Impact on consumption and anti-consumption

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Paper #1: Ideological differences in identity-reinforcing response in the face of the identity threat

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Paper #2: How uncertainty shapes conservatives' and liberals' hedonic consumption

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Paper #3: National-level consumer boycott movement: The role of political dynamics on short-term and long-term consumer boycott engagement

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Paper #4: We live in different Americas: Political ideology shapes perceptions of American culture and iconic brands

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SESSION OVERVIEW

As the political divide deepens in the U.S. and globally, the role of political ideology in consumer behavior has become a burgeoning domain of consumer research. This special session builds synergy in the literature by connecting the relatively nascent work on political ideology with established research on social identity in consumer research. Thus, this session is well aligned with the conference theme, *Together*, as it investigates the interplay of the two lines of research. Novel findings in this session provide insights into understanding and eventually overcoming the differences stemming from political ideology.

In the first paper, Han and Clarkson investigate how a threat to partisan identity can lead to identity-expressive behaviors, that is, voting and consumption of identity-expressive products. They find that Republicans in blue states (but not Democrats in red states) ex-

perience identity threat, and as a form of identity restoration they are more likely to cast a vote compared to those in red states. This effect was replicated for Republicans' preference for identity-expressive products when their identity was threatened.

Continuing the focus on Republicans' sensitivity to threat, the second paper by Jihye Jung and colleagues identifies an important contextual factor that delineates conservatives' preference for hedonistic (vs. utilitarian) consumption. Across 6 studies, they demonstrate that highly uncertain situations, which pose a distinct threat to conservatives, heighten their present orientation and reliance on feelings. This, in turn, bolsters conservatives' (but not liberals') preferences for hedonic goods.

The first two papers examine how consumption can reaffirm and restore conservatives' threatened identity. In the third paper, Kiju Jung and colleagues investigate the unique phenomenon in which political ideology intersects with national identity. Focusing on the nationwide anti-Japanese brands movement in South Korea, they show that liberals are more likely to support and participate in the boycott. These seemingly counterintuitive findings disentangle the complex relationship between partisan identity and national identity.

The fourth paper finishes off the session by answering a broad question: Do liberals and conservatives live in two different perceptual worlds? Euh and colleagues demonstrate that liberals and conservatives perceive the culture of their society differently and prefer brands that are aligned with their distinct perceptions. This effect is explained by the extent to which brands represent their partisan identity-oriented worldview (i.e., symbolism of the brand as a cultural icon).

Together, these papers demonstrate the important implications of the interplay between political ideology and social identity in consumer behavior. This session can appeal to a broad ACR audience, as it addresses not only key predictors of human behavior (political ideology and social identity) but also distinct underlying mechanisms and outcomes (threat, self-expression, culture, voting, anti-consumption, hedonic consumption). It is also important to note that the four empirical papers present 16 studies, utilizing a variety of methodologies and sources—a national stratified sample survey, app intelligence case study, online and lab experiments, among others. In sum, this session contributes to the conference themed *Together* by providing insights into one of the imminent issues facing society: bridging our deepening political divides.

Ideological differences in identity-reinforcing response in the face of the identity threat

EXTENDED ABSTRACT

It has been recognized by researchers that consumers engage in restorative behavior when their aspects of self-identity are threatened (Escalas 2013; Clarkson et al. 2017). One intriguing — and important — category of restorative responses involves reinforcing consumers' connection to their threatened identity through their selections of identity-linked options. For example, after making an identity-contrary gift choice for a close friend, gift-givers are more likely to engage in compensatory behaviors that reestablish their identity, such as purchasing identity-expressive products (Ward and Broniarczyk 2011). Moreover, consumers vary in the extent to which they choose products linked to their threatened identity, as research

shows that consumers are more likely to do so if they are interdependent (White, Argo, and Sengupta 2012) or high in public self-awareness (White, Stackhouse, and Argo 2018). The current research considers the voting as well as the purchase of identity-linked products as a restorative behavior and tests the role of political orientation in shaping responses of rightists and leftists to social identity threat.

A key element in accounting for individuals' political predispositions is their responses to threats. It is known that individuals with right-wing (vs. left-wing) political orientations are more likely to devote psychological resources to quash threat and recover a sense of safety and security (Jost 2017). It is less clear whether more ego-related threats such as identity threat, rather than physical existential threats, heighten the rightists' desire to manage threat, but some studies suggested the possibility. Regarding authoritarianism which predicts a broad range of attitudes related to political conservatism, it was found that high (vs. low) authoritarians tend to respond more defensively to ego-threatening situations (Altemeyer 1998). Onraet et al. (2017) also demonstrated that adhering to right-wing attitudes can have an ego-defensive function in the context of threat. In addition, past work demonstrates that one factor that leads individuals to increase their association with an ingroup after experiencing social identity threat is the ability to identify with the ingroup (Voci 2006). It was found that right-leaning individuals are more likely to have a strong relational motivation and to define themselves in terms of their group memberships (Jost 2017). Drawing on this reasoning, we predict that individuals with right-wing political orientations are more likely to engage in behaviors that reinforce their connection to the threatened social identity via the selections of identity-expressive options.

In Study 1, we tested this idea in one important domain related to an expression of one's identity: *voting*. Many studies view voting as not merely a decision, but also as an expression of one's political identity (Rogers, Fox, and Gerber 2013). By voting for their party, individuals re-affirm their membership of the group and their partisan identity (Fieldhouse 2018). To offer insight into this possibility, we analyzed the Cooperative Congressional Election Study (CCES) data for the 2008, 2012, and 2016 US Presidential Elections (NOTE: CCES data for the 2020 Presidential election is not yet available). We found that voter turnout for Republicans was higher in states that mismatched their identity (i.e., blue states relative to red states; $z = 2.21, p < .05$). We did not find such a difference in voter turnout as a function of political leaning of states among Democrats ($z = .06, p = .95$) and Independents ($z = .19, p = .85$).

In Study 2, we recruited a nationally-representative sample ($n = 1,165$) to test whether the changes in the voter turnout among Republicans are driven by the perceived partisan identity threat and the desire to reaffirm their partisan identity through voting. We conducted a serial mediation analysis for Democrats and Republicans separately. The analysis tested the extent to which the political leaning of the state influenced voter turnout as a function of the perceived threat to their political identity and the perception of voting as a means to affirm their political identity. Results revealed that the difference in voter turnout due to political leaning of states was serially mediated by identity threat and voting as a form of identity restoration for Republicans ($\beta = .029, SE = .016, 95\% CI = [.007, .068]$) but not for Democrats. This finding reinforces the role of state political leaning in shaping voter turnout among Republicans demonstrated in Study 1 while offering insight into the serial impact of partisan identity threat and perceptions of voting as a means to affirm their political identity on voter turnout.

Though the findings of Study 2 support our proposition that voting under identity threat serves as an identity-reinforcing behav-

ior for Republicans, we aimed to extend the bounds of the present findings in Study 3 in which we tested the role of political orientation and identity threat on a different identity-reinforcing behavior: consumer preference for identity-expressive products. Participants read a press release used to manipulate identity threat (adapted from White et al. 2018). Specifically, participants were told that citizens in their city were either less likely (*threat* condition) or as likely (*no-threat* condition) as citizens in other cities to volunteer and give their time. After reading the press release, participants indicated their willingness to purchase an identity-expressive in the form of a t-shirt which had a name of the city placed on it before reporting their political ideology. The findings revealed that consumers' willingness to purchase the t-shirt was significantly higher among conservatives (vs. liberals) in the threat condition ($F(167) = 5.12, p = 0.018$); no difference was observed in the no-threat condition.

Collectively, these findings highlight the role of political orientation and identity threat on the selections of identity-expressive options. Analyses of both historical data and a nationally representative sample demonstrate that Republicans exhibit greater voter turnout in states that mismatched their identity, and this difference is due to partisan identity threat and perceptions of voting as a means to affirm their political identity. Moreover, this pattern was replicated for identity-expressive products, which is the result that reinforces the role of political orientation in shaping consumer response to identity threat.

How uncertainty shapes conservatives' and liberals' hedonic consumption

EXTENDED ABSTRACT

As literature on how political ideology shapes consumption continues to flourish, some work has begun to explore how ideology may influence preference for hedonic versus utilitarian goods. Recent studies propose that conservatives (vs. liberals) have a lower preference for hedonic (vs. utilitarian) products because of their stronger intolerance of ambiguity attributed to such products (Farmer et al. 2021). The present research delves deeper into this relationship to examine whether conservatives may show a stronger preference for hedonic consumption in relevant contexts. We focus on the moderating role of perceived uncertainty.

Prior work suggests that perceiving uncertainty in the environment (e.g., due to existential or economic threats) influences consumption preferences differently, in some cases bolstering present orientation and gratification of present urges (Frankenhuis et al. 2016), and in others driving patient abstention from current urges in anticipation of future needs (Griskevicius et al. 2013). We argue that political ideology moderates consumers' response to uncertainty in the environment, with novel implications for preferences for hedonic goods. First, conservatives (vs. liberals) are responsive to environmental turbulence due to their stronger need to justify the status quo (Jost et al. 2003). Second, conservatives (vs. liberals) appraise uncertain stimuli in the environment, such as potentially dangerous objects or individuals, more acutely with more automatic, emotional response (Carraro et al. 2011; Oxley et al. 2008). Building from these insights, we propose that perceiving high (vs. low) uncertainty in the environment will moderate conservatives' (vs. liberals') interest in hedonic goods. We predict that high (vs. low) uncertainty will bolster conservatives' (but not liberals') preference for hedonic consumption because it will heighten their present orientation and reliance on feelings. Six studies test the prediction across different real-life contexts and operationalizations of uncertainty and hedonic consumption.

Studies 1A–1C tested the hypotheses after mass casualty events in the U.S. which heightened consumers' perceived uncertainty. Study 1A surveyed U.S. participants before and after the 2017 Las Vegas shooting (218 participants [54%] from phase 1 returned for phase 2). In phase 1 (two days after the shooting), participants read articles about the incident and indicated their preference between two electronic device options: 1 = laptop for work (utilitarian) vs. 7 = tablet for entertainment (hedonic). In phase 2 (seven months later), participants indicated their preference between the same options and reported their ideology (1 = Republican; 2 = Democrat). Conservatives' preference for hedonic consumption was higher in phase 1 (high uncertainty) than phase 2 (low uncertainty) ($p = .009$). Liberals' hedonic consumption did not change between the two phases ($p = .811$). Studies 1B ($N = 203$ Texas residents) and 1C ($N = 247$ U.S. participants) randomly exposed participants to articles about similar incidents (the 2018 Austin bombings shortly after the incident in Study 1B; the 2017 NYC truck attack and the 2016 Orlando nightclub shooting in Study 1C), or articles about unrelated events. Participants then indicated preferences between hedonic vs. utilitarian options (Study 1B: apartment, headset, wallet, and luggage categories; Study 1C: apartment, headset, and laptop categories), and they reported their ideology (1 = strongly Republican; 5 = strongly Democrat). High (vs. low) uncertainty bolstered conservatives' preference for hedonic (vs. utilitarian) consumption (Study 1B: $p = .016$; Study 1C: $p = .027$), but it had a reversed effect (Study 1B: $p = .038$) or no effect among liberals (Study 1C: $p = .201$).

Study 2 ($N = 496$) manipulated consumption type between subjects with a hedonic vs. utilitarian product ad (tumbler: "Style You Up, Make Your Day More Entertaining" vs. "Fill You Up, Make Your Day More Productive"). After writing about an uncertain (vs. certain) aspect of their life, participants indicated their WTP for the product. Uncertainty qualified WTP for the hedonic vs. utilitarian product for conservatives (interaction $p = .019$), but not liberals (interaction $p = .504$): conservatives' WTP for the hedonic (vs. utilitarian) product was higher when uncertainty was high ($p = .039$) and not low ($p = .216$).

Studies 3 and 4 examined the psychological process. In an initial test in Study 3, U.S. participants ($N = 229$) read an article about the 2018 Pittsburgh synagogue shooting that had occurred a week prior (vs. unrelated event), then chose between gift cards of hedonic vs. utilitarian goods retailers and reported their reliance on feeling during choice (Hong and Chang 2015). Conservatives (but not liberals) reported heightened reliance on feeling as uncertainty increased, which bolstered hedonic preference ($p = .014$; mediation 95% CI = [.0052, .4037]). In a comprehensive test in Study 4 ($N = 296$), after reporting perceived uncertainty, participants indicated their preference between gift cards for hedonic vs. utilitarian products, and indicated their present orientation and reliance on feeling. Conservatism (not liberalism) led to higher hedonic preference when perceived uncertainty was high (vs. low) ($p = .012$, interaction $p = .061$), due to a stronger present orientation and reliance on feeling (95% CI = [.0001, .0301]).

Study 5 ($N = 269$) manipulated uncertainty by exposing participants to news articles about economic uncertainty, and present orientation through a sentence descrambling task (Mogilner et al. 2012). Participants then made a choice between hedonic vs. utilitarian options. High (vs. low) uncertainty increased conservatives' ($p = .023$), but not liberals' ($p = .244$), preference for hedonic over utilitarian consumption in the control condition without the present orientation prompt (interaction $p = .020$). Prompting present orientation attenuated the interactive effect of uncertainty with ideology ($p = .836$).

Study 6 ($N = 11,743$) used real-world data (Consumer Expenditure Survey, Global Terrorism Database). Based on 116 terror events during 1994–2019 in 40 U.S. states, we compared consumers' spending on hedonic categories (entertainment, alcohol and tobacco, media, sports/photo equipment) before vs. after terror events in affected and neighboring states (treatment) vs. other states (control). Consumer spending on hedonic categories increased after terror events in conservative states ($ps < .01$), but not liberal states ($ps > .10$).

These findings add novel theoretical insights about the nuanced effects of ideology across relevant contexts and consumption categories. They also offer practical insights about marketing hedonic products in different segments and settings.

National-level consumer boycott movement: The role of political dynamics on short-term and long-term consumer boycott engagement

EXTENDED ABSTRACT

Along with Covid-19 pandemic, we have witnessed the increasing geopolitical tensions and economic disputes around the globe, disrupting the flow of commodities and human resources with increasing tribalism, trade controls, and boycotts (e.g., Brexit, China-US trade war). Although the economic and political implications of these geopolitical tensions have been discussed widely in the economics literature (Bekkers and Schroeter 2020), our understanding of micro-level consumer responses and marketing implications is scant. In this research, we examined a national-level consumer boycott at an unprecedented scale, focusing on the role of political dynamics on short-term and long-term boycott engagement.

Extant research on boycott participation suggests that consumer participation in the high-profile boycott movement is often limited as only a minority did so upon the cost-benefit analysis (Klein, Smith and John 2004) with instrumental and non-instrumental motivations (John and Klein 2003). Consumer ethnocentrism and animosity have been found to influence consumer willingness to buy products from countries with which they have long-standing, historical divisions (Klein, Ettenson and Morris 1998; Shimp and Sharma 1987). Conservatism and related beliefs such as patriotism and collectivism (Shimp, Sharma and Shin 1995) could drive stronger consumer ethnocentrism and foreign product animosity.

We employed a multimethod approach by combining two surveys and two archival studies. By using two face-to-face surveys with nationally representative samples of primary household buyers in South Korea, we evaluated the effects of prior attitudes, political ideology, and national pride on multiple aspects of consumer boycott engagement. We propose the role of political ideology should be understood in light of political dynamics. We also conducted two archival studies to draw further marketing implications.

Surveys

Research on consumer ethnocentrism and product/country animosity suggests conservatism should be positively associated with consumer engagement in a national-level boycott. Yet, considering political dynamic, we predicted the opposite pattern. South Korea is characterized by dueling antagonisms with Conservatives using anti-communism as a political rhetoric and Liberals using anti-Japanism as a counter political rhetoric (Shaw 2022). Therefore, in contrast to previous literature, we predicted greater boycott engagement among liberal consumers than among conservative consumers. Furthermore, we argue that the political dynamics would increase the ideological gap over time. A professional survey firm in South Korea administered two surveys, one during August 2019, a month after

the boycott movement began ($N = 1,519$ primary household buyers, 1,322 females, $M_{\text{age}} = 51.51$ years), and one year after, during July 2020 ($N = 2,066$, 1,024 females, $M_{\text{age}} = 43.89$ years).

For the analysis on the first-wave survey, we employed a series of logistic regression models (support, participation, instrumental participation) and a count model (participation strength). Boycott support was positively associated with national pride ($b = .831, p < .001$), but negatively with prior attitudes toward Japanese products ($b = -.147, p < .10$). More important, the effect of conservatism on boycott support was nonsignificant ($p > .10$). In contrast, boycott participation and participation strength (i.e., the number of the boycotted product categories) were negatively associated with conservatism (all $ps < .001$), meaning that conservative consumers were less likely than liberal consumers to participate, and they boycotted fewer products than did liberal consumers if they had participated. Finally, instrumental participation was positively associated with prior attitudes toward Japanese products and national pride (all $ps < .001$). Moreover, conservative boycott participants were more punitive with a weaker instrumental boycott motivation ($b = .122, p < .10$).

The analysis on the second-wave survey indicated that consumer engagement (boycott support and participation) was negatively associated with conservatism (all $ps < .001$) and prior attitudes toward Japan and Japanese people (all $ps < .01$), but positively with pride as Korean (all $ps < .001$). In addition, among the consumer who had participated, conservative consumers were less likely than liberal consumers to persist ($b = -.581, p < .001$). Overall, we found that the effect of political ideology became more pronounced a year after the boycott movement outset. We also evaluated how consumers attribute the responsibility for the trade conflict. Responsibility attribution to Korean government (vs to Japanese government) was associated positively with conservatism ($b = .533, p < .001$), and it mediated the effects of political ideology on consumer boycott engagement.

Archival Studies

In the first archival study, we compare two distinctive market competition contexts: a competing market where domestic and other foreign alternatives compete with target country's products (i.e., beer) vs. a target-dominant market where target country's products dominate the market with an absence of domestic alternatives (i.e., digital camera). We examined the possibilities of a negative spillover effect and a positive substitution effect on other foreign products. We found that the national-level boycott movement did not lead to stronger patriotic consumption and domestic brand favoritism with no damage or even positive substitution effects on alternative foreign products.

In the second archival study, we evaluate the effectiveness of recovery strategies (i.e., online promotion and sales) that a highly targeted company could take. We obtained mobile app intelligence data (i.e., new installment, uninstallment rates) about a popular Japanese fashion brand in South Korea, Uniqlo. Although online promotion and sales, which are thought to be less observable with less social pressure on the purchase, boosted new customer acquisition (i.e., the number of new app installations), but customer retention was even worsening after the recovery effort. Specifically, the number of the new app installments increased by about 150-200% during the promotion period although it decreased back to the pre-promotion level in few weeks. Importantly, the next-day uninstallment rates (a proxy for poor customer retention) continued to grow during and after the promotion period (about 200-250% increase).

In conclusion, we demonstrate for the first time the role of political dynamics on short-term and long-term consumer engagement

in a national-level consumer boycott movement, drawing both theoretical and practical implications for marketers and policymakers concerning the effect of geopolitical tensions on marketplace turbulences. (961 words)

We live in different Americas: Political ideology shapes perceptions of American culture and iconic brands

EXTENDED ABSTRACT

In recent years, political polarization has rapidly divided our society. The rhetoric around "culture wars" (Hunter & Wolfe, 2006) suggests that liberals and conservatives are two distinct groups living in different worlds with different cultures. Indeed, research has identified differences in personality, cognitive processes, and moral values as a function of political ideology (Carney, Jost, Gosling, & Potter, 2008; Graham et al., 2011; Skitka & Tetlock, 1993). However, less is known about how liberals and conservatives view the society that they live in and how these differences in perceptions predict important consumer decisions and behavior. The present study aims to bridge this gap by focusing on the effect of political ideology on perceptions of American society and of the iconic brands that represent America.

We first examine how liberals and conservatives view the culture of their society, specifically focusing on verticality-horizontality (Triandis & Gelfand, 1998). Prior research has shown that political ideology and personal values are linked such that liberals prioritize universalism, whereas conservatives prioritize social order (Caprara et al., 2017). Relatedly, conservatives are more likely to accept social hierarchies and justify status differences across social groups (Hiel & Mervielde, 2002; Perry, Sibley, and Duckitt, 2013). Based on these findings, we hypothesized that conservatives would view their society as more stratified or vertical than would liberals.

We then investigated the link between perceptions of the society's culture and conceptions of brands as cultural symbols (i.e., iconic brands). Brands are cultural products that people use to express and communicate their identity, values, and worldview. A brand is considered iconic when it embodies the key characteristics of the culture (Torelli & Cheng, 2015). Given that we expected differences in the perceived horizontality-verticality of society between liberals and conservatives, we expected that their evaluations of brands that represent society would align with their perceptions of society. Specifically, we hypothesized that conservatives (liberals) would evaluate vertical (horizontal) brands as more iconic of American culture. We defined horizontal brands as those associated with horizontal values (e.g., concern for the welfare of others, openness to change) and vertical brands as those associated with vertical values (e.g., pursuit of self-interest and success, maintaining traditional social structures) (Shavitt, Lalwani, Zhang, & Torelli, 2006). We further expected that conservatives (liberals) would exhibit more positive attitudes and higher purchase intentions toward vertical (horizontal) brands.

In Study 1 ($N=300$), we investigated whether political ideology is associated with different perceptions of American culture. We asked participants to evaluate the extent to which America currently is individualistic (vs. collectivistic) and vertical (vs. horizontal). Findings revealed that conservatives (vs. liberals) view America as more vertical, meaning that inequality and status differences among Americans are more prevalent ($p < .001$). However, conservatives and liberals did not differ in their perceptions of how individualistic or collectivistic America is ($p = .675$). This pattern of results held after controlling for participants' cultural orientation, beliefs in power distance, and demographic variables associated with societal percep-

tions (age, gender, race, education, income, religiosity). This provides an initial demonstration that political ideology predicts how people view American society.

In Study 2 ($N=123$), we investigated whether ideological differences lead to different perceptions of brands' American iconicity. Given that conservatives (vs. liberals) view American society as more vertical, we expected that they would consider vertical brands as more iconic of American culture. To test our hypothesis, we selected brands from 10 product categories (e.g., clothing: Ralph Lauren vs. Vans; automobile: Cadillac vs. Subaru). For 20 brands, participants rated the extent to which the brands embody horizontal-vertical and individualistic-collectivistic characteristics. Consistent with our hypothesis, we found that conservatives and liberals rated brands' American iconicity in line with their view of American society (i.e., a significant interaction effect of consumer political ideology and brands' vertical-horizontal characteristics on brand iconicity, $p=.001$). Specifically, conservatives rated brands that were perceived to be vertical (vs. horizontal) as more iconic ($p=.018$), whereas liberals rated horizontal (vs. vertical) brands as more iconic ($p=.012$). The pattern of results held after controlling for several brand characteristics including the perceived political identity of the brands (Jung and Mittal, 2020), perceived individualistic-collectivistic attributes, and masculinity-femininity.

In Study 3 ($N=242$), we examined the downstream effect of political ideology on consumer attitudes and intentions. In so doing, we tested the mediational model in which consumer political ideology predicts brand attitudes via brand iconicity using 4 vertical and 4 horizontal brands (e.g., Ralph Lauren vs. Vans, pre-tested). Replicating the findings in the previous studies, conservatives rated vertical brands as more iconic of American culture than horizontal brands ($\beta=.34$, $p<.001$). More importantly, conservatives reported more positive attitudes toward vertical brands than horizontal brands: they liked ($\beta=.27$, $p<.001$), felt stronger connection with ($\beta=.40$, $p<.001$), and were more willing to buy ($\beta=.31$, $p<.001$) vertical brands. The hypothesized mediational model based on bootstrapping showed that the indirect effects were significant for all dependent measures (e.g., 95% CI for purchase intention [.03, .11]). The pattern of results held after controlling for possible correlates of brand attitudes and actions (brand familiarity, household income).

Which brands best symbolize America – brands like Vans and JetBlue Airways or brands like Ralph Lauren and Delta Air Lines? The present research suggests that liberals and conservatives hold different perceptions of American culture and of brands as American icons. The findings suggest that political ideology provides a lens through which people perceive society and brand symbolism. It also offers practical implications for marketers for how to better tailor their brand image to fit the worldview of target segments with different political ideologies.

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New Perspectives on Censorship: Reacting to Censorship Decisions, Deciding What to Censor, and Censoring the Self

Chair: Mr. Mohamed Hussein, Stanford University, USA

Paper #1: The Psychology of Consumer-Driven Media Censorship

Polina Landgraf, The University of Virginia, USA
Tami Kim, The University of Virginia, USA

Paper #2: How Pronoun Use Shapes Censorship Decisions

Mohamed A. Hussein, Stanford University, USA
Zakary L. Tormala, Stanford University, USA

Paper #3: Understanding Self-Censorship When Delivering Moral Feedback

Yena Kim, The University of Chicago, USA
Emma E. Levine, The University of Chicago, USA

Paper #4: When (Are) Online Relationships Real and Influential – An Evaluative Context Model

Nirajana Mishra, Boston University, USA
Carey Morewedge, Boston University, USA

SESSION OVERVIEW

Debates around censorship are on the rise. Social media companies like Facebook and Twitter are coming under increasing pressure to update their content moderation policies, sparking debates about the limits and appropriateness of online censorship (Conger, 2020). Similarly, streaming services like Netflix are actively debating whether to take down shows deemed offensive by some consumers (Gariano, 2020). Even university campuses are having renewed discussions about censorship in the form of debates about self-censorship and whether students and faculty are truly able to share their opinions (Camp, 2022). Given these debates around the idea of censorship and the various forms it takes, it is no wonder that there has been a sudden spike in research on the topic (for a review, see Hussein & Tormala, in press).

This session aims to bring together four papers that examine the construct of censorship from three different angles. Together, these papers pose and answer questions such as: First, how do consumers react to censorship decisions made by firms? When are censorship decisions seen favorably by consumers and when do they backfire? Second, as consumers have more opportunities to censor content themselves (e.g., by becoming moderators on platforms like Reddit and Twitch), what drives their censorship decisions? What content do they choose to censor and why? Third, under what conditions do people engage in self-censorship? What drives people to refrain from sharing their opinions and experiences with others?

The first paper in this session examines consumers reactions to media censorship decisions (e.g., taking down a TV show from a streaming platform). This paper finds that consumers generally react negatively to removing media with potentially offensive content, preferring that the content in question be preserved or labelled with a disclaimer.

The second paper focuses on situations in which consumers are making censorship decisions themselves and examines how the linguistic features of online posts, such as their choice of pronouns, impact such censorship decisions. Using a large dataset with actual censorship decisions, this paper finds that the use of second-person pronouns (e.g., you) increases the chances of censorship, while the use of first-person plural pronouns (e.g., we) decreases it.

The third and fourth papers examine self-censorship—that is, the act of refraining from sharing one’s opinions or experiences with others. The third paper finds that, even though people frequently find themselves in situation in which they would like to offer moral feedback to others, people frequently self-censor and refrain from sharing such moral feedback. The fourth paper finds that people self-censor more when they consider both their online and offline social networks. However, when considering their online or offline networks in isolation, people tend to be more comfortable disclosing their experiences and opinions.

Together, these four papers provide timely insights into the construct of censorship, a critical topic given the societal debates taking place. We believe that this session will be of interest to a broad audience of scholars and practitioners working on topics such as advocacy, consumption morality, digital norms, language use, impression formation, and persuasion.

The Psychology of Consumer-Driven Media Censorship

EXTENDED ABSTRACT

Digital platforms today can easily make accessible, take down, and/or modify content. For instance, in response to consumers’ calls for censoring what they deem troublesome content, Disney put a disclaimer for films such as *Dumbo* and *Aristocats* that they feature “negative depictions and/or mistreatment of people or cultures” (Pietsch, 2020). Both *30 Rock* and *Community* have deleted Blackface scenes upon receiving viewer criticisms (Alter, 2020). Two years after the show’s debut, Netflix removed a scene depicting a character’s suicide from *13 Reasons Why* that was criticized for its triggering nature. Although some have lauded the decisions to remove or alter the questioned content, others have been more wary, calling such actions an ‘overcorrection’ (Gariano, 2020).

How should digital platforms respond to consumer calls for media content censorship?

While the deletion or modification of controversial content may signal the platforms’ willingness to take accountability (e.g., Forehand and Grier 2003; Wooten 2009), we introduce and test an alternative account. We derive our predictions from the notion that history is an essential, sacred part of humanity that needs to be protected (e.g., Tetlock, 2003; Vignoles, 2011). To the extent that consumers view media content as a piece of history, they would view media content censorship as an immoral act and thus support content preservation even if the content is flagged for its troublesome nature.

Study 1 tested the proposed main effect. Participants ($N=451$) read about a streaming platform that had some shows featuring racial stereotypes. They were randomly assigned to read that the firm has decided to delete and replace the scenes that feature racial and ethnic stereotypes, leave them as they are, or put a disclaimer. We measured decision morality and subscription likelihood. Both decision morality and subscription likelihood were significantly lower in the content deletion condition ($M_{morality}=3.91$, $M_{subscription}=3.74$) than in the preservation ($M_{morality}=5.03$, $M_{subscription}=4.82$; $ps<.001$) and disclaimer conditions ($M_{morality}=5.35$, $M_{subscription}=4.93$; $ps<.001$).

If consumers liken content deletion to erasing history, they should be especially supportive of preserving the content more (vs. less) associated with the past. Study 2 ($N=198$) was a 2 (content: deletion, preservation; within) \times 2 (time: 1935, yesterday; between)

mixed design. Participants read about a movie that disregarded the brutalities of slavery and that was released in 1935 (vs. yesterday). Participants evaluated two decisions in random order: permanently pulling the film (content deletion) versus placing a disclaimer at the beginning of the film (content preservation). We measured decision morality and subscription likelihood.

There was a significant interaction for decision morality ($p=.01$) and subscription likelihood ($p=.05$). Amongst participants who read about the film released in 1935, decision morality was lower in the content deletion condition ($M=4.26$) than in the content preservation condition ($M=5.20$, $p=.001$). However, there was no difference in perceptions of decision morality across the preservation and deletion conditions amongst those who read about the film that was released yesterday ($p=.73$). Subscription likelihood followed the same pattern.

One reason consumers may espouse the deletion of criticized content is to protect other values that they deem as more critical to protect. When might this occur? We suggest that consumers belonging to affected populations—those who belong to a social group whose sense of collective identity is marginalized by the focal content—would be more in favor of deleting, rather than preserving, the content in question. In Study 3, participants ($N=187$) read about comedian Dave Chappelle's show "The Closer," in which Chappelle makes jokes that many consumers found transphobic. Participants evaluated four decisions in random order: permanently delete the entire show, delete the specific scenes only, add a disclaimer, and leave the show as-is without a disclaimer. We administered the same measures as in Studies 1-2. We recruited both transgender (i.e., affected) and Black (not affected) participants. There was a significant interaction for decision morality and subscription likelihood ($p_s<.001$). While Black participants found both partial ($M=3.99$) and complete ($M=3.86$) content deletion to be less moral than content preservation with ($M=5.00$) or without a disclaimer ($M=4.54$), transgender participants found complete content deletion ($M=5.80$) to be more moral than partial deletion ($M=4.46$) or content preservation with ($M=4.46$) or without a disclaimer ($M=2.60$). Subscription likelihood followed the same pattern.

We also investigate the extent to which consumers perceive the content creator's action to be positively intended as another boundary condition. Specifically, we investigate the role of out-group (vs. in-group) membership of the content creator in modulating inferences of intention and, therefore, people's judgments of content deletion (vs. preservation) as a moral action. Study 4 was a 2 (content: deletion, preservation; within) \times 2 (creator: Black, White; between) mixed design. Black participants ($N=295$) read about a movie created by either a Black or a White American producer that featured Blackface. Participants evaluated two decisions in random order: deleting the blackface scenes and placing a disclaimer. We measured decision morality and boycott intentions. In line with Study 3 findings documenting that consumers belonging to affected groups will favor content deletion over preservation, participants perceived deleting (vs. preserving) the content featuring Blackface scenes to be more moral ($p<.001$). However, there was a significant two-way interaction ($p<.01$). Participants perceived the decision to delete the content created by a White film producer ($M=5.43$) as more moral than preserving it ($M=3.50$). This gap was smaller when the film producer was Black ($M_{deletion}=5.27$, $M_{preservation}=4.59$, $p=.002$). Boycott intentions followed the same pattern.

These findings shed light on when and why consumers call for—or oppose—the censorship of media content and provide an integrative understanding of the psychology of consumer-driven media

censorship. By doing so, we contribute to research on consumption morality, digital norms, censorship, and platform governance.

How Pronoun Use Shapes Censorship Decisions

EXTENDED ABSTRACT

Consumers are becoming more involved in censorship decisions everyday. On Reddit, Facebook, and Twitch, for example, users can sign-up to become moderators with the power to directly remove posts from public view. On Facebook and Twitter, users can delete or hide comments of their choosing and prevent others from seeing them. When given the opportunity, what do people choose to censor, and why?

In the current research, we investigate whether the linguistic features used in a post—specifically which pronouns are used—can impact a post's censorship likelihood. Using a real-world, large-scale dataset with actual censorship decisions, as well as online experiments, we find that the use of second-person pronouns (e.g., you, yours) increases the chances of censorship, while the use of first-person plural pronouns (e.g., we, our) decreases it. We propose that the use of "you," pronouns makes a post seem more aggressive, increasing its chances of censorship, whereas "we" pronouns make a post seem less aggressive, which reduces censorship likelihood.

Study 1 tested whether the use of "you" and "we" pronouns predicted censorship likelihood in a real-life context, on reddit.com. Users on Reddit join groups dedicated to specific themes (e.g., politics). These groups have moderators, volunteer users with the ability to remove comments from public view. We collected all comments ($N = 272,172$) posted over a month to two groups dedicated to politics (r/Conservative and r/Liberal). We then employed a Python script that verified whether a post was deleted by moderators. Comments deleted by moderators were considered censored ($N = 11,275$; 4.14%). Using LIWC (Pennebaker et al, 2015), we estimated the relative frequency of "you" and "we" pronouns in each comment and correlated these frequencies with censorship decisions. We found a positive relationship between the frequency of "you" pronouns in a comment and censorship likelihood ($\beta = .007$, $t(272,169) = 18.41$, $p < .001$), and a negative relationship between the use of "we" pronouns and censorship likelihood ($\beta = -.0008$, $t(272,169) = -2.09$, $p = .036$). These results persisted after controlling for comment length, the frequency of profanities, and the emotionality of the text.

Study 2 aimed to provide casual evidence for the impact of pronoun use on censorship and to provide mechanism evidence. Participants were asked to imagine being moderators of an online forum and to decide whether to censor or keep each of nine comments. One of the comments was manipulated between-subjects to include "you" or "we" pronouns. The target comment read: "The fact that you [we] never leave your [our] little bubble of confirmation is sad. You [We] never want your [our] ideas challenged because you [we] tie them so close to your [our] emotions and personality, so anyone who challenges these ideas challenges you [us]." We also measured participants' perceptions of the aggressiveness of the target comment (aggressive, hostile, angry, open-minded [reverse-coded], and receptive [reverse-coded]).

We found that the target comment was censored at a higher rate when "you" pronouns were used compared to "we" pronouns ($t(248) = 3.46$, $p < .001$, $d = .44$). The target comment was also perceived as more aggressive when "you" pronouns were used compared to "we" pronouns ($t(298) = 25.04$, $p < .001$, $d = 1.41$), and perceived aggressiveness mediated the effect of pronoun type on censorship likelihood (indirect effect = .19, $Z = 4.58$, $p < .001$).

In Study 3, we examined whether the effect of pronouns on censorship was driven by “you” pronouns increasing the likelihood of censorship, “we” pronouns decreasing it, or both. We compared “you” and “we” pronouns to a third neutral control condition that used the gender-neutral indefinite pronoun “one” (e.g., “one must strive for perfection”). We found that, compared to “one,” “you” pronouns increased censorship ($\beta = .078$, $t(746) = 2.40$, $p = .017$, $d = .19$) and “we” pronouns decreased censorship ($\beta = .10$, $t(746) = 2.94$, $p = .0034$, $d = .28$).

Perceptions of aggressiveness tracked these results. Compared to “one,” “you” pronouns were seen as more aggressive ($\beta = 1.44$, $t(749) = 10.78$, $p < .001$, $d = 1.10$), whereas “we” pronouns were seen as less aggressive ($\beta = .35$, $t(749) = 3.08$, $p = .028$, $d = .28$). Perceptions of aggressiveness mediated these differences in censorship likelihood.

Studies 4 and 5 aimed to moderate the effect of “you” pronouns. In Study 4, participants were assigned to either a comment that used “you” pronouns, “we” pronouns, or a third condition that infused “you” pronouns with phrases of acknowledgment (e.g., “Totally see what you mean”) and agreement (e.g., “your point makes sense”). Acknowledgment and agreement were expected to reduce the perceived aggressiveness of the post because they are linguistic markers of receptiveness (Hussein & Tormala, 2021; Yeomans et al., 2020). Indeed, we found that censorship was higher in the “you” pronouns condition compared to the other conditions ($t(449) = 3.93$, $p < .001$, $d = .40$), which did not differ from one another ($t(449) = .048$, $p = .96$, $d = .0062$). Perceptions of aggressiveness mediated these results.

In Study 5, we tested whether group membership would attenuate the effect of “you” pronouns. Participants were assigned to read a comment that used “we” pronouns or “you” pronouns ascribed to an ingroup or an outgroup member. We reasoned that ingroup members would be perceived as less aggressive and afforded greater tolerance for being aggressive compared to outgroup members. Indeed, we found that participants in the “you-outgroup” condition were more likely to censor the comment than participants in the “we” or “you-ingroup” conditions ($t(598) = 4.26$, $p < .001$, $d = .37$), which did not differ from each other ($t(598) = .12$, $p = .91$, $d = .01$).

Five studies revealed that the mere choice of pronouns influenced whether online posts were censored. Posts that used “you” pronouns were censored at a higher rate than posts that used “we” pronouns. This difference in censorship was driven by perceptions of aggressiveness. Reducing the perceived aggressiveness of posts using “you” pronouns reduced censorship. These findings advance a nascent literature on the drivers of censorship.

Understanding Self-Censorship When Delivering Moral Feedback

EXTENDED ABSTRACT

People deeply care about others’ moral character (Goodwin et al., 2014; Goodwin, 2015) and, therefore, find immoral behavior quite upsetting. Given the primacy of morality to interpersonal functioning, we might expect people to be eager to change the immorality of others, for example, by offering them feedback on their immoral actions.

In the present research, however, we suggest that people often censor themselves instead of delivering moral feedback. We propose two mechanisms that underlie this self-censorship: (1) people believe that moral feedback will be more upsetting for feedback-receivers than other types of feedback, and (2) people believe that moral feedback has less instrumental value (e.g., leads to less long-term learning and growth; Levine, 2022) than other types of feedback. Moral

character is considered to be central to one’s identity (Goodwin et al., 2014; Strohminger & Nichols, 2014). Therefore, people may expect that transgressors will be exceedingly sensitive to moral feedback and that such feedback will be met with resentment, not receptiveness. In addition, many people believe that morality is fixed (Chiu et al., 1997; Dweck et al., 1993; Haselhuhn et al., 2010). Once a person commits a single immoral act, they are tainted, even if they change in the future (Klein & O’Brien, 2017). Those who hold fixed beliefs are likely to think that transgressors are incapable of moral improvement; therefore, giving feedback would be a fruitless endeavor. Here, we explore how these mechanisms predict self-censorship in the domain of moral feedback.

In Study 1 ($N = 185$), we used a recall paradigm to understand people’s willingness to deliver moral versus non-moral feedback to others. We also explored whether the propensity to deliver moral feedback differed in close versus distant relationships. Participants recalled an instance in which they “felt frustrated with the behavior of someone who is relatively [close to/distant from] [them]” and wanted their relational partner to change something about themselves or their behavior. Participants categorized the type of change they wanted their partner to make (moral, competence, well-being, sociability, or other). Participants then responded to a series of dependent measures. First, they reported whether they confronted their relational partner using the item “Did you speak to this person about their upsetting behavior?” Participants then reported the extent to which they believed the target would react negatively to their feedback (composite scale of how much the target would appreciate, be offended, be receptive, and be defensive) and the extent to which they believed their feedback had instrumental value (composite of the degree to which their feedback would influence the target’s behavior, be valuable to the target, and be useful for the target’s growth).

People were most likely to recall instances in which they wanted relationship partners (both close and distant) to change their morality with 48.1% of the total sample reporting that they wanted a partner to change their moral behavior. In other words, people frequently face situations in which moral feedback could be fruitful. Despite the frequency with which people desired moral changes in others, however, they often censored themselves instead of speaking up about these desires. People were less likely to deliver feedback about others’ morality than others’ competence and well-being in both close and distant relationships.

To examine our main measures, we collapsed the non-moral domains (competence, well-being, sociability, and other) into one group ($N = 89$) and compared this against the moral domain ($N = 96$). People expected their partners to react more negatively to moral feedback ($M = 5.24$, $SD = 1.35$) than non-moral feedback ($M = 4.67$, $SD = 1.34$), $t(183) = -2.87$, $p = .005$. People also expected moral feedback to have less instrumental value ($M = 3.61$, $SD = 1.67$) than non-moral feedback ($M = 4.21$, $SD = 1.53$), $t(183) = 2.52$, $p = .013$. Only concerns about partners’ negative reactions, however, mediated the effect of domain (moral vs. non-moral) on the likelihood of delivering feedback (95% CI of indirect effect of partner’s negative reaction = $-.834$ to $-.126$; 95% CI of indirect effect of instrumental value = $-.305$ to $.070$).

In Study 2, we manipulated the domain of feedback directly. We focused on feedback delivered to distant relationship partners, given that this was where we found the greatest reluctance to deliver moral feedback in Study 1. Specifically, we presented participants ($N = 194$) with a scenario in which they had the opportunity to give feedback to a new classmate who was demonstrating either low moral character or low competence (pre-registered). Participants reported their willingness to give feedback as well as beliefs about the

partner's negative reaction to feedback and the instrumental value of feedback using similar items to those used in Study 1.

Consistent with Study 1, participants believed that moral character feedback would be (1) more negatively received ($t(192) = -3.86$, $p < .001$) and (2) would have less instrumental value ($t(192) = 2.86$, $p = .005$) than competence feedback. Unlike in Study 1, however, both concerns about partners' negative reactions (95% CI of indirect effect = $-.536, -.134$) and perceptions of instrumental value (95% CI of indirect effect = $-.454, -.067$) mediated the effect of domain (morality vs. competence) on the likelihood of delivering feedback.

In this work, we explore why people are reluctant to confront others—especially distant others—about moral improvements. Expanding on past findings that highlight the importance of moral character in person perception (e.g., Goodwin, 2015), we find that people frequently face situations in which they desire to give moral feedback but end up censoring themselves with distant others. We find consistent evidence that this self-censorship is driven by concerns about others' reactions to moral (versus non-moral) feedback and, to a lesser extent, the instrumental value of moral (versus non-moral) feedback. Taken together, these findings deepen our understanding about when—and in what domains—people are willing to have honest conversations, paving the way for future research on how to constructively communicate about others' (im)morality.

When (Are) Online Relationships Real and Influential – An Evaluative Context Model

EXTENDED ABSTRACT

With the rise of digitization, the social networks in which people form relationships are increasingly online (e.g., Agrawal et al., 2014; Harris & Rae, 2009). These online networks influence behavior through disclosure norms, especially where people disclose vast quantities of costly information about themselves to others with whom they only interact online. We propose a theory to reconcile this pervasive influence of online social relationships with a more general view that they are more constrained and weaker than similar relationships offline (Cummings et al., 2002; Kraut et al., 1998; Burke & Kraut, 2016). We leverage an evaluative context framework (e.g., Bohnet et al., 2016; Hsee et al., 2009) to explain when online social relationships will be weaker than similar offline social relationships and demonstrate how these differences in social distance influence their propensity to disclose personal information.

Participants ($N=232$) at a north-eastern university were randomly assigned to one of two conditions (joint evaluation vs. separate evaluation) in a between-subjects design. All participants wrote about an incident where they described an embarrassing product they use (or had used) that they might not want others to know about. After completing the writing task, participants then thought about their social networks. In the joint evaluation, participants thought about 100 people in both their online and offline social network - with their closest friend at rank 1 and their most distant acquaintance at rank 100. They then wrote down names of relations at ranks 1, 5, 10, and 20 for both online and offline social networks. In separate evaluation, participants thought about 100 people in their online social network and wrote down names of relations at ranks 1, 5, 10, and 20 in their online social network (i.e., Facebook relations).

Finally, the participants reported their willingness to share the embarrassing product information *only with each of their online relations* (ranks 1, 5, 10, 20) in both evaluation conditions.

We found a main effect of the evaluation condition on the participant's willingness to share the embarrassing incident with their online social network ($F(1, 230) = 6.11$, $p = .014$). Participants

assigned to the joint evaluation condition were significantly less willing to share this information with their online networks ($M_{JE} = 0.57$; $SE = .02$) than participants in the separate evaluation condition ($M_{SE} = 0.66$; $SE = .02$). These results show how evaluative context influenced participants' disclosure of information.

In this study ($N = 762$; Amazon Mechanical Turk), we examined whether evaluative context (i.e., joint versus separate evaluation) influenced the disclosure of sensitive personal information in participants social networks. As in the earlier study, all participants wrote down the first names of their relations at ranks 1, 5, 10, and 20 and completed the self-disclosure task for each friend. In the self-disclosure task, participants imagined that they had engaged in 4 illicit behaviors (adapted from John et al., 2011) and reported how comfortable they would feel if they disclosed each behavior to each relation on four separate 7-point scales with endpoints, 1 (Extremely uncomfortable) and 7 (Extremely comfortable). We used a mixed design in which participants were randomly assigned to one of three conditions. In joint evaluation, participants completed self-disclosure task for four relations each, in *both their offline social network and on Facebook*. In separate evaluation, they completed the self-disclosure task for four friends in *either their offline social network or on Facebook*.

We analyzed our results by splitting the data across evaluation condition. In joint evaluation, a $4(\text{rank: } 1, 5, 10, 20; \text{ within-subjects}) \times 2(\text{social network: offline, Facebook; within-subjects})$ repeated ANOVA yielded a main effect of social network on disclosure ($F(1,222) = 25.53$, $p < .001$) such that participants felt less comfortable disclosing sensitive personal information to relations in the online than offline social network. In separate evaluation, a $4(\text{rank: } 1, 5, 10, 20; \text{ within-subjects}) \times 2(\text{social network: offline, Facebook; between-subjects})$ there was no main effect of social network ($F(1,537) = 0.38$, $p = 0.54$).

Participants ($N=204$; Amazon Mechanical Turk) in a within-subjects design, wrote down names of relations at ranks 1, 5, 10, and 20 for both online and offline social networks. Then, they rated their social distance (i.e., relationship strength) to each relation in order of their rank (1, then 5, then 10, then 20) on a 7-point social distance scale (Aron, Aron, & Smollan, 1992).

Participants completed these procedures twice, once for each social network (i.e., offline and Facebook), with social network order counterbalanced. Finally, they completed the self-disclosure task (same as earlier study) with order counterbalanced. A $4(\text{rank: } 1, 5, 10, 20; \text{ within-subjects}) \times 2(\text{social network: offline, Facebook; within-subjects})$ repeated ANOVA showed main effect of social network such that participants felt more socially distant to relations in the online than offline social network ($F(1, 203) = 33.67$, $p < .001$). There was also a main effect of social network on disclosure ($F(1,203) = 8.93$, $p = 0.003$) such that participants felt less comfortable disclosing sensitive personal information to relations in online than offline social networks.

Consistent with our theorizing, mediation with bootstrapping 5000 samples revealed that perceived social distance mediated the effect of social network on disclosure in joint evaluation ($\beta = -.25$, $SE = .06$, 95% CI = $-0.39, -0.15$).

Evaluative context influenced the perceived strength of relationships and, in turn, disclosure propensity in online social networks. Whereas participants felt similarly comfortable disclosing sensitive information to relations in online and offline social networks in separate evaluation, they felt less comfortable disclosing sensitive information to relations in an online than an offline social network in joint evaluation. Furthermore, this difference in disclosure propensity in the joint evaluation was mediated by the increased

social distance participants felt toward comparable relations in online social networks relative to offline social networks. In addition, we find that the default context is a separate evaluation. Consumers do not spontaneously use offline relationships as a natural comparison standard when evaluating their online relationships.

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Broadening the Scope of Consumer Research on Food

Chair: Sherrie Y. Xue, INSEAD, France

Paper #1: The Start Stop Food Journey Framework for Consumer Eating Decisions

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Peggy J. Liu, University of Pittsburgh, USA
Brent McFerran, Simon Fraser University and Deakin University, Canada
Pierre Chandon, INSEAD, France

Paper #2: Open Science Online Grocery: A Description and Application

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Amanda Makara, Children's Hospital of Philadelphia, USA
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Paper #3: Expiration Date Perception and Food Choices for Later Consumption

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Young Eun Huh, KAIST, South Korea
Brent McFerran, Simon Fraser University and Deakin University, Canada

Paper #4: Ordering More and Eating Less: Effects of Preservation Containers on Food Ordering and Consumption Decisions

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Pierre Chandon, INSEAD, France
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SESSION OVERVIEW

Most consumer research on food identifies factors that affect what food people choose between two food options, for eating on a single occasion, for oneself, for the present. This session proposes a need to broaden the research scope, offering a conceptual framework that moves beyond the current scope and empirical papers that illustrate this broadening. The first paper (**Haws, Liu, McFerran, and Chandon**) underscores that eating is repeated and interdependent across episodes, and consequently provides a framework showing how we can move from a “discrete” to a “continuous” approach to food decisions and why this shift is important. The following three papers extend food choices from: choices between two options for one's own consumption to choices for others from an open-source online grocery store (**Howe, Makara, Fitzsimons, Ubel, and Timko**), choices for current consumption to choices for later consumption (**Kim, Huh, and McFerran**), and single-episode food choices to multi-stage food choice, consumption, and waste decisions (**Xue, Lin, Chandon, and Indaburu**).

Haws and colleagues discuss the need to broaden the scope of consumer research on food to enhance its relevance for consumer well-being, public policy, and marketing. They propose a conceptual framework emphasizing three key decision-making dimensions (when to start eating, what to eat, and when to stop eating), incorporating carryover effects of previous decisions on subsequent decisions, both across and within consumption episodes. They argue that

consumer food research needs to move from a single-actor discrete model to a continuous model of food consumption.

The following three papers illustrate ways of broadening the scope of food research. **Howe and colleagues** demonstrate the usefulness of their open-source online grocery shopping tool to extend food choices for oneself to choices made for teens with eating disorders, an understudied population in consumer research. **Kim and colleagues** extend decisions for current consumption to decisions for later consumption, showing that when food is perceived to expire quickly (i.e., when framed as healthy [vs. unhealthy]), consumers are less likely to purchase it for later consumption compared to immediate consumption. **Xue and colleagues** further show the value of considering multiple food decisions, not just what food to choose. They show that consumers order more food when provided a preservation container at the food-choice stage, but eat less of the meal (stop eating earlier) and waste less of the leftover food when provided a container at the consumption stage.

Overall, the session combines conceptual and empirical perspectives to demonstrate how we can broaden consumer food research. The papers use diverse methodologies and theoretical perspectives to shed light on multiple domains (consumption actor, consumption temporality, and consumption decision-making stage) to extend food research under the continuous time model of food consumption. We anticipate that this session will inspire a broad ACR audience of consumer researchers studying food and offer new practical implications for marketers, consumers, and policymakers.

The Start Stop Food Journey Framework for Consumer Eating Decisions

EXTENDED ABSTRACT

Food consumption is of high relevance to multiple stakeholders—consumers, marketers, and policymakers. Indeed, food consumption is a key topic in consumer research's past, present, and future. It is currently one of the most widely studied topics in consumer research, with numerous articles published each year in marketing and consumer research journals on this topic.

However, although our field has contributed much to understanding individual isolated phenomena, most consumer research on food has focused on (a) identifying factors that affect what types of food people eat—differentiating between healthy and unhealthy types of food— and (b) typically examined eating in a single occasion, with most studies containing data from a thin slice of lab time or insights generated from online studies, which is suggested to represent or have broader implications.

Although important, we suggest broadening the focus whenever possible to enhance relevance from both from a consumer well-being and public policy perspective (because other aspects of food decisions are as important to long-term consumer well-being and thus also policymaking considerations) and from a marketing perspective (because other aspects of food decisions are as important to marketers' strategic decisions).

We propose a novel conceptual framework that moves beyond single episodes (“discrete time”) to an approach that underscores that two of the core characteristics of eating are that it is repeated and interdependent. Hence, our framework incorporates carryover effects of previous decisions on subsequent decisions, both across (inter-consumption) and within (intra-consumption) episodes (“con-

tinuous time”). Our framework emphasizes that eating decisions are not independent but influenced by previous and future eating decisions. For example, a choice of what main course to eat for dinner can be influenced by what is to come in the future (e.g., “save room for dessert”) as well as what happened previously (e.g., “I ate a late lunch” or “I already ate that for dinner last night”).

Central to our framework are three key decision-making dimensions that we suggest collectively characterize each eating episode: when to start eating, what to eat, and when to stop eating. In terms of “when to start eating,” any given consumption episode has a distinct starting point when a consumer begins eating or drinking something. This decision to start may or may not precede the decision regarding what to eat. In other words, a consumer may choose to eat now, then search out what to eat (“I’m hungry, let’s see what is in my fridge”), or she may choose what to eat (“tea and scones”), and then decide when to eat it (“5pm”). Similarly, the decision to stop eating may or may not follow the other two decisions. For example, a consumer may choose a fixed portion size from a menu intending to consume the entire portion or otherwise pre-commit to a stopping point before beginning consumption (“only one drink for me tonight”).

Thinking about food consumption in this broader sense and applying our framework leads to the elucidation of many novel research questions, highlighted in table 1. Of importance, we argue that the universe of food decision-making decisions is captured by our framework, yet most consumer research efforts examine only a single “dimension” (typically “what to eat”). Further, researchers typically observe isolated aspects of food decisions within a very specific context and short timespan (i.e., “lab eating” or single-occasion online studies) without understanding how such decisions may map onto the broader sequence of food decisions participants make throughout their day (i.e., “free-living eating”) and more importantly, day after day.

Regardless of whether the motivation is to study food decision making for its practical value or simply as a useful domain for studying various theories, it is important to consider the inherent complexities involved in food decisions, as well as the *patterns* of these decisions. We suggest that understanding these patterns is best approached through understanding the three key dimensions that we propose characterize each eating episode. We argue that consumer research is served by moving from a discrete model to a continuous time model of food consumption. See figure 1 for a comparison of the discrete model and the continuous time model of food consumption. We will offer a series of practical recommendations for consumer researchers to do so, with a goal of encouraging researchers, consumers, marketers, and policy makers to broaden their perspectives.

In conclusion, in our talk, we will: 1) introduce and explicate a model proposing and decomposing three key dimensions of each eating episode and the links between dimensions and episodes, 2) motivate clear directions for future research through the lens of the new framework, and 3) offer practical implications for consumers, marketers, and policymakers.

Open Science Online Grocery: A Description and Application

EXTENDED ABSTRACT

The Open Science Online Grocery (OSOG) platform is a free research tool designed to study the effect of choice context changes in a grocery setting. It is located at <https://openscience-onlinegrocery.com/>. OSOG consists of a researcher interface—where the researcher can easily make changes to the choice context—and a

participant interface—where participants complete a mock grocery shopping trip that integrates the researchers’ changes.

The participant interface of OSOG looks like any other online grocery store that participants may be familiar with (e.g., Instacart, Amazon Fresh). OSOG is populated with 11,096 products, both branded and unbranded. On the main page of the grocery store participants see an overview of the available products: product photographs, names, sizes, prices, and any front-of-package labels the researcher specifies. If participants click on a product, they see more information including the nutrition facts label, the ingredients, and the manufacturer’s description. Participants can browse products by using a navigational menu at the top of the screen or directly search for products by name.

The researcher interface is a point-and-click interface that allows researchers to easily modify the choice context of the store. OSOG is designed to be accessible to researchers with no web coding experience. The modifiable features of the store—which can be changed separately or in conjunction with one another—include the following:

1. Front-of-package labels: Labels that can be uploaded as images by the researcher. The labels are placed on products based on a researcher-specified equation.
2. Within-page sorting: Products can be sorted within a page based on the system default, a random order, product information (e.g., calories from fat, price, alphabetical, health labels), or any researcher-specified order.
3. Custom categories: Researchers can include additional product categories and subcategories above the nine built-in navigational categories (e.g., a vegan section; a WIC-eligible section). Researchers specify which products fall in the new categories.
4. Cart-level feedback: An uploaded image appears at check-out conditional on a researcher-specified equation (e.g., if 50% of items are low in sugar).
5. Modifications to the nutrition facts label: Researchers can change the formatting of the nutrition facts label including the font (type, size, color, bold, italics) and background color. Changes can apply to all labels or be conditional on product features.
6. Product recommendations: When participants add specific items to their cart, a pop-up will appear asking whether they would like to also add a complimentary item (e.g., “we see you’re buying ranch dressing, would you like to add carrot sticks?”).
7. Budgets: Researchers can set maximum or minimum cart totals required to check-out of the store.

OSOG can be used to study how choice architecture affects purchasing of healthy items. However, study need not be limited to choice context effects. For example, one group of researchers is using the store to mimic a consumer-brand interaction and assess downstream consequences for brand connection and brand community (Rifkin, Valsesia, & Cutright, personal communication). A second group of researchers is using the store to study a variety of recommendation algorithms (Xu, Deng & Mela, personal communication). In the second half of this talk, we present one use case for OSOG: As a training tool for parents in Family-Based Treatment for adolescents with anorexia nervosa.

Study of OSOG as a training tool for nutrition education**EXTENDED ABSTRACT**

Anorexia nervosa is a severe psychiatric illness with typical onset during adolescence (Swanson et al. 2011). For adolescents in treatment for anorexia nervosa, weight restoration is critical. During weight restoration, a healthy eating pattern consists of adequate caloric consumption to feed the body and facilitate weight gain (3600-4000 calories/day). This eating pattern is a considerable shift—for both the adolescent and their family—from what previously may have been considered “healthy.” Anecdotally, parents report struggling with shifting their meal planning and shopping from what is often perceived as “healthy” to including typically avoided foods (e.g., high fat foods, “junk food,” calorically dense foods) into their child’s renourishment diet to promote sufficient weight gain.

Parents whose child is hospitalized for medical stabilization due to malnutrition are provided with considerable resources (including meetings with dietitians, mental health clinicians, and physicians) to learn which foods are most effective for renourishment. However, they are given very few opportunities to practice these new habits before their child is sent home. We explored whether parents benefit from using OSOG to practice applying their newly acquired renourishment knowledge prior to discharge.

Twelve families were recruited for this study. After nutritional education with a dietitian, parents were given the opportunity to practice their new purchasing habits in OSOG. In this version of OSOG, all items had front-of-package labels indicating their caloric density and recommendations for high caloric density products (e.g., “we see you’re adding apples, would you also like to add peanut butter?”). Four weeks after discharge, parents completed semi-structured interviews on their inpatient experience, including their experience in the store. This qualitative data was coded using the procedure for inductive thematic analysis (Braun and Clarke 2006).

Parents reported a number of barriers to learning in the inpatient setting that OSOG could help to address. In addition to being distressed by their child’s hospitalization, parents are presented with information from a wide variety of sources (e.g., dietitians, social workers, physicians, psychologists, nurses). Parents reported that it was difficult and stressful to process and remember all the information they were receiving.

Parents indicated that using OSOG after nutritional training reinforced their learning and provided them with concrete examples of what they learned (e.g., caloric density) and provided examples of foods that might work for their families. Parents reported that OSOG was most useful when they were still learning how to renourish their child and thought its usefulness would reduce as they established foods and meals that worked for their families.

Overall, we suggest that OSOG is a valuable research tool, not only for research on nudging but in a variety of contexts, as demonstrated by its use in family-based treatment.

Expiration Date Perception and Food Choices for Later Consumption**EXTENDED ABSTRACT**

Food expiration dates guide various important consumer decisions, including what to buy, how much to buy, and whether to dispose a certain food item. However, for consumers, food expiration information can be confusing, difficult to interpret, or missing altogether. While past research (e.g., Sankar and Block, 2009; Tsiros and Heilman 2005) has examined how clearly-specified expiration information impacts consumers, no research, to the best of our knowl-

edge, has examined how consumers make decisions when expiration information is missing. This is important because much food consumers eat (e.g., restaurant meals, baked goods) has no expiration date provided to guide them. We identify perceived healthiness as a cue consumers rely on. Specifically, we propose that consumers perceive healthy food to expire more quickly than non-healthy food and this leads them to be hesitant to choose healthy food for consumption at a later point.

People form inferences based on their past experiences (Haws, Reczek, and Sample 2017). Some healthy food, such as fresh produce, indeed expires quickly. This means consumers are likely to have more frequent experiences of healthy food (e.g., spinach) quickly expiring than non-healthy food (e.g., potato chips) expiring, resulting in an association between healthiness and quick expiration. However, while healthy food expiring more quickly than non-healthy is true in some cases, such as when comparing between food categories (e.g., spinach to potato chips), such is less likely to be objectively true when comparing within the same food category (e.g., different brands of potato chips) and/or when the food item is held constant. Indeed, in analyzing the actual expiration duration of all cereal brands available in a major market revealed no significant relationship between the perceived healthiness of the brand and its expiration duration. However, even in such cases when there is no objective link between healthiness and expiration duration, we argue that consumers overgeneralize the more rapid expiration of some healthy food to all healthy food. Because concerns about food expiration are important when the consumption is for later rather than immediate, we further propose that consumers would be hesitant to choose food that is perceived to expire quickly, namely healthy food, for later consumption.

In Study 1, participants ($N = 77$) viewed six sets of three food items varying in their level of perceived healthiness (high vs. medium vs. low) and ranked them in the order of how quickly they would expire which served as our main DV. Results revealed the expected pattern, in that the food items high in perceived healthiness were most frequently ranked as the quickest to expire across all six food categories (Table 1).

Study 2 held the food item constant and manipulated the healthiness perception and provided support for the inference-making nature of the process. If, as we argue, people use the perceived healthiness as a cue to infer the expiration date, then this effect should be attenuated among those who do not need to infer the expiration date, that is, those who are knowledgeable about expiration date of food items. Participants ($N = 553$) 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 then indicated how frequently they check expiration dates when purchasing food products, which served as a proxy for expiration date knowledge. As predicted, the bar framed as healthy ($M = 4.45$, $SD = 1.44$) was perceived to expire more quickly than the bar framed as non-healthy ($M = 4.08$, $SD = 1.71$; $p = .006$). In addition, a floodlight analysis revealed that our effect remained significant up to .41 SD above the mean of expiration dates knowledge (68.35% fall below this point; $b = .18$, $SD = .09$), but it attenuated as participants’ level of knowledge increased (Figure 1).

Study 3 examined the consequences of the inference on food choice for later consumption. Specifically, we reasoned that participants would be hesitant to choose healthy food when the food is to be consumed much later and thus the concern for food expiration is high. In Study 3, participants ($N = 77$) visited an online grocery store and shopped for either immediate consumption (received immediately) or later consumption (received two weeks later). A screenshot

of their shopping basket was coded on the healthiness and calories which served as our main DVs. As predicted, participant selected less healthy food items ($M = 4.08$, $SD = 2.12$) with higher calories ($M = 11,200.84$, $SD = 7149.03$) for later consumption than for immediate consumption ($M = 5.18$, $SD = 1.68$, $p = .014$; $M = 8,245.51$, $SD = 4839.61$, $p = .037$).

Study 4 further tested the consequence for food choice for later consumption using a different context—food taken for to-go for later consumption—and by directly manipulating concerns about food expiration. Concerns about food expiration can be naturally high when the consumption time is *much* later as in Study 3. However, even when the consumption time is not too far in the future (e.g., later in the day), other situational factors may increase concerns about food expiration, leading to the same effect. To examine this, we manipulated concerns about food expiration prior to the food evaluation task in an independent task. Specifically, café patrons ($N = 86$) who had already purchased their lunch were approached to complete a survey about food expiration (high concern condition) or the layout of the building (low concern condition). Afterward, they chose between two complimentary chicken sandwiches framed as healthy versus delicious. As predicted, fewer participants chose the healthy sandwich when the food expiration concern was high (46.34%) than when it was low (62.22%; $b = .43$, $SE = .23$, $Wald = 3.35$, $p = .067$, Odds Ratio = 2.36).

In summary, the results of four studies demonstrate that consumers perceive healthy food to expire more quickly than non-healthy food when the food item was held constant and this further made them to be hesitant to choose healthy food for later consumption.

Ordering More and Eating Less: Effects of Preservation Containers on Food Ordering and Consumption Decisions

EXTENDED ABSTRACT

Restaurants sometimes offer food preservation options (e.g., to-go containers) for consumers to preserve unfinished food or drink for later consumption. Although this practice is common, at least in some cultures and types of restaurants, research on how these options affect consumers' ordering choices and consumption decisions is still limited.

Previous studies suggest that food preservation options can facilitate self-regulation in consumption. For instance, resealable bags help people regulate candy consumption (De Bondt et al., 2017), and packaging uneaten food “to-go” attenuates the effect of portion size on consumption (Bates and Shanks 2015; Zuraikat et al., 2018). We contribute to this research by taking a multi-stage perspective to explore the unique effects of food preservation containers at two different stages (Figure 1). We suggest that when provided containers at the food-choice stage, consumers order more food, due to a lower concern about wasting food and money if one cannot finish the order. When provided containers at the consumption stage, consumers consume less due to increased mindful control of overeating. We further suggest that consumers subsequently waste less when provided containers. We show these multi-stage effects using one field and three online studies, all pre-registered.

Study 1 tested the effect of food preservation containers on the amount of food ordered, consumed, and wasted in the field (campus cafeteria). During week 1, no preservation container was offered. During weeks 2-5, free preservation containers were offered. Diners who took a survey reported the percentage of each course they ate and whether they discarded leftovers if unfinished. We compared the

choices of diners who took a container (treatment group) to those who did not (control group), and to their behavior during the no-container baseline week (baseline group), using propensity score matching to address potential self-selection. We found that diners in the treatment group consumed a smaller portion of their dishes ($M=70.98\%$) than those in the control group ($M=91.02\%$), $t(994)=-10.94$, $p<.001$, and baseline group ($M=92.01\%$), $t(994)=-11.48$, $p<.001$. No difference was found between the control and baseline groups, $t(994)=-.54$, $p=.589$. When they did not finish their dishes, fewer diners in the treatment group discarded leftovers (18.14%) than those in the control (91.67%), $B=-3.91$, $SE=.31$, $p<.001$, and baseline group (92.65%), $B=-4.04$, $SE=.32$, $p<.001$. No difference was found between the control and baseline groups, $B=-.14$, $SE=.37$, $p=.713$. In addition to the survey data, the cashiers identified whether any diner took a box along with what they ordered. Exploratory analysis showed that those who took a box ($M=1.36$) ordered more main course dishes (but not appetizers or desserts) than those who did not ($M=1.28$), $t(14301)=2.54$, $p=.011$, and those in the baseline week ($M=1.25$), $t(14301)=3.36$, $p<.001$. (Figure 2)

Study 2 ($N=302$) tested whether people order more when offered a container at the food-choice stage. Participants were offered a menu either with (container condition) or without (no-container condition) a box to pack unfinished food. They were asked to report their likelihood of ordering an appetizer in addition to the main course. Participants in the container condition were more likely to order the appetizer ($M=3.27$) than those in the no-container condition ($M=2.47$), $t(300)=5.57$, $p<.001$. This effect was mediated by waste concern (six-item, e.g., “It would be wasteful if I could not finish both dishes”), $CI_{95}=[.459, .832]$, but not by overeating control (six-item, e.g., “If two dishes are too much for me, I would stop eating when I’m full.”), $CI_{95}=[-.100, .019]$.

Study 3 ($N=297$) tested whether people consume less when offered a container at the consumption stage. Participants imagined being served a pasta dish either with (container condition) or without (no-container condition) a to-go box and reported the percentage of the pasta they would finish. Participants in the container condition reported would finish less food ($M=70.51\%$) than those in the no-container condition ($M=80.48\%$), $t(295)=-4.47$, $p<.001$. This effect was mediated by overeating control, $CI_{95}=[-5.036, -1.304]$.

Study 4 ($N=451$) tested the effects of providing a container at both the food-choice and consumption stages using a 3-condition design (container-at-ordering vs. container-at-consumption vs. no-container). Participants imagined viewing a tapas menu either with (container-at-ordering) or without (other two conditions) a free to-go box. They reported their likelihood of upgrading to a larger menu. Subsequently, all participants read that they were served the large menu because of a promotion regardless of their choice but were told that it either came with (container-at-consumption) or without (no-container) a to-go box, or were reminded about the box that they had already received when ordering (container-at-ordering). They then reported the percentage of the meal they would finish. Replicating Study 2, participants in the container-at-ordering condition were more likely to upgrade to the large menu ($M=3.80$) than those in the no-container ($M=3.21$), $t(448)=4.14$, $p<.001$, and container-at-consumption conditions ($M=3.22$), $t(448)=4.07$, $p<.001$. This effect (container-at-ordering vs. combined-control) was mediated by waste concerns, $CI_{95}=[.253, .544]$, but not by overeating control, $CI_{95}=[-.064, .007]$, in a parallel mediation model. Consistent with Study 3, participants in the container-at-ordering ($M=52.56\%$) and container-at-consumption ($M=56.84\%$) conditions intended to consume less than those in the no-container condition ($M=60.88\%$), $t(448)$ container-at-ordering $=-3.89$, $p<.001$, $t(448)$ container-at-consumption $=-1.98$, $p=.048$.

This effect (combined-container vs. no-container) was mediated by overeating control, $CI_{95}=[-3.391, -.552]$, but not by waste concern, $CI_{95}=[-1.499, .006]$.

Our research suggests that providing preservation options can be an effective tool for consumers, policymakers, and marketers to better align health, environmental, and business objectives by increasing sales while decreasing overeating and food waste. We show that food preservation containers can improve consumer well-being, allowing them to order the desired variety and quantity of food without the need to trade-off economic, health, and taste goals. We also show the effectiveness of a common and yet under-researched healthy eating intervention (Cadario and Chandon 2020), contributing to nudge literature. Our research further indicates that providing containers can reduce food waste, consistent with societal sustainability goals.

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“Seeing Stars: Novel Insights on how Consumers Generate and Use Product Ratings”

Chair: Quentin André, Leeds School of Business, University of Colorado Boulder, USA

Paper #1: The Influence of Mean Product Ratings on Review Judgments and Search

Daniel Katz, Booth School of Business, University of Chicago, USA

Dan Bartels, Booth School of Business, University of Chicago, USA

Paper #2: Would you Use a South-Pointing Compass? Consumers Underestimate the Informativeness of Systematic Disagreement

Quentin André, Leeds School of Business, University of Colorado Boulder, USA

Samuel Hirshman, Norwegian School of Economics, Norway
Nicholas Reinholtz, Leeds School of Business, University of Colorado Boulder, USA

Paper #3: Set Aside: Consumers Neglect Set Size when Evaluating Ranked Products

Uri Barnea, Bocconi School of Management, Bocconi University, Milan, Italy

Alice Moon, The Wharton School, University of Pennsylvania, USA

Jackie Silverman, Lerner College of Business, University of Delaware, USA

Paper #4: Cold, Rain, and Snow: Trouble for Star Ratings

Matt Meister, Leeds School of Business, University of Colorado Boulder, USA

Nicholas Reinholtz, Leeds School of Business, University of Colorado Boulder, USA

SESSION OVERVIEW

The widespread availability of online reviews and ratings has dramatically changed consumers' shopping experiences. In the pre-internet world, consumers mostly relied on advice from friends and family, marketing communications, or expert ratings (such as Consumer Reports) to make their decisions. Nowadays, over 90% of buyers rely on online user-generated content (in the form of ratings or text reviews) to decide whether to buy and what to buy (Qualtrics, 2020).

Following this revolution, a large literature in marketing has blossomed, discussing topics as diverse as the impact of ratings and reviews on sales (e.g., Chen et al., 2011; Chintagunta et al., 2010) and how this effect compares to other important variables such as price (e.g., Kübler et al., 2018); whether online ratings are reliable predictors of product quality (e.g., de Langhe et al., 2015; Simonson, 2016); what explains the “J-shaped” distribution of product ratings (e.g., Schoenmueller et al., 2020), or which insights firms can gain from online reviews (Tirunillai & Tellis, 2014)...

The present session continues this rich stream of research, with a particular focus on how consumers generate, interpret, and use ratings and reviews. The first paper explores how perceptions of product reviews (what people write about a product) are influenced by product ratings (the star-rating that people give to a product). It finds that reviews that are accompanied with a rating that closely agrees with the average rating are not only seen as more helpful, but also more likely to be searched and relied on. The second paper shows that consumers underestimate the informativeness of ratings that are negatively correlated with their preferences: They fail to realize that someone who systematically disagrees with them can provide more

informative ratings that someone who often agrees with them. The third paper demonstrates that consumers neglect the total set size when evaluating ranked products, such that they prefer products ranked from smaller sets (e.g., 2nd out of 8) over products ranked in larger sets (e.g., 4th out of 16). Finally, the fourth paper highlights the role of expectancy-disconfirmation in product ratings: Winter gear sold on colder days is rated lower than the same gear sold on warmer days.

Together, these four papers provide a broad perspective on user-generated product evaluations, covering issues as diverse as the inputs consumer use when generating ratings, the biases that might affect people's processing of rankings, the interplay between textual and numerical information in product reviews, or the way people learn from agreeing vs. disagreeing information. As such, we believe that this session would appeal to a large audience, and generate a lively discussion.

The Influence of Mean Product Ratings on Review Judgments and Search

EXTENDED ABSTRACT

People often see summary information about reviews for a product (e.g., mean rating, total number of reviews, distribution of reviews) before reading individual reviews. We manipulated this summary information to investigate its effects on judgments of how helpful a given review is. Only the deviation (i.e., absolute difference) between a given review and the mean product rating was significantly related to helpfulness judgments, so we will focus on this factor. We found that as reviews strayed further from the mean, participants rated them as less helpful. This was true for all products we tested. This relationship has implications for the reviews consumers choose to read and how they update their beliefs after review information.

Study 1 (N=3,603) used a 3(mean rating: 2,3,4) x 5(star rating of review: 1,2,3,4,5) between-subjects design. Participants saw one review and answered the following question: “How helpful would this review be when deciding whether to buy this product?” (1= Not helpful at all, 7= Very helpful). We ran the following OLS regression: $\text{Helpfulness}_i = \beta_0 + \beta_1 * \text{Absolute Deviation}_i + \epsilon_i$. There was a significant negative relationship between perceived helpfulness and absolute deviation from the mean ($\beta_1 = -0.4$; $t(3,601) = -14.0$; $p < .001$). This study introduces an important relationship between judgments of review helpfulness and how close the review is to the mean. In future studies we will explore how this relates to the reviews people choose to read and how they update their beliefs after reading a review.

An exploratory study not reported here suggested deviation from the mean can affect participants' attention to a review's text or star rating. Because these are the two cues that people can use to update their beliefs about a product after seeing the review, Study 2 asked participants which cue was more important to their helpfulness judgments. We also recorded how participants updated their beliefs about the product.

Study 2 (N=630) used a 3(mean rating: 2,3,4; between) x 5(star rating of review: 1,2,3,4,5; within) mixed design. Participants saw one review from each possible star rating in a random order. After each review, participants rated how helpful the review was using the same question as Study 1. Additionally, participants reported which

cue was more helpful (1 = definitely star rating, 7 = definitely text; counterbalanced) and how their attitude toward the product changed (-3 = much more negative, 0 = no change, 3 = much more positive). We ran the following mixed-effects regression: $\text{Helpfulness}_{ij} = \beta_0 + \eta_i + \beta_1 * \text{Absolute Deviation}_i + \varepsilon_{ij}$, where η_i is a participant-level random intercept. As in Study 1, there was a significant negative relationship between helpfulness and absolute deviation from the mean ($\beta_1 = -0.32$; $t(2,536) = -12.2$; $p < .001$). We ran the same regression with cue importance as the DV and found a negative (positive) relationship between the relative importance of the text (rating) and absolute deviation from the mean ($\beta_1 = -0.16$; $t(2,536) = -5.8$; $p < .001$). This finding suggests a reviewer's deviation from the mean can impact the parts of the review participants used when judging it, which could explain, in part, why deviation causes differences in helpfulness. We also ran the following linear mixed-effects regression: $\text{Attitude Change}_{ij} = \beta_0 + \eta_i + \beta_1 * \text{Absolute Deviation}_i + \beta_2 * \text{Star Rating}_{ij} + \beta_3 * \text{Absolute Deviation}_i * \text{Star Rating}_{ij} + \varepsilon_{ij}$. Importantly, we observe a significant interaction ($\beta_3 = -0.18$; $t(2,434) = -9.8$; $p < .001$) that implies participants updated their beliefs more extremely for reviews close to the mean. This is noteworthy because it runs counter to most normative theories of search, as reviews close to the mean do not offer as much new information as reviews further from the mean. However, it is consistent with confirmation bias. The results of Study 2 replicated the finding from Study 1 and offered further insight into the processes underlying participants' judgments of review helpfulness.

If the mean rating of a product causes people to have different expectations about what reviews will be more or less helpful, that could significantly impact the type of reviews consumers choose to search for. This study looked into the effect of mean product rating on review search.

Study 3 ($N=604$) used a 3(mean rating: 2,3,4; between) x 5(star rating of reviews that could be searched: 1,2,3,4,5; within) mixed design. Participants were required to search at least one review and then could terminate search at any time. The maximum number of reviews they could search is five (one from each star rating). We ran the following OLS regression: $\text{Mean Rating of Searched Reviews}_i = \beta_0 + \beta_1 * \text{Mean Product Rating}_i + \varepsilon_i$. There was a significant positive relationship between the mean product rating and the mean rating of reviews that were searched ($\beta_1 = 0.26$; $t(598) = 10.3$; $p < .001$). In other words, participants chose to read reviews that were close to the mean rating. Again, this is inconsistent with most normative of models of search, but is consistent with theories of positive test strategies, a form of confirmation bias. This is one way in which the effect of deviation from the mean on perceived review helpfulness can have a significant impact on consumer behavior.

In sum, we observed that participants' judgments of review helpfulness changed significantly when we manipulated the mean product rating. We found that this relationship may be due to differential sensitivity to the review text. Importantly, participants updated their attitudes toward the product to a greater degree if the review was highly consistent with (i.e., didn't vary much from) the mean. Mean ratings can also significantly alter search behavior, as participants tended to search for reviews that confirmed the mean. Our work suggests there may be confirmation bias in searching for, reacting to, and learning from product reviews. These findings augment the field's understanding of how people acquire and use product review information.

Would you Use a South-Pointing Compass? Consumers Underestimate the Informativeness of Systematic Disagreement

EXTENDED ABSTRACT

If you had to decide about watching a movie or not, buying a product or not, or voting for or against a particular policy, who would you rather contact for advice: a person you often agree with, or a person you systematically disagree with? In the context of these binary decisions, systematic disagreement is, normatively, highly informative: One simply needs to do the opposite of what the person recommends. However, we hypothesized that people would instead prefer to contact the person they often agree with. In support of this hypothesis, we provide three pre-registered experiments showing that consumers often fail to appreciate the informativeness of "south-pointing compasses": sources of information that have a strong negative correlation with their preferences. Instead, they prefer to rely on information that is weakly correlated with their own preferences, and therefore less informative.

In the first study ($N = 601$), respondents read a scenario. We told them that they frequently see movies with two friends, Nick and Sam. One of the two friends (e.g., Nick) often agrees with them, and the other (e.g., Sam) systematically disagrees with them. We manipulated, between subjects, three different ways of presenting this information. In the "Agree" condition, we told participants that "Over the last ten movies, they agreed with Nick 7 times, and agreed with Sam 1 time". In the "Disagree" condition, we told them that they "disagreed with Nick 3 times, and Sam 9 times". In the "Mixed" condition finally, we told them that they "agreed with Nick 7 times, and disagreed with Sam 9 times". After reading this scenario, we told participants that they were now debating seeing a movie that they didn't know anything about, but that Nick and Sam had seen. We asked them who they'd rather contact to make up their mind on a 5-point scale anchored at "Definitely Text Sam" and "Definitely Text Nick", with the midpoint being "Indifferent between Sam and Nick".

T-tests against the midpoint of the scale revealed that, in all conditions, participants preferred to contact "often-agreeing" Nick over "systematically-disagreeing" Sam (all $ps < .001$, all $ds > 0.30$). We did not observe a significant difference between the "Agree" and "Disagree" condition ($p = .087$, $d = .17$), but saw that participants were more likely to contact "systematically-disagreeing Sam" in the "Mixed" condition than in the other two ($p < .001$, $d = .60$). This first study confirms the basic intuition, and suggests that the framing of disagreeing information can mitigate, but not fully eliminate, the effect.

In the second study ($N = 203$), we asked people to rate their agreement, on a [-50; +50] slider scale, with ten political statements regarding the economy (e.g., "The Federal Government should regulate healthcare"). After each rating, we showed participants how six raters from two different groups (described as the "Orange Group" and the "Purple Group") rated the same statement. The ratings of one group were constructed to be weakly positively correlated with the participants' rating (i.e., taking the participants' rating, and adding a large amount of noise). The ratings of the other group were constructed to be strongly negatively correlated with the participants' rating (i.e., flipping the sign of the participant's rating, and adding a small amount of noise). This manipulation produced an average correlation of $r = -.97$ (vs. $r = .76$) for the "strongly negatively correlated" (vs. "weakly positively correlated") group.

After rating all statements, we told participants that there is a new measure about the economy on the ballot, that they don't know anything about this measure, but that they'd like to vote in a way that

aligns with their political preferences. We asked them would they'd prefer to contact on a five-point scale anchored at "Definitely the [strongly negatively correlated] group" and "Definitely the [weakly positively correlated] group", with the midpoint being "Indifferent between the two". Again, a t-test against the midpoint replicated the results of Study 1: People preferred to contact the positively correlated, but less informative, group ($p < .001$, $d = .98$).

In Study 3 ($N = 799$) uses a similar paradigm in the context of movie choices. Participants rated at least five, and up to ten, movies from a list, on a [0; 100] slider scale. After rating each movie, they learned how two other websites had rated the same movies. The reviews of one website were constructed to be strongly negatively correlated ($r = -.85$), and the other weakly positively correlated ($r = .49$), with the participants' ratings. After completing all ratings, participants were asked which website they'd visit to make a movie-going decision on a 5-point scale anchored at "Definitely the [strongly negatively correlated] website" and "Definitely the [weakly positively correlated] website". Unlike in Study 2 (which was a single-cell design), we orthogonally manipulated two between-subjects factors in Study 3. First, the type of decision: Participants were told that they would visit the websites to identify the movie that they want (vs. do not want) to see. Second, the timing at which this information was revealed: Before vs. after rating the movies.

A t-test against the midpoint replicated our key result: People preferred to visit the positively correlated, but less informative, website ($p < .001$, $d = .149$). Next, we tested if this effect was moderated by the type of decision, and by the timing at which the type of decision was revealed. We found neither main nor interaction effects of these two variables (all $ps > .132$), suggesting that people are unlikely to rely on negatively correlated ratings, even when they know that they will use this information to make a negative decision.

Set Aside: Consumers Neglect Set Size when Evaluating Ranked Products

EXTENDED ABSTRACT

Consumers often rely on outside sources of information when making product decisions. One such source is a ranked list: a set of products ordered based on their quality or popularity, as determined by outside experts, customers, or retailers. Indeed, ranked lists are pervasive in various domains, from music (Billboard 100) to educational institutions (US News & World Reports), and research suggests that ranking information is quite influential (e.g., Pope, 2009).

How do consumers use ranking information when evaluating products? In six pre-registered experiments, we find that participants prefer products ranked within smaller (versus larger) sets, even when percentile rankings are the same. For instance, consumers prefer a product ranked 2nd of 8 (smaller set) over one ranked 4th of 16 (larger set) even though both products are ranked at the 25th percentile. We propose this effect arises because consumers put more weight on the (absolute) numeric rank of a product relative to the number of products in the set.

In Experiment 1 ($N=318$, undergraduates), participants made an incentivized choice between two pens. Participants were told that one pen was ranked 2nd of 8 and the other 4th of 16 on their respective company websites. Supporting our prediction, more participants (63.4%) chose to receive the pen from the smaller set, $\chi^2(1, N=318)=22.79$, $p<.001$.

Experiment 2 ($N=453$, MTurk) served as a conservative test of our effect by asking participants to choose between a product from a smaller set with a worse percentile ranking and one from a larger set with a better percentile ranking. Participants imagined they were

shopping for a reusable water bottle, and had found two that they liked on separate websites. They chose between a bottle ranked 2nd of 8 (top 25%) and one ranked 4th of 20 (top 20%). Again, more participants (57.7%) chose the bottle from the smaller set, $\chi^2(1, N=453)=10.93$, $p<.001$.

Experiment 3 ($N=1002$, MTurk) examined the robustness of the effect across various ranked product pairs matched on percentile. Participants chose which water bottle they would buy from one of four choice-pairs: 4th of 20 or 10th of 50 (20%); 12th of 40 or 15th of 50 (30%); 6th of 16 or 12th of 32 (38%); 6th of 8 or 12th of 16 (75%). Across pairs, more participants (67.6%) chose the bottle from the smaller set, $\chi^2(1, N=1002)=123.66$, $p<.001$.

Why do people prefer products from smaller (vs. larger) sets? We propose that when evaluating ranked products, people rely more on information that they can use more easily (e.g., the "gist" of the stimulus: Reyna & Brainerd, 2008). Since numeric rank is easier to interpret and use than set size (which is only informative if used in conjunction with numeric rank to compute relative or percentile rankings), people place greater weight on (absolute) numeric rank, and fail to sufficiently consider set size. We tested this mechanism in Experiment 4 ($N=575$, undergraduates) by systematically manipulating numeric rank and set size across several stimuli. If people place greater weight on numeric rank, their evaluations should be more sensitive to differences in numeric rank (vs. set size).

Participants rated 16 pairs of shoes on a 0 (very bad) to 100 (very good) scale. Eight shoes varied numeric rank while keeping set size constant (e.g., 2nd of 8; 3rd of 8; 4th of 8, etc.), and eight shoes varied set size while keeping numeric rank constant (e.g., 2nd of 8; 2nd of 9; 2nd of 10, etc.). Better numeric rank (i.e., closer to 1st) was associated with more positive evaluations, $B=-5.80$, $SE=.19$, $t(574)=-30.49$, $p<.001$. Moreover, larger set size (i.e., from a set of more shoes) was associated with more positive evaluations, $B=2.40$, $SE=.13$, $t(574)=18.99$, $p<.001$. Critically, when comparing these effect sizes, we found that an improvement in numeric rank had a greater positive effect on evaluations than an increase in set size, Wald test: $\chi^2(1, N=595)=892$, $p<.001$.

Experiment 5 ($N=898$, MTurk) further tested our proposed mechanism by manipulating what information was highlighted. We hypothesized that highlighting the number of products that the focal product is better than would attenuate the effect, as it should lead people to weight set size more in evaluations. Conversely, highlighting the number of products that the focal product is worse than would amplify the effect by further emphasizing numeric rank.

Participants were randomly assigned to condition in a 2(Set: Smaller vs. Larger) X 3(Frame: Control vs. Better Than vs. Worse Than) between-subjects design. Participants evaluated a restaurant either ranked 2nd of 8 (smaller set) or 4th of 16 (larger set) on its neighborhood's Yelp list on three 7-point scales (e.g., how likely they were to eat there; $\alpha=.88$). In the control frame, participants simply read the ranking information and rated the restaurant. In the better-than frame, participants also read that "this pizzeria is ranked above [six/twelve] other restaurants on Yelp's list." In the worse-than frame, participants instead read that "this pizzeria is ranked behind [one/three] other restaurant(s) on Yelp's list." The control condition replicated previous studies: participants evaluated the smaller-set restaurant more positively ($M=5.89$, $SD=0.80$) than the one from the larger set ($M=5.57$, $SD=0.95$), $t(296)=3.09$, $p=.002$. Moreover, as predicted, Frame moderated this effect, $F(2, 892)=6.34$, $p=.002$. The numeric rank effect was eliminated in the better-than frame ($=5.75$, $SD=0.78$ vs. $=5.69$, $SD=0.86$), $t(296)=0.60$, $p=.547$, and amplified in the worse-than frame ($=5.92$, $SD=0.83$ vs. $=5.36$, $SD=1.01$), $t(300)=5.31$, $p<.001$.

Finally, Experiment 6 (N=1003, MTurk), investigated if highlighting products' percentile rankings reduces the weight given to numeric rank, thus attenuating the effect. Participants imagined choosing between a restaurant ranked 2nd of 8 and one ranked 4th of 16 from different neighborhood Yelp lists. Participants who simply read the rankings as in previous studies (control condition) again preferred the restaurant from the smaller set (7-point scale: $M=3.63$, $SD=1.45$), $t(650)=10.97$, $p<.001$. Importantly, participants who also read that both restaurants were "better than 75% of the other restaurants and worse than 25%" on their respective lists" (percent-salient condition) preferred the smaller-set restaurant to a lesser degree ($M=3.87$, $SD=1.43$), $t(648)=2.28$, $p=.023$ (independent t-test: $t(1298)=6.13$, $p<.001$).

Cold, Rain, and Snow: Trouble for Star Ratings

EXTENDED ABSTRACT

We investigate the impact of consumption context on star ratings in two studies. First, we consider a scenario in which a consumption-relevant contextual factor is visible to us and leads to a relatively straightforward prediction: How fluctuations in raters' recent local temperature affects ratings for cold-weather gear (e.g., winter jackets). Ideally, ratings would be independent of temperature — one consumer's temperature has no bearing on another's, and no bearing on the product's intrinsic quality. However, we predict that this form of context will affect experience, and ratings as a result. Consumers will feel warmer amidst unseasonably warm temperatures and feel colder amidst unseasonably cold temperatures. Then, because the purpose of cold-weather gear is to make consumers feel warm, consumers experiencing unseasonably cold temperatures will conclude the gear to be less effective, rating it more negatively as a result.

We support this argument with 22,027 web-scraped UGRs from REI.com, a popular online retailer. We merge these ratings with weather data to show that cold-weather gear (e.g., jackets, gloves, and mittens) receives lower average ratings when a rater consumes a product amidst unseasonably cold weather. Because temperature impacts experienced warmth but not the intrinsic quality of a product, we take this as evidence that ratings are impacted by idiosyncratic consumption contexts. Critically, these contextual influences cannot be easily observed — and therefore cannot be easily corrected for — by prospective consumers who use ratings.

In a follow-up experiment, we demonstrate that the noise created by consumption context can have a meaningful economic impact for sellers through its influence on consumers' search. Because sample sizes for product ratings are often small (de Langhe et al., 2015), noise in individual ratings is not necessarily washed out when they are aggregated into product averages. If a consumer then sorts product lists by average rating, the order in which they see products will be affected by noise in UGRs. This is the case in our data. Product rankings (in order of star rating) are significantly different when we control for observable temperature. We find evidence that this meaningfully alters consumers' search, consistent with related findings that consumers are more likely to consider alternatives that appear earlier on product pages (Ursu, 2018). As a result, some products benefit from the noise created by context, while others are harmed.

It is trivial for us to observe and potentially control for consumption context in our scenario. However, it is unlikely that prospective consumers would undertake such effort. Moreover, there are innumerable contextual factors that influence consumption experiences, which are likely more difficult to observe and understand than temperature affecting consumers' experience with cold-weather

gear. As a result, we think it unlikely that prospective consumers can be aware of the effects of consumption context on ratings.

Our data are 22,027 reviews scraped from REI.com for which we could parse a reviewer's location. We merged this set with National Centers for Environmental Information (NCEI) daily weather data for the last ten years from 1,283 weather stations in the US. We test our hypothesis with tightly controlled OLS regression. The dependent variable was the star rating (1-5, discrete) of a given review. Our independent variable of interest is the three-day average temperature at a reviewer's location on the day of their review and two before, which we predict to have a positive and significant slope (warmer days, higher ratings). We included fixed effects for location (closest weather station) to control for climate, month to control for general seasonality, and the interaction of location and month to control for local seasonality.

To address the possibility that colder than expected days lead to grumpier reviewers in general, we analyze all reviews for which we could merge weather data and include a dummy code for weather a review is for cold weather gear, which we interact with temperature. A significant interaction would suggest that ratings for cold weather gear are impacted by temperature differently than those for other products available on REI.com. Lastly, we cluster standard errors at the product level.

Consistent with our prediction, we find that colder temperatures lead to lower ratings for cold-weather gear ($B = 0.005$, $t(1, 14,190) = 2.209$, $p = 0.027$), evidence of the effect of expectation disconfirmation on star ratings. This coefficient is the simple effect of temperature on ratings of cold weather gear. An interaction between temperature and product type (cold weather vs other) indicates that temperature does not affect ratings for other products in the same way ($B = -0.006$, $t(1, 14,190) = -3.106$, $p = 0.002$). The simple effect of temperature on ratings of other gear was not significant ($B = -0.0006$, $t(1, 14,190) = -0.302$, $p = 0.763$).

We then use an online experiment to demonstrate the practical importance of this finding. Specifically, we asked 401 participants from Amazon Mechanical Turk (AMT) to view a list of 30 winter jackets and click on any that they would consider — mirroring real online search. Between-subjects, we varied whether these jackets were presented in order of their raw star ratings, or their weather-adjusted ratings (subtracting the effect of temperature from each rating, and then finding the mean). We constructed two of each list — one for men, one for women. We predicted that, consistent with Ursu (2018) and others, order would have a significant impact on search.

Results support this, as the (logged) position of a jacket in its list significantly predicted the probability of it being clicked ($B = -0.0297$, $t(11,570) = -5.144$, $p < 0.001$). Of the total 60 jackets shown, the correlation between clicks in the regular and re-ranked conditions is only 0.410. Importantly, this study illustrates the impact that not adjusting ratings for weather has on sellers in this marketplace, suggesting that some are being harmed by unluckily being rated during colder weather.

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Novel Insights on Prosocial Behaviors

Chair: Minzhe Xu, Iowa State University

Paper #1: To Donate or Not: Providing Fewer Options Increases Donation Amounts

Bowen Ruan, University of Iowa, USA
Minzhe Xu, Iowa State University, USA
Zoe Y. Lu, Tulane University, USA

Paper #2: When Donation Feels Like Volunteering, People Give: A “Donateer” Fundraising Method

Adelle X. Yang, National University of Singapore, Singapore
Oleg Urminsky, University of Chicago, USA

Paper #3: What is Impact? Inter-Temporal Trade-offs in Donation Behavior

Aparna Labroo, Northwestern University, USA
Uzma Khan, University of Miami, USA

Paper #4: Outcomes (vs. Impact) Framing Makes People More Likely to Reduce Background Risk in Prosocial Decisions

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Joshua Lewis, New York University, USA
Lucius Caviola, Harvard University, USA

SESSION OVERVIEW

Prosocial behaviors, such as donations, comprise a non-negligible part of a consumer’s life. In 2020, individuals in the US donated \$324.10 billion to charity (Philanthropy Network Greater Philadelphia, 2021). Despite that, charities can face fierce competition for donations, since there are over 1.5 million charities in the US (National Philanthropic Trust, 2019) and the proportion of households that donate has been decreasing (Hadero, 2021). Therefore, it is vital to understand how charities can nudge consumers to donate in general. Additionally, charities may face challenges when soliciting investments for specific targets. For example, consumers are less willing to donate to distant recipients because consumers expect their donations to benefit distant recipients less than close recipients (Touré-Tillery & Fishbach, 2017); preparedness programs may struggle to attract donations since the crises might not occur. The four papers in this session provide novel solutions to these issues, with significant practical implications for charitable organizations.

The first paper studies how restructuring the donation amount options can affect the average donation amount. Although the common practice is to provide people with multiple options (e.g., \$0, \$1, \$2, \$5, and \$10), five studies document a larger average donation amount (including zero-donations) in the absence of middle-ground options (e.g., \$1, \$2, \$5). The result indicates that people may perceive *whether* they donated as more self-diagnostic than *how much* they donated.

The second paper investigates how the framing of a donation behavior can affect the donation likelihood. Eight experiments find that people are more likely to donate when they are asked to dedicate the money earned from a future work session (i.e., “Donateer”) than to donate the same amount of money directly. The “donateer” method is effective because it transforms the donation behavior into a volunteering experience and strengthens the behavior’s association with positive emotions.

The third paper differentiates between urgency and magnitude, two types of impact that are important to prospective donors. Five studies demonstrate that when donating to local causes, people care more about urgent needs and prefer to make sooner-smaller donations, whereas when donating to global causes, people care more

about long-term needs and tend to make later-larger donations. The findings suggest that emphasizing later-larger options and long-term needs can encourage donations to distant beneficiaries.

The last paper distinguishes between two approaches to saving lives: people may invest in solutions that reduce background risk, which save more lives only if the risk is realized (e.g., pandemic preparedness), or people may invest in solutions that save fewer lives, but are guaranteed to do so (e.g., regular healthcare). Three experiments demonstrate a stronger preference for solutions that reduce background risk when people focus on the overall outcome (e.g., the worst-case mortality rate) rather than the solution’s impact (e.g., how many people will be saved).

Together, these papers shed new light on consumers’ donation decisions. We expect this session to attract a diverse audience because it connects the donation literature with extensive literatures on choice architecture, emotions, intertemporal preferences, and framing effects.

To Donate or Not: Providing Fewer Options Increases Donation Amounts

EXTENDED ABSTRACT

Fundraisers often provide multiple donation options to prospective donors and let them decide whether to donate and how much to donate. For example, in a recent fundraising campaign, PetSmart provided customers with the following donation options at check-out: “No thanks” (i.e., \$0), \$1, \$2, \$5, and \$10. It seems logical that providing more donation options gets *more people* to donate, but it remains an open question whether providing more donation options gets people to *donate more*.

In this research, we examine whether removing middle-ground options increases the average donation amount (including zero-donations). Specifically, we compare the conventional condition where potential donors are presented with more than two options (donating zero, X_1 , X_2 , ..., or X ; $0 < X_1 < X_2 < X$) with the experimental condition where potential donors are presented with only two options: donating zero or X . We propose and demonstrate that removing middle-ground options (e.g., X_1 , X_2) significantly increases the average donation amount.

Our proposition builds on the assumption of utility maximization: people aim to maximize the positive utility and minimize the negative utility of their donation decisions.

Donation decisions involve two steps: first, whether to donate; then, how much to donate (Dickert, Sagara, & Slovic, 2011). In the first stage, whether to donate depends on the difference between the positive utility of feeling good about oneself ($U_{1,\text{self-perception}}$) and the negative utility of pain of payment ($U_{1,\text{pain}}$) due to *donating* (Dickert et al., 2011; Kelting, Robinson, & Lutz, 2019). $U_{1,\text{self-perception}}$ depends on the act of donating but not on the donation amount (Dickert et al., 2011), while $U_{1,\text{pain}}$ depends on the donation amount. Without the middle-ground donation options (e.g., X_1), people in the experimental condition will anticipate more pain of payment from donating than people in the conventional condition (e.g., $U_{1,\text{pain},X,\text{experimental}} > U_{1,\text{pain},X_1,\text{conventional}}$). *Ceteris paribus*, people in the experimental condition will be less likely to donate than people in the conventional condition.

In the second stage, how much to donate depends on the difference between the positive utility of resolving empathy (i.e., re-

solving one's worry about the victims; $U_{2,empathy}$) and the negative utility of pain of payment ($U_{2,pain}$) due to donating a specific amount. Previous research on psychic numbing and scope neglect (Slovic, 2010) suggests that $U_{2,empathy}$ depends on the identifiability of the victims but not the donation amount. However, the pain of payment is contingent on the donation amount. Faced with several middle-ground donation options, people in the conventional condition should anticipate more pain of payment for the larger donation options than for the smaller options (e.g., $U_{2,pain,X,conventional} > U_{2,pain,X1,conventional}$). *Ceteris paribus*, people in the conventional condition will be less likely to donate X than to donate a smaller amount (e.g., X_1).

Notably, people in the experimental condition evaluate the pain of donating X in a single-evaluation mode, whereas people in the conventional condition (where X_1, X_2 are explicitly given) evaluate the pain of donating X in a joint-evaluation mode. According to evaluability theory (Hsee and Zhang 2010), people in the experimental condition should be less sensitive to the donation amount than people in the conventional condition (e.g., $U_{1,pain,X,experimental} - U_{1,pain,X1,conventional} < U_{2,pain,X,conventional} - U_{2,pain,X1,conventional}$).

To summarize, people in the experimental condition will be less likely to donate than people in the conventional condition in the first stage, but to a lesser extent than people in the conventional condition will be less likely to donate X than to donate X_1 or X_2 in the second stage. As a result, we predict that the experimental condition will achieve a larger average donation amount than the conventional condition will.

Five studies tested our proposition with real donation decisions. Studies 1–3 invited college students to write slogans for endangered animals. Study 1 ($N=83$) showed initial evidence of our effect: on average participant helped significantly more animals if provided with only two options (refuse to help (i.e., 0) or write slogans for 10 animals; $M_{experimental}=7.35$) than if provided with more options (0, 1, 2, ..., 10; $M_{conventional}=5.10$; $F(1,81)=6.72, p=.011$). Studies 2 and 3 replicated the effect and ruled out ease of choice and the compromise effect as alternative explanations.

Studies 4 and 5 tested two boundary conditions. Study 4 ($N=395$) found that the upper bound of the choice set (i.e., X) moderated the effect. This study invited participants to help hungry people by answering questions on Freerice.com; participants chose from either two options (refuse to help (i.e., 0) or answer X questions) or multiple options (answer 0, 1, 2, ..., or X questions). We orthogonally manipulated the magnitude of X (24 vs. 240). We found a significant interaction effect ($F(1,391)=4.86, p=.028$): when X was 24, providing fewer options increased the average number of questions answered (standardized $M_{experimental,24}=.35, M_{conventional,24}=.20$; $F(1,391)=7.28, p=.007$), whereas when X was 240, providing fewer options did not significantly affect the average number of questions answered ($M_{experimental,240}=.01, M_{conventional,240}=.03$; $F(1,391)=.18, p=.670$).

Study 5 ($N=272$) found that the effect of providing fewer options was stronger when the zero option was communicated in a harsh (vs. soft) frame. This study invited students to donate money to a university hospital and offered either two options (\$0 or \$5) or multiple options (donate \$0, \$1, ..., or \$5). We orthogonally manipulated the framing of the zero option: "I refuse to help" (harsh-framing) or "Maybe later" (soft-framing). We found a significant interaction effect ($F(1,268)=4.07, p=.045$): providing two (vs. multiple) options increased the average donation amount in the harsh-framing condition ($M_{experimental,harsh}=3.16, M_{conventional,harsh}=2.10$; $F(1,268)=6.36, p=.012$) but not in the soft-framing condition ($M_{experimental,soft}=2.72, M_{conventional,soft}=2.86$; $F(1,268)=.10, p=.747$).

Theoretically, this research advances our understanding of how choice architecture can impact donation behaviors. Practically, this research yields implications in the contexts of not only donations but also shopping (e.g., providing fewer options for the purchase quantity may increase the average purchase quantity).

When Donation Feels Like Volunteering, People Give: A "Donateer" Fundraising Method

EXTENDED ABSTRACT

Helping others can bring people joy. The positive emotions associated with specific prosocial actions influence the propensity of those actions (Aknin et al., 2012; Cryder et al., 2017; Gesiarz & Crockett, 2015). In particular, people often prefer volunteering—which generates more positive emotions—to donating, even when donating would have a bigger impact (Brown et al., 2019; Handy & Katz, 2008). Drawing on these insights, we propose a fundraising method that restructures a donation as a "donateer" experience: asking prospective donors to dedicate income from a future session of regular work as a monetary gift to a charity. We propose that this method can heighten willingness to give because it evokes more positive emotions, those which are typically associated with a volunteering experience. In other words, we propose that the donateer method can help transfer at least some of the positive emotions associated with volunteering to a donation opportunity.

We test these proposals in eight preregistered experiments ($N = 4,586$). We first tested the proposed donateer effect in Study 1A with a hypothetical choice ($N = 220$, Prolific). We first obtained information about participants' income on the Prolific platform, and then used this income information to customize the donation appeals so that the requested donation amount was explicitly held constant across the types of appeals. Participants read about a charity campaign to help households in need during the pandemic. Participants were randomly assigned to one of the two appeal types: direct-donation vs. donateer. In the direct-donation condition, participants were asked if they would pledge some earnings to the charitable cause: "We ask that you consider donating two hours' worth of the income that you earn on Prolific to the charity, that is to make a donation of [value displayed through piped text]." In the donateer condition, participants were instead asked if they would pledge some of their time working to the charitable cause, so that their resulting earnings would be donated: "We ask that you consider dedicating two hours of your work on Prolific to the charity, that is to specify two hours of your upcoming work to earn [value displayed through piped text] to be donated." Participants in the donateer conditions were more willing to donate than participants in the direct-donation condition ($M = 4.03$ vs. 3.41, $t(218) = 2.57, p = .011, d = .49$).

We replicated this effect in Study 1B ($N = 589$ undergrads) with an incentivized choice and a real charity donation task (64.4% vs. 55% donated, $b = .39, Wald = 5.39, p = .020$). We also examined the robustness of the effect to contextual factors in Studies 2A–2C ($N = 476, 553, 537$). These studies provide consistent support for the donateer effect ($ps < .001$). Moreover, in all these studies, the positive emotions associated with the donateer opportunity (vs. the direct-donation opportunity) mediated the effect (indirect effects $> .17$).

Next, we examined theoretical moderators of the donateer effect: the emotional appeal of the charity target (Study 3, $N = 807$), the effect's sensitivity to current moral self-concept (Study 4, $N = 656$), and the timing of the requested work being from the past versus the future (Study 5, $N = 748$). These moderators help disentangle the emotion mechanism from alternative explanations, such as potentially different charity perceptions, mindsets (e.g., Liu & Aaker,

2008), or mental accounts (e.g., Soster et al., 2010) being induced by the donatee versus direct-donation appeals.

In Study 3, the effect was mitigated when the charity target (attractive animals) already had strong emotional appeal irrespective of the donation request type (either direct-donation or donatee), and was replicated when the charity target (neutral animals) did not have particularly strong emotional appeal (interaction $F(1, 805) = 4.75, p = .030$).

In Study 4, the effect was replicated when participants reflected on a positive moral self-concept ($t(335) = 4.00, p < .001$), but not when participants reflected on a negative moral self-concept ($t(317) = .86, p = .390$; interaction $F(1, 655) = 4.51, p = .034$). These results are consistent with a habitual interpretation of the emotion mechanism, while inconsistent with goal-directed interpretations of the emotion mechanism including both a mood-regulation account and a self-signaling account (e.g., Larsen, 2000; Sachdeva et al., 2009).

Finally, in Study 5, the effect was replicated when the requested donatee work was a future experience ($b = .45, Wald = 4.12, p = .042$), and was mitigated when the requested donatee work was a past experience ($b = -.26, Wald = 1.16, p = .282$; interaction $b = -.71, Wald = 4.69, p = .030$). In other words, the donatee method's effectiveness hinges on reframing a future work experience to be associated with charitable outcomes, not past work that has already taken place.

Together, these boundary conditions critically rule out alternative accounts (e.g., different mindsets, mental accounts, charity perceptions), as well as explicit goal-directed interpretations of the emotion mechanism, such as mood regulation or image signaling, as primary explanations to the documented effect. Instead, these results congruently support a habitual interpretation of the emotion mechanism. Overall, these findings shed new light on how emotional rewards (e.g., "warm glow") motivate donations and offers a novel method that may benefit both charities and donors.

What is Impact? Inter-Temporal Trade-offs in Donation Behavior

EXTENDED ABSTRACT

Most people want to make a positive difference in the world. Research shows that people donate more when the cause is near versus distant (Touré-Tillery & Fishbach, 2017). One reason for such a preference is that the same amount is seen as having a higher impact when given to a spatially, or even psychologically, near than distant cause. However, some of the most pressing causes can be distant, for example, the spread of COVID-19 in the underdeveloped countries during the pandemic, and the current war and resulting humanitarian crises in Ukraine. So, how to motivate people to engage with, and give to, such distant causes? Research on this question is sparse. In one recent article, Xu et al. (2020) show that donations to distant causes increase when people's moral goals are made accessible. We contribute to this limited research by distinguishing between two different kinds of impact and putting forward an inter-temporal framework to explain peoples' preference for giving to near versus far causes.

We posit that two key aspects underlie consumers' perception of impact—immediacy (i.e., urgency of the need) and magnitude (i.e., size of the donation). This distinction has important implications with respect to consumers' temporal donation preferences. Proximal causes may be perceived as more urgent and thus assessment of impact may be based on how quickly one can help. Instead, distant causes may be perceived as more extensive and thus assessment of impact may be based on how much one can help. We, therefore, pre-

dict that people will prefer to donate smaller-sooner amounts to close causes but larger-later amounts to distant causes. Furthermore, holding magnitude constant, people should demonstrate a greater preference to donate to a close (distant) cause when the donation serves immediate (distant) needs of recipients.

We test our theory in five preregistered studies. Study 1 ($N=301$) tested whether consumers prefer to give smaller-sooner (larger-later) donations to close (distant) charities. Participants read an appeal from a charity addressing homelessness and food insecurity in either local community (spatially close), nationally (psychologically close), or globally. Participants then made five choices indicating preference to donate \$100 now or \$100 in 1-year, \$100 now or \$125 in 1-year, \$100 now or \$150 in 1-year, \$100 now or \$175 in 1-year, and \$100 now or \$200 in 1-year. Participants also indicated preference to make an urgent over a larger impact (1=urgent to 7=larger). Regression analyses revealed that participants donating to global charities tended to make larger later donations ($M=1.97$) than those donating to national ($M=1.59$) or local ($M=1.46$) charities. Furthermore, participants donating to global charities indicated a higher preference for supporting magnitude over urgency ($M=3.47$; $b=.549, SE=.215, t(198)=2.55, p=.011$) compared to those donating to national ($M=3.17$) or local ($M=2.92$) charities.

Study 2 ($N=251$) tested whether people prefer to make urgent (long-term) impact for close (distant) causes, using hurricane relief and a sample of people in hurricane prone areas. Participants read an appeal from either a local or global charity and made five choices deciding how much of \$10, \$50, \$100, \$150, and \$200 they would allocate to Charity A that looks after immediate needs and Charity B that looks after long-term needs of hurricane victims. A repeated-measures ANOVA revealed that for lower magnitudes participants donated higher proportions to charity B ($M=.67$ vs. $M=.62$; $F(4, 996)=12.01, p<.001$). This effect is consistent with participants wanting to donate more to long-term needs when magnitudes are small because a larger proportion of money may be needed to make impact, but this proportion falls as magnitudes become large, and differences in allocations become less granular. Furthermore, participants allocated a larger proportion of money to long-term needs of global ($M=.66$) compared to local ($M=.61$) charities ($F(1, 249)=3.17, p=.077$).

Studies 3-5 shed further light on the process through moderation. Study 3 ($N=221$) tested whether participants seek to make magnitude impact to global charities and thus their goal is to do good (vs. feel good). Everyone considered donating in the present but they decided whether to serve urgent or long-term needs of recipients. We expected that people will donate to long-term global causes to do good but will shift preferences toward urgent causes when they are primed to feel good. Participants read a charity appeal highlighting how they could do good or feel good by donating. They then decided whether to donate to Charity A that served urgent needs or to Charity B that served long-term needs of African famine victims. As expected, a larger percentage chose to donate to Charity B when they were primed with doing ($M=.58$) versus feeling ($M=.45$) good ($F(1, 219)=3.31, p=.07$).

Study 4 ($N=577$) was like Study 3, except participants considered a distant charity serving flooding victims in Thailand, and for half of the participants we satiated their need to do good by asking them to recall a time when they recently did good. As expected, participants reminded to do good (vs. feel good) picked the charity that served long-term needs more often. However, this effect was attenuated among participants who recalled doing good through a recent donation.

Study 5 (N=304, preregistered) focused on a close charity. Participants read an appeal to donate to a local cause in either a control, feel-good, or do-good condition. They then made 9 choices whether to donate a smaller-sooner or a larger-later amount. We predicted that participants would make fewer larger-later choices in the control condition because donating to urgent causes feels good unless they are reminded to do good which will shift preferences to making impact through magnitude. As predicted, people in the baseline and the feel-good conditions made fewer larger-later donation choices than participants in the do-good condition.

We add to prior research by distinguishing between two important theoretical components of impact and by showing how they influence peoples' temporal preferences in prosocial giving. Our research suggests that encouraging a precommitment to donate a larger-later amount while highlighting the future (vs. immediate) needs of distant recipients could increase donations to distant causes.

Outcomes (vs. Impact) Framing Makes People More Likely to Reduce Background Risk in Prosocial Decisions

EXTENDED ABSTRACT

While many prosocial decisions have guaranteed benefits, others have benefits that are only realized under certain states of the world—like when some background risk materializes. For example, while investing in regular healthcare saves lives no matter what, investing in pandemic preparedness only saves lives if there is a pandemic. Because of limited resources, people may have to choose between doing a small amount of good for sure and doing potentially much more good but only in the event that something bad happens. Importantly, both options can be framed in one of two ways. Imagine two viruses. One of them is predictable and will kill 50 people for sure. The other is uncertain and has a 50% chance of killing 100 people and a 50% chance of killing nobody. Would you develop a cure that guarantees no-one dies from the predictable virus, or one that guarantees no-one dies from the uncertain virus? When both options are described in terms of their impact (the number of people saved), the cure for the uncertain virus seems riskier; it saves 100 people if the uncertain virus is deadly but 0 people if it is not, while the cure for the predictable virus always saves 50 people. However, when both options are described in terms of their potential death tolls, then developing cure for the uncertain virus is *less* risky; if it is developed, only the 50 people affected by the predictable virus will die because all potential uncertain virus victims are protected, whereas if the cure for the predictable virus is developed, either 0 or 100 people will die depending on whether the uncertain virus is deadly. Across three preregistered studies (N = 3,310), we find that when people are prompted to consider the overall outcomes in the world (vs. impact), they are more likely to reduce background risk—choosing the option that saves more people, contingent on a bad event.

In Study 1 (N = 394), participants chose between developing a cure that could save 50 people from a predictable virus and developing a cure that could save 100 people from an uncertain virus, which had a 50% chance to be deadly. In the Impact condition, the possible consequences of the decision were described in terms of the people each cure could save (e.g., the cure for the uncertain virus saves 100 people if the uncertain virus is deadly but saves 0 people if it is not deadly). In the Outcomes condition, they were described in terms of the number of people (out of the 200 across both towns) that would survive (e.g., if the cure for the uncertain virus is developed, 150 people survive overall whether or not the uncertain virus is deadly). As expected, the framing of the options affected people's choices: whereas only 37% in the Impact condition chose to develop cure for

the uncertain virus, 56% did so in the Outcomes condition, $\chi^2(1, N = 394) = 13.86, p < .001$.

Study 2 (N = 992) extended the framing effect to more diverse scenarios. Participants were randomly assigned to see either Impact information or Outcomes information. They read about three scenarios in a random order, and made a decision in each of them: Virus (similar to the scenario used in Study 1), Fire (saving 2 people trapped in a burning building for sure or saving 8 people from a 50% chance of death), and Death (preventing the deaths of 10 accident patients for sure or preventing the deaths of 500 people from a virus with a 50% chance of being lethal). Our preregistered logit model reveals a significant effect of framing, $p < .001$. Participants in the Outcomes condition were more likely to reduce background risk than participants in the Impact condition, and this was true in each of the Virus (41% vs. 33%, $p = .007$), Fire (48% vs. 42%, $p = .065$), and Death (62% vs. 54%, $p = .007$) scenarios. This study also included a 2-item baseline risk attitude measure as an exploratory moderator. A logit model reveals a significant interaction between Outcomes framing and risk attitude, $p < .001$. In the Impact condition, risk-averse people were less likely to reduce background risk, $p < .001$. However, in the Outcomes condition, risk-averse people were *more* likely to reduce background risk, $p = .026$. Interestingly, overall there was no main effect of risk attitude, $p = .323$. This suggests that people's risk aversion can be leveraged to nudge them to reduce background risk, if the options are described in terms of outcomes rather than impact.

Study 3 (N = 1,924 across three sample populations) aimed to test a manipulation that, rather than explicitly giving participants information in different frames, nudged them to reframe the information themselves. Participants chose between saving either 10 people for sure or 100 people from a 10% chance of death. In the Impact condition, participants were asked to consider “what YOU could achieve depending on your choice”. In the Outcomes condition, participants were asked to consider “how good or bad the WORLD AS A WHOLE could be depending on your choice”. Among undergraduate students, participants in the Outcomes condition were more likely to reduce background risk (18%) than those in the Impact condition (10%), $\chi^2(1, N = 560) = 8.58, p = .003$. We also tested the manipulation among Effective Altruists—a community aiming to help others as much as possible using reason and evidence. Even among this community that prizes rationality, the manipulation still had an effect: those in the Outcomes condition were more likely to reduce background risk (36%) than those in the Impact condition (19%), $\chi^2(1, N = 366) = 12.68, p < .001$. Interestingly, among Prolific participants, there was no such framing effect, $\chi^2(1, N = 998) = 0.09, p = .759$. This result is consistent with an account based on risk attitudes, which would predict that any effect would require sufficient numeracy to mentally reframe the options as suggested by the manipulation.

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Consumer Interdependence: Decision Making With and For Others

Chairs: Ms. Amanda Geiser, University of California, Berkeley, USA

Prof. Rachel Gershon, University of California San Diego, USA

Ms. Emily Powell, New York University Stern School of Business, USA

Paper #1: Friends with Health Benefits: A Field Experiment

Prof. Rachel Gershon, University of California San Diego, USA

Prof. Cynthia Cryder, Washington University in St. Louis, USA

Prof. Katherine Milkman, The Wharton School, University of Pennsylvania, USA

Paper #2: "I'll do it if you do": Conditional Cooperation, Shared Agency, and Persuasion

Ms. Amanda Geiser, University of California, Berkeley, USA

Prof. Jonathan Berman, London Business School, UK

Paper #3: On Paying it Forward: How Norms and Misperceptions Break Chains of Giving

Ms. Emily Powell, New York University Stern School of Business, USA

Prof. Minah Jung, New York University Stern School of Business, USA

Prof. Leif Nelson, University of California, Berkeley, USA

SESSION OVERVIEW

Consumers are often influenced by the behavior or presence of others. For instance, people are more likely to donate to charity, vote, and conserve energy when they learn that others have done so (Frey & Meier, 2004; Gerber & Rogers, 2009; Allcott, 2011), and behave differently when others are watching (Ariely, Bracha, & Meier, 2009; Gerber, Green, & Larimer, 2008). However, in many consumer contexts, people do not just respond passively to information about others; they also make decisions both *with* and *for* others (Bagozzi, 2000; Liu, Dallas, & Fitzsimons, 2019). The presentations in this session explore consumer interdependence. How do people behave when their outcomes are tied together with the outcomes of others? When do social expectations interfere with desirable behavior, and how can such barriers be overcome?

Gershon, Cryder, & Milkman investigate the impact of social incentives on goal pursuit in a large-scale field experiment. They find that people visit the gym more often when they are paid to go at the same time as a friend compared to when they are paid to go alone, despite the fact that visiting the gym with a friend involves additional coordination costs. Social incentives not only make gym-goers feel more accountable for exercising, but also increase feelings of closeness between partners.

Geiser & Berman show that making individuals' outcomes contingent on each other also works as an interpersonal persuasion tactic. Specifically, they demonstrate that when trying to persuade someone else to engage in a behavior, it is often more effective to make an explicit request to conditionally cooperate (e.g., "I'll donate if you do") than to lead by example (e.g., "I'm going to donate"). By linking people's decisions together, requests to conditionally cooperate make people more sensitive to others' preferences and foster social connection.

Powell, Jung, & Nelson investigate the influence of social expectations on pay-it-forward chains of giving. In a series of field and lab experiments, they find that such chains often break down because givers are uncertain about how best to help others and how their kindness impacts recipients' happiness. Reducing this uncertainty, for example by providing specific ranges of giving or limiting

givers' means of being kind, can help sustain pay-it-forward chains of giving.

Together, these papers document several ways in which the social environment helps and hinders desirable behavior, and identify novel consequences of linking consumers' behavior together. Given that many real-world decisions are made interdependently, understanding how to leverage the social environment to improve consumer decision making is crucial.

Friends with Health Benefits: A Field Experiment

EXTENDED ABSTRACT

We study the benefits of incentivizing tandem goal pursuit. Specifically, in a large field experiment, we pay some participants for completing an individual goal only if they complete it concurrently with a friend, offering them a conditional "tandem" reward. We compare their behavior to that of participants who also identified a friend with whom they could concurrently complete the individual goal and who are offered the same reward for completing it; however, their reward is unconditional on their friend's actions (a "standard" reward). We propose that even though it is objectively easier to complete the goal alone, and even though participants earning the standard incentive *can choose* to complete the goal with their friend, adding a social requirement has the potential to increase follow-through by increasing accountability and making goal pursuit more enjoyable.

Notably, adding a social engagement requirement to goal completion adds costs. People who only receive incentives when they complete a goal in tandem must work harder to coordinate schedules and can only obtain their reward if *two* people follow through. However, we propose that tandem goal pursuit offers benefits that outweigh these costs. First, being required to pursue a goal alongside a to earn incentives may ensure that someone is holding you accountable for success. When individuals' behavior is known to others, they are typically driven by the desire to be viewed positively (Bénabou and Tirole 2006; Ariely, Bracha, and Meier 2009; Gerber, Green, and Larimer 2008). In the case of tandem rewards, they likely feel additional accountability, because people are generally motivated to help others achieve good outcomes (Charness and Rabin 2002; Fehr and Fischbacher 2002, 2003) and avoid bad outcomes (Perera, Canic, and Ludvig 2016; Volz et al. 2017).

Another hypothesized benefit of tandem goal pursuit is that it may foster greater enjoyment of the goal process. Enjoyment is important for goal pursuit because most goals require sacrificing pleasure now and exerting effort to gain rewards in the future (Milkman, Rogers, and Bazerman 2008). Past work has demonstrated benefits of "temptation bundling," or combining enjoyable activities with difficult but desirable activities such as exercising (Milkman, Minson, and Volpp 2014; Kirgios et al. 2020; Lieberman, Morales, and Amir 2021). Goal persistence increases when individual focus on immediate enjoyment (rather than long-term benefits) of a goal (Woolley and Fishbach 2016, 2017) and individuals tend to find social engagement fun and rewarding (Lucas et al. 2000). Therefore, adding a social component to an effortful goal process might have the benefit of making the quest more enjoyable.

To test our hypothesis that the motivational benefits of tandem engagement in goal pursuit can outweigh the costs, we conducted a large, preregistered field experiment with a university gym that attempted to boost participants' exercise (preregistration, anonymized data, and recruitment materials are all available on OSF at <https://bit.ly/3FaoE8X>). While considerable existing research has established that incentives increase exercise (Charness and Gneezy 2009; Royer, Stehr, and Sydnor 2015; Carrera et al. 2020; Mitchell et al. 2013), we study a costless method for structuring these incentives to enhance their potential for motivating individuals. We recruited participants to join our 4-week-long study with a friend and then randomized the friend pairs to either earn \$1 each day they exercised regardless of when and with whom they visited the gym (the "standard reward" condition) or \$1 each only on the days the friend pairs exercised together (the "tandem reward" condition). As a conservative approach, we added a scheduling requirement – participants in both conditions were required to schedule their exercise at least one hour ahead of time. This was meant to hold constant across conditions any potential benefits of scheduling workouts ahead of time, because scheduling is necessary when coordinating as a pair but not necessary when exercising alone.

We recruited 774 participants (387 buddy pairs; 60.59% female) with an average of 0.74 gym visits per week in the 10 weeks prior to the intervention period. Participants completed 20.51% of all gym visits during this pre-intervention period in tandem with their gym buddy (meaning both participants entered the gym during the same 30-minute interval). We found no significant differences between conditions in participant characteristics measured before the intervention.

During the intervention period, participants across conditions visited the gym an average of 1.07 times per week (0.32 more visits per week, on average, than they made in the ten weeks pre-intervention). Participants increased their gym visits in the *standard-reward condition* compared to baseline during the intervention, but as predicted, they increased their gym attendance even more in the *tandem-reward condition*. Overall, participants in the *tandem-reward condition* made 35% more gym visits than participants in the *standard-reward condition*, visiting the gym a regression-estimated 0.22 more times per week ($SE = .099, p = .026$).

Our findings also suggest that individuals do not fully recognize the benefits of tandem goal pursuit on their own. Although all study participants signed up for our experiment with a gym buddy, those paid to exercise in tandem visited the gym with their partner at a greater rate (48.31%), than those in the standard reward condition (26.52%). Data from a survey of field study participants further suggests that when financial incentives were conditional on coordinating exercise with a gym buddy, participants felt more accountable for working out than when they were offered financial incentives alone. Further, participants in the *tandem-reward condition* enjoyed exercise more and felt closer to their gym buddy following our study.

This work highlights an essentially costless approach to boosting the impact of incentives, while also advancing our understanding of the determinants of behavior change, underscoring the importance of incorporating social motives into economic models of behavior (Charness and Rabin 2002; Dawes and Thaler 1988). Our findings add to a growing literature about the power of social influence and contribute to accumulating evidence that making goal pursuit more enjoyable can add value as can increasing individuals' accountability to one another.

"I'll do it if you do": Conditional Cooperation, Shared Agency, and Persuasion

EXTENDED ABSTRACT

Individuals often seek to persuade others to engage in behaviors that they also want to engage in. For instance, a parent who is interested in donating money to their local PTA may seek to persuade others to donate, and someone who wants to invest in a new local restaurant may try to convince their friends to invest too.

Theories of social influence argue that one particularly effective persuasion tactic is to lead by example (Cialdini & Goldstein, 2004; Goldstein et al., 2008; Schultz et al., 2007). By engaging in the behavior themselves first (e.g., donating or investing one's money), an initiator acts as a model and can persuade others to engage in a behavior by showing that the behavior is normative.

However, across six preregistered studies, we demonstrate that inviting others to conditionally cooperate (e.g., "I'll do X if you do") is a more effective persuasion tactic than leading by example (e.g., "I'm going to do X"). We argue that requests to conditionally cooperate are persuasive because they turn an individual decision into one involving *shared agency*: for either party to engage in the behavior, both parties must agree to do so. In contrast to individuals acting independently, individuals who share decision-making agency have a direct impact on each other's outcomes. We find that when people are invited to conditionally cooperate, they are more likely to consider the initiator's preferences, and thus more likely to select the option they believe is preferred by the initiator. Further, we find that requests to conditionally cooperate foster social connection and thus they are viewed as a means to bond with an initiator.

In studies 1-4, participants imagined that another person (the initiator) asks them (the responder) to engage in a particular behavior (e.g., "Do you want to buy a lottery ticket?"). In the *social proof* condition, the initiator states that they have already decided to engage in the behavior before asking the responder if they will (e.g., "I'm going to buy one!"). In the *conditional cooperation* condition, the initiator instead makes an explicit request to conditionally cooperate (e.g., "I'll buy one if you do!").

Study 1 (N=190) finds that requests to conditionally cooperate are more effective at persuading people to make risky financial decisions (e.g., gambles, investments) than social proof. Across three scenarios, participants were more persuaded to take a risk in the conditional cooperation condition (64%) relative to the social proof condition (52%), $p = .004$. Study 2 (N=765) further establishes the robustness of this effect by showing that requests to conditionally cooperate were more persuasive than social proof for decisions involving both virtues and vices ($ps < .04$).

Next, study 3 (N = 543) shows that conditional cooperation requests can backfire when responders are less motivated to bond with the initiator. Specifically, participants imagined running into a friend's boyfriend, who invites them to buy a doughnut. In the low bonding motivation condition, they additionally learn that their friend is about to end the relationship. Requests to conditionally cooperate were persuasive when participants were highly motivated to bond with the initiator ($p = .025$), but this effect reversed when participants were less motivated to bond ($p = .01$), producing a significant interaction ($p < .001$). This suggests that conditional cooperation requests are persuasive in part because they are seen as an invitation for social connection.

Study 4 (N=580) shows that requests to conditionally cooperate increase sensitivity towards the initiator's welfare. When an initiator requests to conditionally cooperate, responders have control over the initiator's outcome. Thus, we hypothesized that responders would be

especially reluctant to agree to an activity that could be harmful to the initiator when invited to conditionally cooperate. Indeed, when potential harm to the initiator was low, requests to conditionally cooperate (73%) were more effective at inducing behavior than social proof (59%; $p < .001$). However, when potential harm was greater, the effect reversed: participants were less likely to engage in the behavior in the conditional cooperation condition, when their actions directly affected their partner (7%) compared to the social proof condition, when their actions would not affect their partner's behavior (21%; $p < .001$), producing a significant interaction ($p < .001$).

We argue that conditional cooperation is persuasive because it makes responders more attuned to the consequences of their actions for the initiator. In studies 5 and 6, we test this directly by removing the element of direct communication between interaction partners and varying whether participants know which option the initiator prefers.

In study 5 ($N=854$), participants chose whether to donate a bonus payment to charity or keep it for themselves, whereas in study 6 ($N=842$), they chose between a risky and a sure bonus payment. In both studies, they were first told that they would be paired with another participant in the study. They were then randomly assigned to one of three between-subjects conditions: a social proof condition (in which they learned that their partner had chosen the donation [risky bonus] option) and one of two conditional cooperation conditions, in which they would only receive the donation [risky bonus] option if both they and their partner chose this option. In the conditional unknown condition, they were not informed of their partner's decision, while in the conditional known condition, they were informed that their partner had already selected the donation [risky bonus] option. Across both studies, participants in the conditional known condition (S5: 68%; S6: 68%) were substantially more likely to choose the donation [risky bonus] option than those in the social proof condition (S5: 50%; S6: 54%) and the conditional unknown condition (S5: 51%; S6: 51%), $ps < .001$. This suggests that a crucial element of the persuasiveness of requests to conditionally cooperate is knowing the initiator's preferences.

This research demonstrates that requesting to conditionally cooperate is an effective persuasion tactic. We propose that conditional cooperation requests are effective because they link people's behavior together, evoking a sense of *shared agency*. When individuals share decision-making agency, they are more likely to engage in a given behavior both because they hope to bond with an initiator and because they want to satisfy the initiator's preferences.

On Paying it Forward: How Norms and Misperceptions Break Chains of Giving

EXTENDED ABSTRACT

Doing something nice for others makes people happy (Andreoni 1989), sometimes even happier than doing something nice for themselves (Dunn, et al. 2008). Of course, it also feels good to receive kindness from others (Pressman, et al. 2015). If it feels good to both give and receive kindness, one might expect chains of giving to be frequent and persistent. But, in reality they are rare and surprising.

We use the term "pay-it-forward" to denote any act of kindness in which the recipient has the opportunity to pass the kindness on to another person, but cannot directly reciprocate their benefactor (Gray, et al. 2014). One potential reason for the breakdown in chains of giving, despite theoretical predictions, is that givers are often uncertain about how best to help others (e.g., Flynn and Brockner 2003; Kumar and Epley 2018). In four preregistered studies using real giving behavior, we show that givers are uncertain about how

best to help others and this can lead them to choose not to give. We then show how contextual features can enhance chains of giving by reducing this uncertainty.

We first conducted two field studies in collaboration with real-world companies, allowing us to track kind behavior in parallel with predicted and actual happiness, to test whether chains of giving persist in real-world contexts. Since people tend to be kind so that they impact others well-being (e.g., Cryder, et al. 2013), we captured givers' uncertainty by comparing givers' predictions of their recipients' happiness in response to the kind act to recipients' actual happiness.

In study 1, givers were asked to perform a kind act and that recipient was asked to pay it forward to someone new. We used a customized platform enabling givers and receivers to log their experiences and perceptions by scanning a QR code on a token transferred with each act of kindness. Despite giving making people happy, the chains broke down (60% paid it forward). Further, givers were uncertain about their impact, they underestimated recipients' happiness (M -giver = 6.19 v. M -recipient = 6.52), $F(1, 164) = 25.29$, $p < .001$. Study 2 was a replication of study 1, except that participants ($N=304$) were asked to perform a relatively small or large kind act. The difference in magnitude of kindness did not mitigate misperceptions nor the tendency for chains to break.

Givers in studies 1-2 were unable to accurately predict their impact on others' happiness, suggesting they were uncertain about how best to help others. We propose that this uncertainty can prevent givers from choosing to be kind and reducing this uncertainty can lead to more giving. In studies 3-4, we test whether contextual features, like suggested acts of kindness (e.g., Goswami and Urminsky 2016), can reduce givers uncertainty and lead to more giving.

In Study 3, we developed a novel, lab-based paradigm to create and observe chains of giving across multiple generations of givers and observe chains of giving across multiple generations of givers ($N=3,725$). Initial participants were tasked with completing 20 captchas. They also learned that a previous participant had completed some of these captchas for them, as an act of kindness. They could then choose to pay forward the kindness by completing additional captchas for a future participant. We matched these initial participants with a second set of participants, serving as the second link in the chain of giving. We again measured the happiness of each participant and their predictions about the happiness of the subsequent member of the chain of giving. By limiting the range of giving and unambiguously featuring this information consistently across both givers and receivers, this paradigm allowed us to reduce the ambiguity of giving and test how perceived norms influence the spread of kindness.

In contrast to studies 1-2, but consistent with the existing theoretical predictions, most people (83.4%) paid it forward. Furthermore, the amount received initially influenced how much people paid forward such that receiving more led to giving more, $b = .30$, $t(3692) = 16.59$, $p < .001$. However, those who receive a small amount tended to pay forward more than they received whereas those who received a larger amount paid forward less. In other words, people do not directly reciprocate the amount they receive but instead update this to an "appropriate" level of kindness. Using this data, we simulated chains of 7 giving exchanges and find that the level of giving regresses to a set point (about 7-9 captchas) and the initial seeded amount no longer influences what people chose to pay forward. This pattern suggests that givers use information about what they received along with their own sense of what is appropriate when determining how to be appropriately kind. Moreover, in this constrained giving context, givers were relatively accurate in assessing how happy their recipients would be (giver predicted $M=4.65$ v. recipient actual $M=5.06$), $F(1, 3652) = 3.58$, $p = .06$.

In study 4, we directly manipulated uncertainty to test how it affected giving rates. Participants ($N=505$) all completed a series of 15 tasks comprised of finding 4 links to recipes, 5 images of exotic flowers, and 6 biographies of historical figures. Then, they were given an opportunity to perform an act of kindness by doing additional work on behalf of a future participant. We manipulated uncertainty by varying what work this future participant was assigned. In the high uncertainty condition, participant's partner was assigned to complete 5 each of the recipe, images, and biography tasks. Thus, high uncertainty givers must choose any number of any of the three tasks in any combination. In the low uncertainty condition, participant's partners were assigned to complete 15 of just one task (randomly assigned). As predicted, more people chose to be kind in the low uncertainty condition (41.8%) than in the high uncertainty condition (24.3%), $\chi^2(1)=10.86$, $p<.001$.

In sum, this investigation reveals the nuances of behavior in extended exchanges of giving. We suggest that givers are often uncertain about how best to help others and this uncertainty can act as a barrier to the spread of kindness. Contextual features, such as specific ranges of giving (study 3) or limited types of giving (study 4), can help reduce this uncertainty, help givers better predict their impact on recipients' happiness, and increase giving.

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Predicting Consumer Behavior with Elicited Preferences: Challenges and Advances

Chair: Dr. Antonia Krefeld-Schwalb, Rotterdam School of Management, Erasmus University, Netherlands

Paper #1: How Well Do Laboratory-Derived Estimates of Time Preference Predict Real-World Behaviors? Comparisons to Four Benchmarks

Prof. Daniel Bartels, The University of Chicago Booth School of Business, USA

Mr. Soaham Bharti, University of Chicago Booth School of Business, USA

Dr. Ye Li, University of California Riverside, USA

Paper #2: No Pain No Gain: Lose-Now-Gain-Later Intertemporal Choice Questions Better Predict Self-Care Behaviors

Dr. David Hardisty, University of British Columbia, Canada

Dr. Ye Li, University of California Riverside, USA

Mr. Wade Wade, Sauder School of Business University of British Columbia, Canada

Paper #3: When Willingness-To-Pay Seems Irrational: The Role of Perceived Market Price

Dr. Ioannis Evangelidis, ESADE, Universitat Ramon Llull, Spain

Prof. Minah Jung, New York University, USA

Dr. Alice Moon, The Wharton School, University of Pennsylvania, USA

Paper #4: Measuring Stable Noise in Consumers' Intertemporal Preferences

Dr. Antonia Krefeld-Schwalb, Rotterdam School of Management, Erasmus University, Netherlands

Dr. Eric J. Johnson, Columbia Business School, USA

SESSION OVERVIEW

The measurement of consumer preferences is of central importance for marketing and consumer research. There are various survey methods for measuring consumer preferences: from conjoint tasks for measuring partworths to choice paradigms for measuring time or risk preferences. Ideally, these tasks with only a few similar questions allow for the measurement of consumer preferences that predict consumer behavior in different situations and contexts in each domain. Recently, however, research has uncovered challenges with preference measurement that undermine its predictive power and relevance for consumer research.

This special session will examine some of the recently discovered challenges in preference measurement and highlight the implications for the predictive validity of the measurements. The special session compiles studies that not only identify the problems, but also suggest ways to move preference measurement toward greater predictive validity, underscoring its relevance and importance for understanding and predicting consumer behavior.

The first presentation provides a comprehensive overview and test of the general validity of using intertemporal preferences measured in laboratory paradigms to predict how consumers make time value trade-offs across various domains. In their large, two wave study the authors revealed that intertemporal preferences predict a variety of behaviors, but the effects are rather modest and often stay below researchers' empirically gathered expectations. Within a larger number of other relevant predictors, intertemporal preferences rank average for predicting how consumers make temporal trade-offs.

The next presentation turns to aspects of the specific questions presented to participants that influence the preference measures. The authors illustrate that the standard procedure of designing preference elicitation tasks for measuring intertemporal preferences, consisting typically of choices between two delayed rewards, leads to considerably different results compared to deviating from this procedure by using choice options that involve both gains and losses. In particular, for some behavior that bears resemblance to the loss now gain later pattern choices with gains and losses are actually more predictive than the standard gain-gain choice trials. Beyond illustrating task effects on preference measures, this study also emphasizes the importance of a task's ecological validity for improving its predictive validity.

In a similar vein, the next presentation studies the ecological validity of preference measures but turning the focus away from intertemporal preferences to willingness to pay measures. The authors provide compelling evidence that willingness to pay measures are often not measuring consumers' preferences but reflect consumers' perception of the market price. Giving consumers the option to express zero preferences instead of just asking their willingness to pay substantially increases the measure's validity.

In response to the presented and related evidence, the final submission presents a model and paradigm helping to elicit and measure biases and noise in elicitation tasks. The authors show that accounting for variation between trials and tasks, helps to produce preference measures of higher predictive validity for a larger range of tasks and domains.

The special session presents methodological advances in preference measurement that go beyond fitting experimental data but advance the external validity of the preference measures for predicting consumer behavior outside the lab.

How well do laboratory-derived estimates of time preference predict real-world behaviors? Comparisons to four benchmarks

EXTENDED ABSTRACT

Many consumer decisions entail tradeoffs between sooner outcomes and later outcomes—from the mundane (i.e., dessert?) to the consequential (i.e., mortgages). Accordingly, most choice theories assume or estimate time preferences—i.e., how much value an outcome retains as it is delayed—to describe or predict these behaviors. A large literature articulates how estimates of time preference can help us understand and predict behaviors involving delayed consequences (for reviews, see Ericson & Laibson, 2019; Frederick et al., 2002; Read & Read, 2004). Hundreds of papers have explored the association between measures of time preference and behaviors (Urmansky & Zauberman, 2015).

Our goal was to provide the most comprehensive investigation to date of how well laboratory-derived measures of time preference predict real-world behaviors by sampling more behaviors, assessing more covariates, employing a test-retest design with a large sample, and eliciting forecasts of the size of these correlations by those best-positioned to make these predictions—researchers who think about and publish on the topics of intertemporal choice and time preference.

In Study 1, participants self-reported 36 behaviors ranging from finance (paying credit card balance in full, savings decisions),

to health (dental cleanings, physical activity), to personal prudence (education level, driving recklessly). We assessed time preference by offering choices between smaller-sooner and larger-later amounts (e.g., \$816 now vs. \$860 in 3 months). We also measured 15 other covariates, including demographics and psychologically-relevant scales like risk preference, loss aversion, personality scales, and other individual differences previously found to predict many of the behaviors. Participants completed all measures twice, separated by 4-5 months, to account for measurement reliability. We recruited 1576 participants (774 from MTurk; 802 from a commercial panel); 1308 completed both waves.

We compared the predictive validity of time preference to four benchmarks. The first benchmark is zero association. For a majority of the 36 behaviors, estimates of time preference had significant explanatory variance (22) and for most of those (15), it explained unique variance even when controlling for the 15 covariates. However, most of the associations between time preference and the behaviors were moderate or small. Across the 36 behaviors, the 25th, 50th, and 75th percentiles of absolute correlation coefficients were .03, .07, and .12 (and .02, .06, and .07 for the median absolute standard betas in regressions with all the covariates).

The second benchmark is comparison across behaviors. We found substantial variance in the strengths of associations that is not easily explained. Following previous research (Bradford et al., 2017; Chabris et al., 2008), we classified the behaviors into three domains: Financial, Health, and Personal Prudence. Correlations with financial behaviors were greater than those for both health-related and personal behaviors, but there was substantial variation within each domain (e.g., paying credit cards in full $r=.31$ vs. overpaying taxes $r=.02$; getting dental cleanings $r=.17$ vs. physical activity $r=-.03$; education $r=.16$ vs. not driving recklessly $r=-.03$). Moreover, participants' responses for behaviors within a given domain were only modestly correlated (average inter-domain correlations were 0.09, 0.07, and 0.08).

The third benchmark is comparison to other covariates. We assessed how well time preference and 15 covariates each predicted behaviors by (i) counting how many times each variable was a significant predictor (at $p < .05$) across 36 regressions involving all 16 predictors, and (ii) calculating the median absolute standardized betas across those regressions. By both metrics, time preference ranks near the middle of the 16 predictors. For number of times each variable was a significant predictor, time preference was outperformed by age, parent education, extraversion, and Barratt Impulsiveness scale. For median absolute standardized coefficients, age, extraversion, conscientiousness, Barratt Impulsiveness Scale, financial literacy, and numeracy-CRT were more strongly associated with the 36 behaviors than time preference. If our sole goal were to predict these 36 behaviors, we would have been better served to measure age, Barratt Impulsiveness, extraversion, or conscientiousness than to measure time preference.

The fourth benchmark is expert predictions. Study 2 aimed to capture expert intuitions about the relationship between time preference and behaviors, as these researchers have been exposed to a wealth of relevant data. It is the predictions of experts like these that determine where we examine the role of time preference in behavior. We asked 55 time-preference researchers to forecast the 36 correlations between time preference and self-reported behaviors from Study 1. We did so because many papers on time preference (including those we have authored) operate on the assumption that time preference is likely implicated in behaviors with delayed consequences and should therefore predict such behaviors. If we find that experts forecast these correlations to be larger than we found or

poorly predict the relative magnitudes of these correlations across behaviors, we will have uncovered gaps in our collective understanding. Obtaining expert forecasts also helps us calibrate on whether our own surprise at many of the small correlations observed in Study 1 was idiosyncratic.

Experts sequentially viewed the wording and possible responses for each of the 36 behavior questions in Study 1 and provided their best estimates of the correlation between our time preference measure and each of these 36 behaviors. We found that although the experts are reasonably well-calibrated—the correlation between the average expert forecasts and observed correlations across the 36 behaviors was $r=0.60$. However, experts predicted that correlations would be small: The average expert prediction for the correlation between time preference and the 36 behaviors in our study was 0.11 (range from -0.04 to 0.27). Nonetheless, they overestimated correlations on average; the average correlation in Study 1 was even smaller (0.08, range from -0.03 to 0.31). The average expert forecast significantly overestimated the time preference correlations for 16 of the behaviors and underestimated for 6. The average forecast was not significantly different from the observed correlations for the remaining 14 behaviors (although 10 of those were directionally overestimated).

In conclusion, our investigation yielded a mixed bag of results. We hope that this comprehensive investigation can help future research make better-informed decisions about whether (and where) time preference might be a suitable metaphor and/or predictor of behaviors of interest.

No pain no gain: Lose-now-gain-later intertemporal choice questions better predict self-care behaviors

EXTENDED ABSTRACT

People frequently make intertemporal choices—tradeoffs between gains and losses at different times. Research has shown that people's intertemporal choices in laboratory settings predict how they make related tradeoffs in life, ranging from drug use and exercise to savings and other financial behavior (Bickel, Odum, and Madden, 1999; Chabris et al, 2008; Chapman, 1996; 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 all intertemporal choices reflect the same underlying process (delay discounting), there are likely multiple processes involved; while the choice of an immediate versus future reward may reflect impulsivity, the choice not to floss does not seem "impulsive." Might mixed intertemporal choice questions represent different psychology and better predict "mixed" real-world behaviors, such as flossing? Specifically, when faced with a decision between gaining a fixed amount today or 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 choices typically asked? Prior research has yet to address this question: Only a few papers have considered losses in intertemporal choice (e.g., Chapman, 1996; Hardisty & Weber, 2009; Hardisty et. al, 2013) and none have explicitly compared gain measures with mixed measures. 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 (e.g., flossing), we expected that mixed discounting measures will better predict such behaviors.

Method. 3,200 MTurkers completed one of four between-subject (gain, loss-gain, loss, or gain-loss) intertemporal choice measures: 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 \$5 increments. Participants in the Loss-Gain condition saw a normatively-equivalent set of options, but transformed by subtracting \$25 today 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 27 questions about real-world behaviors with intertemporal aspects. These were adapted from a similar list 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. For each participant, we calculated the indifference point between the sooner and later options by averaging the options before and after the participant switched from preferring the sooner to the later options. To more easily compare time preferences across conditions and to better compare with previous research, we converted the indifference points to exponential discount rates although results were nearly identical using hyperbolic discounting.

Discount rates varied by condition, $F(3,2820) = 80.5, p < .001, = .08$. Participants were more impatient 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 more impatient than the Loss condition and the Gain-Loss condition, both $p < .001$. There was no difference between the Loss and Gain-Loss conditions, $t(1285) = 0.3, p = .74$.

Overall, correlations between behaviors and discount rates were modest. More importantly, we examined how much discount rates correlated to each of the “real-world” intertemporal behavior measures. We calculated the average of the absolute values of the correlations, and found that the loss-gain condition yielded the highest correlations overall ($r = .08$ vs. $r = .06$ for gain-loss, $r = .06$ for gain, and $r = .05$ for loss).

To gain more insight on the 27 behaviors, we conducted factor analysis to yield a five-factor model corresponding to Financial, Impulsive, Self-care, Fitness, and Vice behaviors. Correlations between the discount rates in each condition with the five factors found that the suitability of pure gain, pure loss, gain-now-lose-later, and lose-now-gain-later as predictors of real-world intertemporal choice behaviors depends critically on the type of behavior. Notably, discount rates from pure gains were comparable in their predictive value to discount rates from loss-now-gain-later tasks when predicting financial behaviors. However, loss-now-gain-later discount rates better predict self-care and vice behaviors. Pure loss discount rates appeared to have the lowest predictive power. Also of interest are the factors that no discount rates predicted well, namely impulsivity (e.g., propensity to use a cell phone while driving) and fitness behavior. This may be because the “cold” financial decision scenarios

do not match the “hot” decision environment of impulsive choices. 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.

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 scale can easily be adapted simply by subtracting some fixed amount (e.g. \$25 now) from both sets of choices. Therefore, using this technique is easy and we hope will become widespread.

When willingness-to-pay seems irrational: The role of perceived market price

EXTENDED ABSTRACT

Researchers often use willingness-to-pay (WTP) to understand preferences, and many theories assume that measured WTP is a true expression of preference (e.g., Thaler 1985; Tversky et al. 1988; Kahneman et al. 1991). In this paper, we demonstrate that this assumption can often be invalid, which may lead to erroneous inferences about preferences. Seven preregistered studies demonstrate how WTP can deviate from personal valuations, frequently capturing perceptions of market value instead. Those deviations are consequential for our understanding of preferences.

In Study 1 (N=802), we started with a classic paradigm (Tversky et al. 1988) comparing choice and WTP. In the original study, participants preferred the lottery with a high winning probability in choice but preferred the lottery with a high possible payoff in WTP. Though previous research has assumed that this demonstrates a “preference reversal,” our interpretation was that people simply thought that a high payoff lottery typically sold for a higher price and that their stated WTP simply followed that price perception. To test this, we asked people which lottery ticket was more expensive. Replicating the original study, people preferred the high payoff lottery in WTP but preferred the high winning probability lottery in choice. Importantly, consistent with our account, when restricting our analysis to those who thought the high payoff lottery was less expensive, the preference reversal was eliminated.

Study 2 examined preference reversals for hedonic and utilitarian products in WTP versus choice (O’Donnell and Evers 2019). We hypothesized that these reversals might be traced to price perceptions. We varied price information for a pen and chocolate. Participants (N=863) saw either (a) No Price Info, (b) Pen More Expensive, or (c) Chocolate More Expensive. As in the past research, when the pen was more expensive, participants were more likely to prefer pen over chocolate in WTP than in Choice (53% vs. 24%). However, in the Chocolate More Expensive and No Price conditions, we instead found that participants were less likely to prefer the pen over the chocolate in WTP than in Choice (9% vs. 22%; and 11% vs. 24%, respectively).

Studies 1-2 showed that WTP responses traced price perceptions. Study 3 delved deeper into this finding. We reasoned that people might report their WTP for products as if they were in the market for those products. For instance, vegetarians might report their WTP for steak as if they were in the market to buy it (as if they were meat-eaters), even when they are not. Participants (N=597) indicated their WTP for five products that were either personally relevant or irrelevant. Afterwards, they were asked what they considered when stating their WTP. As hypothesized, we found that a substantial number of participants (27.8%-41.5% across products) did not treat WTP as a measure of preference. Rather, they responded based on their beliefs about the market value

of the products, particularly what they considered a fair price. Further, participants who responded based on their beliefs about the market value of goods reported about the same WTP regardless of whether the product was relevant or irrelevant to them.

Study 4 (N=802) tested a simple intervention that could shift WTP closer to personal valuation. Participants were randomly assigned to either the WTP or WTP Zero condition. Those in the WTP condition indicated their WTP for three products that were relevant/irrelevant. Participants in the WTP Zero condition also saw a “\$0 (I would not buy this product)” option. By asking participants to indicate their WTP conditional on purchasing, this manipulation prompted participants’ WTP based on personal product relevance. As predicted, there was a significant Condition x Relevance interaction on WTP ($p=.001$). In the WTP condition, the average WTP for a steak, for example, did not differ significantly by whether participants were vegetarian or not, but in the WTP Zero condition, it was significantly higher for participants who were meat eaters compared to vegetarians.

Study 5 (N=900) compared WTP responses derived from an incentive-compatible Becker-DeGroot-Marschak (1964) method to hypothetical responses derived from the two WTP tasks discussed in Study 4. Participants were randomly assigned to one of three conditions (WTP vs. WTP Zero vs. BDM) and were asked to state their WTP for a dog toy. For some of our participants, the product was relevant, while for others not. There was a significant Condition x Relevance interaction on WTP ($p=.047$). The average WTP was higher when the product was relevant (vs. not) in both WTP Zero ($p=.04$) and BDM ($p=.002$) conditions. This result was eliminated in the WTP condition. Thus, our data suggest that the proposed WTP Zero procedure elicits responses that better reflect personal valuations compared to WTP, without being more costly (cf. BDM).

If regular WTP traces price perceptions, we hypothesized (1) that expensive (but personally valueless) product attributes would yield preference reversals between WTP and choice, and (2) these preference reversals would be attenuated when the WTP Zero task is used instead of WTP. Studies 6-7 tested our hypotheses. Study 6 participants (N=471) considered two BBQ grills. In the control condition, participants evaluated Grill A (smaller) and Grill B (larger). We assumed that A would seem less expensive and thus elicit lower WTP, but in choice, participants might be more indifferent between the two. Indeed, 9.8% preferred A in WTP, but 51.2% preferred it in choice ($p<.001$). In the treatment condition, they saw the same grills with an additional attribute: A had a gold handle and B had a regular steel one. We expected that this would shift WTP to be higher for A but choice to be lower. As expected, 52.4% preferred A in WTP, but 34.6% preferred it in choice ($p<.001$). In Study 7 (N=931), we replicated these results and demonstrated that the WTP Zero task reduced the gap between WTP and choice, indicating that our intervention shifted WTP closer to personal valuation.

This research advances a novel interpretation of WTP as a measure that tracks perceived price rather than personal valuations. It holds important implications for how researchers use WTP in their studies and how they interpret WTP data.

Measuring Stable Noise in Consumers’ Intertemporal Preferences

EXTENDED ABSTRACT

Arguably the gold standard for measuring consumers’ preference are so-called preference elicitation tasks. In these tasks, consumers are presented with choice or judgment trials that are constructed to provide a precise measure of the consumers’ preferences (Rachlin et al., 1991, Thaler, 1981). By presenting a few, similar trials, these tasks

promise to elicit preferences that are predictive of consumer behavior across a wide range of situations outside of the lab. Intertemporal preferences for instance, (O’Donoghue & Rabin, 1999; Zauberman, 2003) have been shown to predict consumers time-value trade-offs in various domains (Tasoff & Zhang, 2021; Bradford et al., 2017). Recent work, however, identified friction in this procedure that reduces the measures predictive validity compared to other methods. We argue that these shortcomings are due to an insufficient measurement and modeling of *noise* in the elicitation tasks.

Preference measures are derived from the elicitation tasks by estimating utility models on the observed responses. For that purpose, the utility models typically consist of an error model and the focal model of interest, that contains a set of parameters for measuring the preferences. *Noise* in the responses is captured by the error model. Usually, the focal model makes deterministic predictions while the error model adds random noise to the prediction. The amount of random noise added typically varies from respondent to respondent, modeling more or less deterministic behavior. In other words, utility models assume that consumers have different preferences, but some consumers always make choices in line with their preference and other consumers are less consistent in following their preferences.

Variation in preferences, elicited in preference elicitation tasks is yet more systematic than this model assumes. Measures in preference elicitation tasks vary around a mean. The preference measures vary between individuals and from occasion to occasion. Some of this variation is meaningful and stable, as preferences truly vary between consumers, for instance, and other variation is random –consumers show different behavior in repetitions of the same situation. But all kinds of variation influence the size of the measurement error and can undermine the predictive validity of the measurement, if not modeled correctly.

Measurement error can be partitioned in *bias* and *noise*. In preference elicitation, for instance, task settings can bias the measurement: respondents adapt their decision processes to the task (Li et al., 2022) and preference measures vary between different tasks (Hardisty et al., 2012; Read et al., 2017). Bias is thus a systematic deviation from the true mean conditional on the task. If the experimental setting is not controlled the bias remains unnoticed. The bias can only be revealed, by comparing different settings and tasks in a controlled experiment.

Noise, instead, is variation around the mean estimates in all directions. Noise is not purely random; noise can reflect stable variation in preferences, for instance individual differences between consumers or indicate a specific interaction of individuals and situations. Consumers –despite an overall preference for one brand over the other– may show opposite preferences regarding brands for one specific product. But to distinguish that stable noise from random variation, situations must be repeatedly presented to participants.

Stable noise and variation in preferences that is different from the random variation assumed in the models can lead to biased preference estimates with the focal model. Because in many choice models, the focal and the error model are not independently estimated (Krefeld-Schwalb et al. 2021). In a simulation study with the quasi-hyperbolic discounting model of intertemporal preferences, we simulated individual responses in a choice task. On top of individual variation in preferences we also simulated interindividual variation in preferences and random responses in a certain number of trials. This variation, although it should be captured by the error model, led to a systematic overestimation of patience measured in the focal model.

Indeed, in earlier empirical work we illustrated non-random variation in preferences in elicitation tasks showing that respondents adapt to the tasks. The resulting task-specific bias in elicited preferences undermines their predictive validity for consumer behavior (Li et al., 2022).

In order to use preference elicitation tasks for valid and reliable measures for predicting consumer behavior, the tasks and models must be designed to model and control the different sources of noise in the tasks. We propose a model that estimates task specific bias, interindividual variation due to specific trials and random noise, to ultimately provide a less noisy, and less biased measure of consumers' preferences.

As a first application of our model, we developed a new preference elicitation task for measuring consumers' intertemporal preferences. The task consists of an adaptive choice and a judgment task to estimate task specific bias and all trials are repeated twice to measure individual variation in preferences between different trials and repetitions of the same trial.

We first implemented the task in a mouse track environment to study search processes during the task, and test different versions of the task with a large online sample (Study 1, N = 377, prolific). This revealed that respondents search differently between the choice and judgment trials and adapt their search across multiple questions within each task.

Second, we tested the validity of our model estimates for predicting consumer finance behavior and preferences with a large online sample (Study 2, N = 426). This analysis illustrated the excellent predictive validity of our measures. For instance, we predict 14% variance of consumers' credit score and 65% choices in an incentive aligned choice task, for an additional reward of either \$1 immediately, or \$1.25 one week later. To further validate our task, we also tested whether preference measures derived only from the more commonly derived choice paradigm would do a worse job. Indeed, the predictive validity of the measures derived from the choice trials only dropped to 9% for the credit score and to 59% for the incentive aligned choice.

This study shows that modeling stable noise in preferences in the form of task induced bias, and interaction between the questions and respondents improves the predictive validity of intertemporal preference measures.

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Lay Beliefs about What Machines Can Do Better than Humans (and Vice Versa)

Chairs: Almira Abilova, Erasmus University, the Netherlands
Jimin Nam, Harvard Business School, USA

Paper #1: Robo-Journalism: Robo-Journalism Decreases Perceptions of Bias by Increasing Perceptions of Comprehensiveness

Jimin Nam, Harvard Business School, USA
Adam Waytz, Northwestern University, USA
Michael I. Norton, Harvard Business School, USA

Paper #2: To Delegate, or Not to Delegate: Consumers Prefer to Delegate Decisions to Algorithms (vs. Humans)

Sarah Lim, University of Illinois at Urbana-Champaign, USA
Gizem Yalcin, The University of Texas at Austin, USA
Stefano Puntoni, Wharton School of the University of Pennsylvania, USA

Paper #3: Stigma Against AI Companion Applications

Julian De Freitas, Harvard Business School, USA
Anya Ragnhildstveit, University of Utah, USA
Ahmet K. Uğuralp, Bilkent University, Turkey
Zeliha Oğuz, Bilkent University, Turkey

Paper #4: Antecedents of Lay Beliefs about Job Automation

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Stefano Puntoni, Wharton School of the University of Pennsylvania, USA

SESSION OVERVIEW

From customer service to cars, automated machines are becoming ubiquitous and increasingly capable of matching or outperforming humans, as in domains like medical diagnosis (Shen et al., 2019), drug discovery (Kim et al., 2020), and art generation (Gatys et al., 2015). Given the accelerated nature of these advancements, however, it is unclear to what extent consumer beliefs of what automated machines can do align with the actual performance of these technologies. This session investigates when and why consumers believe automated machines can *perform tasks better than humans*, by studying both domains in which consumers prefer to use autonomous machines over humans and ones in which they persist in favoring humans or human standards instead. Answering this question is of import to managers, regulators and ultimately consumers, since both the economic and societal success of automated technologies depend on whether and when consumers adopt them.

The first two papers explore situations where consumers prefer that work be conducted by autonomous machines rather than humans. **Paper #1** shows that both Democrats and Republicans prefer news written by robot-columnists when they are searching for unbiased and objective news. In four studies, authors demonstrate that consumers perceive robot-columnists as more capable of evenhandedly aggregating information, which is why the resulting news is viewed as more unbiased. In a similar vein, **Paper #2** finds that consumers are more inclined to delegate tasks to algorithms than humans. This preference is driven by concern that others will look upon one unfavorably for delegating tasks to humans, whereas delegating tasks to algorithms circumvents this concern.

Contrasting with these findings, when it comes to more meaningful relationships such as friendships or romantic partnerships, **Paper #3** finds that consumers view an AI companion as inferior to a human one. This belief is driven by the notion that a friendship or

romantic relationship with AI will not be ‘true’, because the AI will not understand you and thus not reciprocate

Finally, **Paper #4** uncovers the factors that drive lay beliefs about which jobs will become automated. In a large-scale occupation survey, authors find that people rely on the human-centric standard of prestige, rather than on more pertinent factors such as how routine, social, manual, or cognitive the job is.

In sum, consumers prefer robot-written news because it is viewed as less biased, and they prefer to delegate tasks to algorithms because it saves face. But, they prefer human companions over AI companions, and they persist in applying irrelevant human standards when evaluating how automatable a job is. Aside from the capabilities of these automated technologies, therefore, psychological factors will play a potent role in whether and when consumers adopt them.

Robo-Journalism: Robo-Journalism Decreases Perceptions of Bias by Increasing Perceptions of Comprehensiveness

EXTENDED ABSTRACT

Media outlets increasingly have access to a diverse set of tools including artificial intelligence (AI) to produce content (Broussard et al., 2019; Chace, 2020). “Robo-journalism” has been increasingly adopted by major news outlets, including *Bloomberg News*, *the Washington Post*, *the Associated Press* (Peiser, 2019). Moreover, increased sophistication of AI has made such content nearly indistinguishable from content written by humans (Clerwall, 2014; Köbis & Mossink, 2021; Kreps et al., 2022). But while some evidence suggests consumers’ aversion to AI-generated content (Graefe et al., 2018), we explore a possible advantage of content generated by “robot columnists”: it may be seen as freer from bias than content generated by human columnists. And while other evidence suggests that people see robots as worse than humans on some dimensions (e.g., emotional intelligence; Waytz & Norton, 2014), we suggest that in the context of journalism, positive perceptions of content are driven by a factor on which AI is better than humans: aggregating more information, resulting in more comprehensive (and therefore less biased) content.

We find that Democrats and Republicans view robot-written news as unbiased compared to news written by political ingroup and outgroup members (Study 1). This unbiased perception of the robot columnist holds for unfavorable and favorable news (Study 2) and unbiased perceptions of robot written news is mediated by the perception of aggregation capabilities of the columnist (Study 3). Both Democrats and Republicans opt to read robot-written news, even over news written by members of their own party, when asked to communicate in an unbiased manner (Study 4).

Study 1. Democrat and Republican participants (N=400; 49.50% female; age: $M = 35.60$, $SD = 14.07$) were asked to read three articles on the topic of oil futures that were randomly tagged as written by a conservative, liberal, or robot columnist. Participants were asked to choose which article was the most unbiased. Approximately 71.50% of Democrat participants and 68.00% of Republican participants selected the article written by a robot columnist to be the most unbiased and both were significantly greater than 50% (all $ps < .001$, binomial tests).

Study 2. Democrat and Republican participants (N=601; 50.92% female; age: $M = 39.28$, $SD = 12.19$) were randomly assigned to one

of two article topics: Biden's success, Biden's struggle. In the "Biden's success (struggle)" condition, participants were told that they were going to read an article about Biden's success (struggle) with immigration and the border crisis. Participants were asked to choose the columnist they would prefer to read an article by between a robot or an outgroup columnist. For favorable news, approximately 65.31% of Democrat participants in the "Biden's success" condition and 61.44% of Republican participants in the "Biden's struggle" condition opted for the article written by a robot columnist, and both shares are significantly greater than 50% (all $ps < .001$, binomial tests). A similar result holds for unfavorable news, where about 64.05% of Democrat participants in the "Biden's struggle" condition and 66.22% of Republican participants in the "Biden's success" condition, opted for the article written by a robot columnist (all $ps < .001$, binomial tests).

Study 3. Democrat and Republican participants ($N=700$; 49.43% female; age: $M = 39.68$, $SD = 12.07$) were asked to read an article that was randomly tagged with one of two columnists (robot or outgroup). Democrat participants assigned to the robot columnist evaluated the columnist to be more unbiased ($M = 4.99$, $SD = 1.47$) than those assigned to the conservative columnist ($M = 4.19$, $SD = 1.46$; $t(348) = 5.11$, $p < .001$, $d = 0.55$). The results are similar for Republican participants ($M_{robot\ columnist} = 4.82$, $SD = 1.50$; $M_{liberal\ columnist} = 4.18$, $SD = 1.60$; $t_{robot\ vs.\ liberal\ columnist}(348) = 3.87$, $p < .001$, $d = 0.41$). Democrat participants perceived the conservative columnist to be significantly less capable of aggregation ($M = 4.53$, $SD = 1.24$) than the robot columnist ($M = 5.12$, $SD = 1.33$; $t(348) = 4.27$, $p < .001$, $d = 0.46$). This is also consistent among Republican participant perceptions of the liberal columnist ($M = 4.37$, $SD = 1.31$) and the robot columnist ($M = 5.03$, $SD = 1.24$; $t(348) = 4.86$, $p < .001$, $d = 0.52$).

For Democrat participants, a 5,000-sample bootstrap analysis using PROCESS Model 4 (Hayes, 2018) revealed a significant indirect effect though capability of aggregation ($\beta = 0.30$, $SE = 0.08$, 95% $CI = [0.14, 0.47]$). The same results hold for Republican participants ($\beta = 0.32$, $SE = 0.08$, 95% $CI = [0.17, 0.49]$).

Study 4. Democrat and Republican participants ($N=1,003$; 53.44% female; age: $M = 35.47$, $SD = 12.15$) were randomly assigned one of four incentive-compatible summary writing tasks. In the control condition, participants were asked to write a summary about a specific topic of the article. In the unbiased, liberal, and conservative conditions, participants further told that their goals were to write the summary from a specific perspective. Participants were all given a choice to select an article of their choice to help with their summary writing. In the unbiased condition, about 81.82% Democrat participants and 68.03% of Republican participants opted to read the article written by the robot columnist. These shares were significantly different than the shares in the liberal condition (Democrat Participants = 32.23%; Republican Participants = 19.35%; $\chi^2_{Democrats}(1, N=242) = 60.70$, $p < .001$; $\chi^2_{Republicans}(1, N=246) = 59.29$, $p < .001$) and the conservative condition (Democrat Participants = 16.54%; Republican Participants = 27.78%; $\chi^2_{Democrats}(1, N=254) = 108.23$, $p < .001$; $\chi^2_{Republicans}(1, N=248) = 40.27$, $p < .001$).

Several streams of research suggest that consumers hold negative views of AI-generated content, due to its perceived inferiority on important dimensions such as emotional intelligence and acknowledging uniqueness (Waytz & Norton, 2014; Yalcin et al., 2021). We demonstrate that by leveraging an aspect of AI that is seen as superior to humans – specifically, in its ability to aggregate more information – AI-generated content can be preferred to human-generated content, due to consumers' perception that such content is freer from bias.

To Delegate, or Not to Delegate: Consumers Prefer to Delegate Decisions to Algorithms (vs. Humans)

EXTENDED ABSTRACT

Although the use of algorithms has substantially increased, consumers are reluctant to rely on algorithms (vs. humans) when making decisions. Such algorithm aversion has been consistently shown in various decision-making contexts, including medical (Longoni et al. 2019), financial (Onkal et al. 2009), moral (Bigman and Gray 2018), and recommendation decisions (Yeomans et al. 2019). The current research examines and identifies a situation in which consumers may prefer algorithms to humans, namely decision delegation. We argue that people are less likely to delegate their decisions to algorithms rather than humans because they are more concerned about their impression management (e.g., looking bad) when delegating decisions to humans (vs. algorithms).

Delegations involve asking others for a favor— asking others to make choices that people need to make, which may involve some social costs. For instance, consumers may be worried that delegating decisions, or passing burdens of making choices to others, makes them look bad. We propose that consumers would be less concerned about such negative interpersonal consequences of decision delegation when they delegate decisions to algorithms (vs. humans), which results in a greater preference for algorithmic (vs. human) delegation. Across four studies, we provide converging evidence that supports this proposition.

Study 1 (pre-registered) provides an initial test of our effect. We randomly assigned participants to a condition in a 2 (delegation alternative: algorithm vs. human) between-participants design. Participants imagined working at the United Network for Organ Sharing (UNOS) and deciding who would receive an organ transplant. Half of the participants were told that they could delegate the decision to an algorithm, whereas the other half were told that they could delegate it to another employee. Participants then indicated whether they would prefer to make a decision themselves or delegate it to another agent (algorithm or human). Supporting our prediction, participants preferred to delegate the decision when they could delegate it to an algorithm compared to when they could delegate it to another person ($M_{algorithm} = 6.10$; $M_{human} = 5.27$; $F(1, 305) = 4.17$, $p = .042$).

Study 2 (pre-registered) aimed to enhance the generalizability of our effect by examining if our effect occurs regardless of the level of decision difficulty. To this end, we manipulated decision difficulty by manipulating the decision type (low difficulty: hiring vs. high difficulty: firing) in recruitment context. Participants were randomly assigned to condition four in a 2(delegation alternative: algorithm vs. human) x2(decision type: hire vs. fire) between-participants design. Participants imagined that they were a human resource manager and had a task to decide either whom to hire or fire. Depending on the condition, participants were told that they could delegate the decision either to an algorithm or another employee. Again, participants preferred to delegate a decision when they could do it to an algorithm rather than to a human ($M_{algorithm} = 5.51$; $M_{human} = 4.24$; $F(1, 401) = 15.70$, $p < .001$). Importantly, this effect was consistent regardless of decision type (no interaction effect; $F < 1$).

Study 3 examined the proposed underlying mechanism of impression management motives. Participants imagined reviewing and making a decision on loan applications. After indicating their delegation preference, participants also rated how much they would worry about looking bad by delegating the decision (e.g., being disliked by others, looking mean, looking irresponsible, looking unprofessional). Replicating our findings, we found that participants preferred to delegate their decision when they could do so to an algorithm rather than

a human ($M_{\text{algorithm}} = 6.17$; $M_{\text{human}} = 5.40$; $t(399) = 2.10$, $p = .036$). Furthermore, when the delegation alternative was an algorithm (vs. a human), participants indicated lower impression management concerns ($M_{\text{algorithm}} = 5.37$ vs. $M_{\text{human}} = 6.01$; $t(399) = 2.57$, $p = .010$). Importantly, impression management concerns mediate the effect of delegation alternative on delegation preference ($b = -.13$, 95% CI [-.2648, -.0277]).

Study 4 (pre-registered) tested a theoretically relevant boundary condition. If our effect is driven by impression management motives, it should be mitigated when consumers can easily justify their delegation decision. To this end, study 4 examines moderation by justification. We randomly assigned participants to a condition in a 2(delegation alternative: algorithm vs. human) x 2(justification: no vs. justification) between-participants design. As in our previous studies, participants thought that they were a loan officer and making decisions on loan applications. In no justification condition, we told participants that in addition to the loan application review, they currently had no other urgent work. In the justification condition, we told participants that in addition to the loan application review, they recently got urgent work to take care of. Participants indicated their preference for delegating a decision to another agent (either a loan algorithm or another loan officer). We found the predicted significant interaction effect ($F(1, 228) = 9.34$, $p = .003$). In the no justification condition, we replicated our key effect: participants preferred to delegate the decision when they could delegate it to an algorithm rather than a human ($M_{\text{algorithm}} = 6.56$; $M_{\text{human}} = 4.10$; $F(1, 228) = 14.96$, $p < .001$). However, in the justification condition, this effect was significantly mitigated ($F < 1$).

Taken together, the current research examines how impression management concerns can prompt people to rely more on algorithmic versus human decisions, making novel contributions to the literature on algorithmic decisions (e.g., Longoni et al. 2019) and delegation decisions (e.g., Steffel and Williams 2018). First, extending the existing literature in algorithmic decision making, the current research demonstrates how social cues signaled by algorithms vs. human delegation affect consumers' choices. Second, by examining a role of impression management concerns in delegation decisions, we extend prior research that has primarily looked at the effect of decision characteristics (e.g., decision difficulty) on delegation choice (Steffel and Williams 2018; Steffel, Williams, and Permann-Graham 2016).

Stigma Against AI Companion Applications

EXTENDED ABSTRACT

For the first time in history, humans struggle to tell apart AI-generated texts from human-generated ones (Brown et al. 2020). One cutting edge application of these models is 'companion chatbot' applications, designed for free-form social conversations of a friendly or romantic variety. Unlike human conversation partners, AI companions are always there to talk and listen to you in a non-judgmental way. Despite the surge in these apps, however, no work in consumer psychology has examined them. Here we explore a potential impediment to their adoption: consumer stigma against the notion of a friendship or romantic relationship with an AI.

Study 1 examined the possibility of stigma against AI companions, rooted in the intuition that these would not be viewed as 'true' relationships. Typically, people judge that something is not a 'true X' when it satisfies the concrete features of the category but not the abstract values that the features are meant to realize (Knobe, Prasada, and Newman 2013).

Participants ($N=216$, 23% excluded) saw one of two advertisements for a chatbot application named "Chatty". Between-subjects, the app was described as connecting users to either human or AI companions. Participants were asked how willing they were to find a friend

and romantic partner on Chatty, and how much they would pay for the app per month. They also indicated whether they agreed that (i) *Any friendship with an AI [person] on Chatty would **not** be a true friendship*, (ii) *An AI [person] on Chatty would always be there to **talk** and **listen** to you*, and (iii) *An AI [person] on Chatty would always be on your side and not **judge** you*. DVs in all studies were on 0–100 scales.

Participants were less willing to find an AI (versus human) friend ($M_{\text{AI}}=35.3$; $M_{\text{Human}}=45.5$; $t(116.3)=2.94$, $p=.004$) or romantic partner ($M_{\text{AI}}=11.4$; $M_{\text{Human}}=27.0$; $t(153.5)=5.03$, $p<.001$) and marginally less willing to pay for an AI versus human companion app ($M_{\text{AI}}=\$1.83$; $M_{\text{Human}}=\$2.43$; $t(151.1)=1.82$, $p=.071$). Stigma for all three DVs was consistently mediated by intuitions about whether the friendship would be 'true', rather than by judgments of whether the companion would listen to you and not judge you.

Study 2 explored why consumers believe that AI relationships are less 'true'. The design was like study 1, except participants ($N=199$, 20% excluded) additionally rated how much they agreed, *An AI [person] on Chatty is unable to **feel** emotions*, *An AI [person] on Chatty is unable to **understand** what you are saying*, *An AI [person] on Chatty cannot provide **physical** intimacy*, and *A relationship with an AI [person] on Chatty would be **one-sided**, not mutual*.

We again found stigma against AI relationships for all three main DVs ($p < .05$), which were selectively mediated by judgments that AIs cannot understand you, but not by judgments that they cannot feel or be physically intimate with you. As predicted, we also found significant evidence for the following serial mediation model: Agent → Not understand → Not Mutual → Not True → Unwilling to Friend/Be romantic partners, but not for a model in which the order of the 'understand' and 'not mutual' mediators is reversed. Thus, the reason consumers think relationships with AI are not 'true' is because they seem one-sided, because they believe AI companions would not understand them.

Study 3 explored whether the stigma against AI companions is eliminated when consumers are made aware of their bias, as in other successful debiasing interventions (De Freitas and Johnson 2018; Kahn, Luce, and Nowlis 2006). In a 2 (Agent: Human v. AI; within-subjects) x 2 (Order: Human or AI first; between-subjects) mixed design, participants ($N=196$, 3% excluded) saw the same ads and questions from study 1, presented underneath each other on the same page.

Linear regressions found no main effect of order nor any interactions. Notably, participants were still less willing to find an AI (vs. human) friend ($M_{\text{AI}}=30.4$; $M_{\text{Human}}=47.0$; $b = 15.94$, $p < .001$) or romantic partner ($M_{\text{AI}}=12.6$; $M_{\text{Human}}=31.6$; $b = 20.01$, $p < .001$) and less willing to pay for an AI versus human companion app ($M_{\text{AI}}=\$1.77$; $M_{\text{Human}}=\$2.06$; $b = 0.30$, $p = .018$). So, consumers persist in 'stigmatizing' AI companions even when made aware of their stigma.

Study 4 explored whether positive user reviews can reduce this stigma, given the usual tendency for favorable reviews to increase sales (Chevalier and Mayzlin 2006). In a 2 (Agent: Human v. AI) x 2 (Review: Present v. Absent) x 8 (Review Types) design, participants ($N=1092$, 17% excluded) saw the same ad from E1—either on its own or followed by one of eight positive reviews of a friendship with an AI companion. We used real reviews of AI companion apps, gathered from the Apple and Google app stores. Participants answered the same DVs as study 1.

A 2 (Agent) x 2 (Review) ANOVA again found stigma against AI friendships ($p < .001$), a benefit of reviews ($p = .035$), but no interaction ($p = .706$). A similar analysis also found stigma against AI romance and willingness to pay (both $ps < .001$), but no main effects of reviews nor any interactions (all $ps > 0.1$). Therefore, reviews selectively improved willingness to *befriend* human and AI companions, but not to become romantic partners with them nor pay more for them.

Implications. We uncovered an impediment to adoption of AI companion apps: stigma against relationships with AI. Unfortunately for managers of these apps, making consumers aware of their stigma did not eliminate this stigma. Somewhat promisingly, including positive reviews increased consumer willingness to *befriend* AI, although it did not increase willingness to be in romantic relationships with AI. Our serial mediation results suggest that managers may need an intervention that directly targets whether consumers believe an AI understands them, which should lead consumers to feel that they are in more of a two-sided (rather than one-sided) friendship or romantic relationship. Given the impressive capabilities of the language models underlying these applications (Dhariwal et al., 2020), one promising tactic could be informative test runs in which consumers are explicitly encouraged to probe the understanding of these applications.

Antecedents of Laypeople's Beliefs about Job Automation

EXTENDED ABSTRACT

Rapid technological advancement in Artificial Intelligence and robotics is transforming labor markets. Experts forecast that automation will eliminate over 50% of existing occupations, jeopardizing more than 38 million jobs in the United States alone (Acemoglu and Restrepo 2019). While the exact impact of automation on demand for labor remains a highly debated topic in both academic and policy circles (Frank et al. 2019), it is uncontroversial to argue that people entering the labor market should consider the risk of automation when making study and career decisions. However, no prior research has examined the antecedents of people's inferences of job automation - what jobs do people expect to be more affected by the technological replacement of human labor and why?

Extensive research on job automatability has focused on the tasks indicative of whether the job can be automated; the extent to which a job involves routine, social, manual, and analytic tasks has been shown to predict the job's automatability (Autor, Levy, and Murnane 2003; Das et al. 2020). Consequently, it is likely that with considerable media attention to technological replacement and the drivers thereof, expert opinions should inform lay people's beliefs about job automation. However, past work has shown that when laypeople think about a job, they do not immediately think about the tasks involved within a specific occupation (Anteby, Curtis, and DiBenigno 2016). Instead, laypeople tend to evaluate jobs based on so-called *occupational stereotypes* (He et al. 2019). The most ubiquitous stereotypes that people hold about jobs are the stereotype of gender and *prestige* (Oswald 2003; Shinar 1975). The gender stereotype is used to assess personal suitability for a particular job, and the prestige stereotype is used to assess the general standing of the job (Gottfredson 1981). While jobs that are at high risk of automation will typically be considered less prestigious, we argue that laypeople's perception of this relationship is correlational rather than causal. As a consequence, they will also use perceptions of prestige as a predictive cue for automation likelihood. Despite its salience, this job dimension is in many situations irrelevant to whether new technological capabilities can allow the replacement of human labor (Duckworth, Graham and Osborne 2019) and can even hurt rather than help predictions. For example, an EU Commission funded project¹ in a large European city shows that that many students pursue majors for occupations considered more prestigious (e.g., white-collar office jobs) rather than available less prestigious alternatives (e.g., blue-collar harbor jobs), ignoring the fact that tasks in basic administration and book-keeping are quickly being automated (Das et

al. 2020). Therefore, our primary goal is to examine the relationship between occupational prestige and inferences about the likelihood of job automation, in conjunction with the assessment of jobs on other dimensions related to automation likelihood.

We administered a large-scale survey across 538 different occupations. We find that laypeople's beliefs are aligned with expert opinion in that more routine and less social jobs are predicted to be more affected by job automation. At the same time, we find that more (vs. less) prestigious jobs are perceived as less (vs. more) automatable. We further show the effect of the prestige cue in a controlled setting.

In Study 1 ($N=3504$, $M_{age}=38.22$, $SD=11.17$, $Female=1851$), we explore whether perceptions of task characteristics and occupational stereotypes influence perceptions of job automation. We identified task characteristics from major publications in economics, computer science, and AI that have the most significant impact on automatability (Autor et al. 2003; Duckworth et al. 2019). Further, we used an extensive list of 538 occupational titles. Each participant rated 50 occupational titles on one of the following 5-pt scales: prestige, gender, social, routine, analytic, or manual (Table 1), and the likelihood of job automation on a 100-pt scale. Task characteristics such as routine ($\beta=9.52$, $s.e.=.97$), social ($\beta=-4.2$, $s.e.=.56$), and manual ($\beta=-5.51$, $s.e.=.53$) were significantly associated with the perception of the likelihood of job automation. Yet, even when controlling for the attributes that are directly relevant to job automation, prestige perceptions remained a significant predictor of likelihood of job automation. ($\beta=-8.91$, $s.e.=1.20$; Table 1). We looked at the interaction between prestige and social perceptions for exploratory purposes. Since prestige is a social cue, for the jobs with low social aspects, prestige should have a more negligible effect on the perceptions of job automation. Indeed, there is a significant interaction between the two variables ($\beta=-1.94$, $s.e.=.69$, $p=.005$), canceling out the main effect of each of the variables.

In Study 2 ($N=150$, $M_{age}=37.78$, $SD=11.09$, $Female=72$), we test the causal relationship between prestige and perceptions of the likelihood of job automation. We employed a within-participant design and manipulated prestige through job industry. The study had a 2 (prestige cue: high vs. low, within subjects) x 3 (job: auditor vs. storage manager vs distribution manager, for generalizability purposes only) x 2 (attractiveness: high low) design. The attractiveness cue was added to low and high prestige job to avoid the halo effect. Participants were told that they would be giving career advice to their younger relative, who is now in middle school. All other job characteristics were constant (Figure 1). Participants then evaluated each job on likelihood of job automation (6-pt scale). Participants rated jobs with high prestige ($M=4.11$, $SD=1.72$) as less likely to be automated than the jobs with low prestige ($M=4.69$, $SD=1.76$, $F(1,149)=13.04$, $p<.001$). There was no significant interaction of various jobs or industries with prestige ($F<1$) on our dependent variable.

Our work is one of the first to uncover the antecedents of laypeople's beliefs about job automation. We show that people, unlike experts, consider prestige an important antecedent of job automatability. Our work sheds light on why some educational programs intended to help people learn the least automatable skills might not receive much support from people most in need and offers noteworthy consideration to the role of prestige when designing communication strategies.

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Structural Effects On Motivation

Chair: Holly Howe, Duke University, USA

Paper #1: The Watch List Effect: How Loose Plans Make Consumers Feel Productive

Scott Wallace, University of Washington, USA

Paper #2: Quantitative Feedback Increases Social Comparison Motivation

Holly S. Howe, HEC Montréal, Canada

Jordan Etkin, Duke University, USA

Szu-chi Huang, Stanford University, USA

Paper #3: Work-to-Unlock Rewards: Leveraging Goals in Reward Systems to Increase Consumer Persistence

Marissa A. Sharif, University of Pennsylvania, USA

Kaitlin Woolley, Cornell University, USA

Paper #4: Stuck in a Rut: The Behavioral Entrenchment Effect

Alicea Lieberman, University of California, Los Angeles, USA

On Amir, University of California, San Diego, USA

Ziv Carmon, INSEAD, France

SESSION OVERVIEW

Consumers often struggle to meet their short- and long-term goals. People struggle to achieve goals that are affectively unpleasant, including goals that require self-control and persistence, like saving for retirement (PWC 2019) or maintaining physical health (Troiano et al. 2008), as well as goals whose pursuit is tedious or chore-like, like decluttering (Offer Up 2016). They also struggle to achieve goals for leisure such as improving at a hobby (Ballard 2020), taking vacation (US Travel Association 2019), and collecting experiences (Keinan and Kivetz 2011).

Consumers' failure to meet their goals is not surprising. Goal pursuit is complex, involving various judgments and decisions across multiple stages. Consumers must plan what they will do and evaluate their goal progress. They must decide how much to persist and whether or when to shift focus to other goals. At each stage, consumers encounter structural factors that influence their goal pursuit. For example, tasks may vary in the degree to which they are pre-planned, the format of performance feedback, the reward structure, the task duration, and the required attentional resources. In this session, we explore structural factors that influence consumers during the planning, evaluation, persistence, and quitting phases of goal pursuit.

Paper 1 explores the *planning* process, specifically asking whether consumers should plan their leisure goals. The paper shows that consumers prefer to consume leisure items from a planned list. This occurs because consumers who plan for their leisure time feel more productive upon completing their plan. Paper 2 explores how consumers *evaluate* their goal progress. This paper demonstrates that consumers who receive quantified feedback (vs. no feedback or qualitative feedback) on their performance are motivated to seek social comparison with others. This occurs for leisure goals (e.g., solving a crossword) and goals where one's relative standing is inconsequential (e.g., daily water consumption). Papers 3 and 4 examine the situational factors that cause people to *persist* or *quit* during goal pursuit. Paper 3 examines how the reward structure of a task influences persistence, demonstrating that consumers persist more in goals when they need to "work-to-unlock" rewards (i.e., when they receive continuous rewards only after completing unrewarded goal-related actions). Paper 4 describes the phenomenon of "behavioral ruts" wherein consumers continue to perform unfavorable activities when they could easily switch to preferred alternatives. The paper

describes conditions under which these ruts are likely, showing that tasks that cause consumers to become entrenched (e.g., long duration tasks, tasks that require singular focus) are more apt to lead to ruts.

Together, these papers demonstrate the structural components of goal pursuit that can influence consumers' behavior. The session contributes to our understanding of how consumers navigate all stages of goal pursuit and should be of interest to scholars who study self-control, motivation, goals, or health.

The Watch List Effect: How Loose Plans Make Consumers Feel Productive

EXTENDED ABSTRACT

Being productive is an important goal to many consumers and has a broad influence on decisions. It not only drives consumers to invest in their long-term goals, but also to choose products and experiences that make them feel productive in their leisure consumption (Keinan and Kivetz 2011). This research explores a novel aspect of consumption that caters to these productivity goals: planned leisure consumption. I propose and find that, when people plan what they will consume in advance, such as in a video Watch List, the later act of consumption feels more productive and is more appealing to productivity-motivated customers. I also show that planning tools that make progress salient enhance these effects, and that the planning process separately boosts feelings of productivity.

Five studies document this "Watch List Effect," revealing how offerings that facilitate customer planning can enhance feelings of productivity and help marketers appeal to productivity-oriented customers. Findings shed light on this novel effect and its implications for consumer well-being, product design, and promotions targeting productivity-motivated customers.

Study 1. I first tested the prediction that productivity motivation would increase preference for consumption from a Watch List over an equivalent, unplanned alternative. Participants ($N = 110$) read a pretested scenario manipulation that made productivity goals highly active or inactive, respectively, in two experimental conditions. Participants then reported their preference between two shows to watch in the scenario, both described as "entertaining and relaxing." The key difference between the shows was that one was previously saved on a personal Watch List and the other was a newly-discovered, recommended show. As predicted, those in the Productivity Goal Active (vs. Inactive) condition reported greater interest in the Watch List option ($F(1, 108) = 4.14, p = .044$).

Study 2. This study was a survey to test whether the observed link between productivity goals and Watch List viewing was reflected in real-world consumption behavior. Streaming video users ($N = 155$) responded to a four-item scale (all 1-7) measuring their chronic productivity orientation based on relevant behaviors identified by Keinan and Kivetz (2011), e.g., "I often use free time to catch up on work or household chores." Respondents also reported their usage frequency for "Watch List, My Videos, or other save-for-later options" in online streaming services, from "Never" (1) to "All the time" (5). Although correlational, results showed that more productivity-motivated consumers reported significantly more Watch List consumption in real life ($r = .20, p = .014$), consistent with the experimental findings of Study 1.

Study 3. This study looked at whether consumers feel more productive when consuming from a planned Watch List. Participants

($N = 140$) watched four video trailers for upcoming movies chosen from a pool of eight options. In one condition, they first created a Watch List of the four trailers they wanted to view and then chose from that list for their subsequent viewing. In the other (Control) condition, participants simply picked a video from the available pool each time. Selected videos were no different across conditions based on pretest ratings of how productive it felt to watch each trailer individually. However, as hypothesized, those in the Watch List (vs. Control) condition felt more productive (7-point scale) after watching their chosen videos ($F(1, 138) = 7.65, p = .006$).

Study 4. Examining the mechanism underlying Study 3, this study manipulated the salience of progress as participants went through their Watch List. Within the same movie-trailers paradigm, participants ($N = 298$) were assigned to either a Dynamic or Static version of the Watch List condition. The Dynamic Watch List adjusted after each video to show only the remaining unwatched videos, increasing the visual salience of progress through the list. The Static Watch List did not change and there were no visual cues to reflect participants' progress (this version matched Study 3). As hypothesized, the greater salience of progress in the Dynamic Watch List condition led participants to feel more productive than those in the Static condition ($F(1, 296) = 8.50, p = .004$).

Study 5. This study extended beyond video Watch Lists and also separately examined the experiences of making versus fulfilling plans for consumption. Participants ($N = 371$) read the daily "Activity Journal" of a fictional person, Emily, and rated how productive they thought Emily felt doing each activity described in the journal. Sixteen journal items were identical for all participants (Control Items). Five (Focal Items) were planned consumption experiences in the Planned condition (e.g., watching a show from her Netflix Watch List, reading a bookmarked article online), or equivalent but unplanned experiences in the Control condition. Three additional items described Emily making plans for focal Items in the Planned condition (e.g., adding a show to her Netflix Watch List), or unrelated activities in the Control condition. Results showed that, although control item ratings did not differ by condition ($p = .80$), the focal items were rated as more productive in the Planned condition than in the Control condition ($F(1, 368) = 42.01, p < .001$). Targeted item comparisons shed light on the overall effects of planned consumption. Specifically, fulfilling plans was rated as more productive than making those plans within the Planned condition ($t(187) = 4.56, p < .001$), and both components were more productive than doing the same activity with no plan in the Control condition (p 's $< .001$). Together with the previous studies, these findings indicate that consumers see the experience of plan fulfillment as productive, separate from any judgment about the process of planning. In practice, both aspects jointly contribute to the appeal of planned consumption for productivity-motivated consumers.

This research reveals a novel influence of productivity goals on consumption. Insights from this work can help consumers to feel better about how they spend their time and adapt to the cultural pressure of constant productivity. For marketers, this work informs the design of planning features in digital products, effective targeting of productivity-oriented customers, and contextual ad opportunities for productivity-related offerings (e.g., YouTube users watching their Watch Later list).

Quantitative Feedback Increases Social Comparison Motivation

EXTENDED ABSTRACT

Recent technological advances have made it possible to provide consumers with quantitative feedback about their work and leisure pursuits. For example, a consumer's phone tracks how many steps she takes in a day, how quickly she completes the crossword puzzle, her running pace, and how much time she spends on social media. In most cases, tracking has become the default. Consumers must opt out of receiving quantitative feedback on their performance.

How might receiving this quantitative feedback affect consumers' behavior? We hypothesize that receiving quantitative information will drive consumers to seek social comparison with others. Imagine a consumer who recently shifted from completing the crossword in the newspaper to completing it on her phone. When completing the paper crossword, she may have had a broad sense of how easy the crossword was for her. However, when completing it online, she is provided with an unambiguous numerical assessment of performance (e.g., "you finished the Monday crossword in 7:38"). In theory, regardless of the medium the consumer chooses, she is completing the crossword for leisure. Her performance in comparison to others is irrelevant.

Yet, we suggest that getting quantitative feedback on performance should lead the consumer to seek social information. According to social comparison theory (Festinger 1954) non-social means are not available, people evaluate their opinions and abilities by comparing them with others. In the absence of both physical and social comparison, subjective evaluations of opinions and abilities are unstable. When an objective, non-social basis for the evaluation of one's ability is readily available, people will not evaluate their opinions or abilities by comparison with others. The tendency to compare oneself with some specific other decreases as the difference between self and other increases (e.g., I do not compare my athletic performance to an Olympian, consumers have an innate desire to evaluate their abilities. This evaluation becomes easier when the consumer gets an unambiguous numerical assessment of her performance (Festinger 1954) non-social means are not available, people evaluate their opinions and abilities by comparing them with others. In the absence of both physical and social comparison, subjective evaluations of opinions and abilities are unstable. When an objective, non-social basis for the evaluation of one's ability is readily available, people will not evaluate their opinions or abilities by comparison with others. The tendency to compare oneself with some specific other decreases as the difference between self and other increases (e.g., I do not compare my athletic performance to an Olympian. We suggest that the mere act of receiving quantitative feedback prompts consumers to seek context for their score (i.e., to compare their score to others).

In study 1, we asked participants ($N = 399$) to imagine completing the New York Times mini crossword online. All participants imagined getting a pop-up telling them their solve time. Participants were randomly assigned to have the pop-up message reveal their solve time (30 seconds) or have their solve time blurred out. Then, participants were shown an example Leaderboard that displayed their friends' names and solve times. Participants reported how long they would be willing to wait for the Leaderboard to load. Participants in the feedback condition were willing to wait longer to see the leaderboard ($M = 40.49$ seconds, $SD = 76.28$) than participants in the no feedback condition ($M = 28.33$ seconds, $SD = 38.75$), $t(293.49) = 2.01, p = .046$. This finding replicates if participants are given the

opportunity to wait for one other person's score versus a leaderboard of scores, $t(540) = 2.50, p = .01, d = .21$.

In study 2, we replicated this finding behaviorally. Participants ($N = 441$) completed a series of 30 puzzles. In each puzzle, participants counted the number of zeros in a 6 by 6 matrix. They had three minutes to finish as many puzzles as possible. After completing the first round of puzzles, participants were randomly assigned to receive or not receive feedback on their performance. Then, participants were informed that they would be doing another set of 30 puzzles. Before beginning, participants were informed that they had the opportunity to see how another participant had performed on round 1, but that they would have to wait for the computer to load the score. Our primary dependent variable was how long participants waited to see another person's score. Participants in the feedback condition waited longer ($M = 35.81$ seconds, $SD = 30.11$) than participants in the no feedback condition ($M = 19.92$ seconds, $SD = 26.92$), $t(439) = 2.17, p = .03$.

In studies 3A-3C, we explored boundary conditions on the effect. In study 3A, using a step-tracking scenario, we compared desire to seek social information among participants who received quantitative, qualitative (i.e., "good job") or no feedback on their performance. Participants in the quantitative feedback condition ($M = 53.16$ seconds, $SD = 105.84$) were willing to wait longer to see scores than participants in the qualitative feedback ($M = 36.48$ seconds, $SD = 78.15$) and no information control conditions ($M = 30.74$ seconds, $SD = 46.18$), $F(2, 433) = 3.06, p = .048, \eta_p^2 = .014$. Post-hoc tests revealed that participants in the quantitative feedback condition waited significantly longer than participants in the control condition, $t(433) = 2.39, p = .02$, and marginally longer than participants in the qualitative condition, $t(433) = 1.77, p = .08$.

In study 3B, we tested whether participants would still seek social information if they were provided with a non-social referent. According to social comparison theory (Festinger 1954) non-social means are not available, people evaluate their opinions and abilities by comparing them with others. H2B: In the absence of both physical and social comparison, subjective evaluations of opinions and abilities are unstable. H2c: When an objective, non-social basis for the evaluation of one's ability is readily available, people will not evaluate their opinions or abilities by comparison with others. H3: The tendency to compare oneself with some specific other decreases as the difference between self and other increases (e.g., I do not compare my athletic performance to an Olympian, consumers should only seek social comparison in the absence of a better referent. Therefore, providing a valid non-social referent (i.e., an expert recommendation) should reduce consumers' reliance on social comparison. Indeed, consumers who imagined seeing quantitative feedback (vs. no feedback) on their screen time reported higher willingness to wait for social information only if they were not provided with an expert recommendation for daily screen time, $F(1, 591) = 4.04, p = .045, \eta_p^2 = .01$.

In study 3C, we tested whether participants who get quantitative feedback prefer to receive social information over other performance-relevant information (i.e., comparisons to themselves in the past, called "temporal comparisons"). Specifically, we randomly assigned participants based on a 2 (feedback: quantitative, no information control) x 2 (comparison: temporal, social) design. Participants imagined tracking their daily water consumption and receiving quantitative (or control) feedback. Then, participants reported how long they would be willing to wait to see temporal or social comparisons. Among participants who were given the option to make a temporal comparison, there was no difference between the quantitative and no information conditions, $F(1, 816) = .05, p = .83, \eta^2 = .00$.

However, participants were willing to wait longer for social information in the quantitative vs. control feedback condition, $F(1, 816) = 4.82, p = .03, \eta^2 = .01$.

Work-to-Unlock Rewards: Leveraging Goals in Reward Systems to Increase Consumer Persistence

EXTENDED ABSTRACT

We propose that consumers persist more in goal-related activities when they first need to "work-to-unlock" rewards—that is, when they receive continuous rewards only after first completing a few unrewarded goal-related actions compared to "work-to-receive" rewards—that is, when they receive continuous rewards after the first goal-related action completed. We suggest that work-to-unlock rewards naturally encourage consumers to set an attainable goal to start earning rewards, leading them to be more motivated initially to reach that goal (Locke and Latham 1990). Second, unlike mere goal setting (Fishbach, Dhar, and Zhang 2006; Heath, Larrick, and Wu 1999) keeping in shape, consumers are likely to persist with work-to-unlock rewards beyond that initial goal due to low progress (i.e., perceived lack of accomplishment) towards earning rewards.

In Study 1 ($N = 646$), participants were incentivized to floss their teeth for 12 days. In the Work-to-Receive condition, participants were paid \$0.24 each day they flossed their teeth. In the Work-to-Unlock condition, participants were not paid for the first three days that they flossed their teeth. However, after three days, they received \$0.32 for every day that they flossed their teeth. We used these reward magnitudes to hold constant the total possible amount participants could receive if they successfully flossed for 12 days. Participants in the Work-to-Unlock (vs. Work-to-Receive) condition flossed significantly more days ($M_{\text{Work-to-unlock}} = 8.03, SD = 4.33$; $M_{\text{Work-to-receive}} = 6.96, SD = 4.29, p = .002$).

In Study 2 ($N = 300$), we held constant the payment amount per task—thus the total possible bonus was lower in the Work-to-Unlock condition. All participants learned that they would be asked to complete a series of short workouts. In the Work-to-Receive condition, participants were informed that they would receive 5 points, worth a 2-cent bonus, starting from the first workout they completed. In the Work-to-Unlock condition, participants were informed that they would not receive any points/badge for the first four workouts. After completing four workouts, they would receive 5 points, worth a 2-cent bonus for each workout they completed. Participants completed significantly more workouts in the Work-to-Unlock condition than in the Work-to-Receive condition ($M_{\text{Work-to-unlock}} = 9.80, SD = 5.32$; $M_{\text{Work-to-receive}} = 8.15, SD = 5.53; p = .009$). Studies 3 and 4 replicated this effect with non-monetary rewards in a vocabulary task ($p = .001$) and with a product evaluation task ($p < .001$).

In Study 5, we examined how participants with work-to-receive rewards with a mere goal compared to those with work-to-unlock rewards in terms of persistence. We used the same conditions as Study 2 with one new condition, work-to-receive-goal. In this condition, they had the same work-to-receive reward structure but they were also encouraged to set a goal to complete at least four workouts. Participants with work-to-unlock rewards completed more workouts than those in both work-to-receive reward conditions ($M_{\text{Work-to-unlock}} = 8.14, SD = 5.30$; $M_{\text{Work-to-receive}} = 7.03, SD = 4.97; p = .024$; vs. $M_{\text{Work-to-receive with Goal}} = 7.20, p = .054$). While those with work-to-receive rewards with a mere goal were motivated initially to reach their goal, like those with work-to-unlock rewards, they were significantly less motivated once they reached their goal. Of participants who reached the goal to workout at least four times, participants were significantly more likely to persist and complete more workouts in the Work-to-

Unlock condition ($M_{\text{Work-to-receive with Goal}} = 8.31, SD = 4.15, p < .001$). We suggest this is because consumers are likely to feel a lower sense of progress and achievement towards earning rewards when receiving work-to-unlock rewards relative to work-to-receive rewards, leading them to persist more.

If this theory is true, other reward structures that encourage goal setting, but that do not result in lower progress towards earning rewards, should also be less motivating than work-to-unlock rewards. In Study 6 and 7, we examined whether consumers persist more with work-to-unlock rewards than what we term goal based lump sum rewards, when participants receive a small lump sum reward after completing a series of goal-relevant tasks. Study 6 ($N = 304$) found that overall participants are more motivated with work-to-unlock rewards ($M_{\text{Work-to-Unlock}} = 26.09, SD = 16.56$ vs. $M_{\text{Goal-Based Lump Sum}} = 21.96, SD = 16.86, p = .032$). In Study 7 ($N = 1,066$), we examined whether they indeed are more likely to persist after reaching their goal by requiring all participants to reach the “unlocking” threshold. The work-to-unlock and work-to-receive conditions were the same as study 1b. In the Goal-Based Lump Sum condition, participants learned that for every 4 workouts they completed, they would receive 20 points (worth 8 cents) and a badge. We required all participants to complete the first four workouts. After this point, participants could stop completing workouts at any points. Participants completed more workouts after the initial four workouts in the Work-to-Unlock condition than the Work-to-Receive condition and the Goal-Based Lump Sum condition ($M_{\text{Work-to-Unlock}} = 4.60, SD = 4.53$ vs. $M_{\text{Work-to-Receive}} = 3.40, SD = 4.33, p < .001$ vs. $M_{\text{Goal-Based Lump Sum}} = 3.65, SD = 4.56, p = .005$).

Study 8 ($N = 814$) examined a theory-consistent boundary condition of work-to-unlock rewards. We propose that if consumers are indeed setting a goal to unlock the rewards, the length of the unlocking period may attenuate the effect, such that a longer unlocking period is demotivating (Dalton and Spiller 2012; Locke and Latham 1990). All participants had the opportunity to type 100 word sets. Participants received a .75 cent bonus for every word set they typed in the Work-to-Receive condition; 1 cent bonus for every word set after typing 25 sets in the Work-to-Unlock condition; 3 cent bonus for every set after typing 75 sets in the Work-to-Unlock -Longer Unlocking Period; and a 75 cent bonus if they typed all 100 sets in the Lump Sum condition. Participants in the Work-to-Unlock condition typed significantly more sets of words compared to all three other conditions (all $ps < .02$).

Overall, this research introduces a novel intervention that increases the motivational value of continuous rewards, helping to jumpstart consumers' progress towards their goals.

Stuck in a Rut: The Behavioral Entrenchment Effect

EXTENDED ABSTRACT

Consumers often get stuck in ruts, continuing unfavorable activities when they could easily switch to preferred alternatives. We deem such behaviors—continuing less-preferred activities while passing up clear opportunities for improvement—as behavioral ruts. Consumers' daily lives are filled with behavioral ruts—envision a shopper awkwardly juggling an armful of groceries as they walk through a store rather than grabbing a nearby cart; or, think about a consumer struggling to make a purchase on their phone rather than switching to a nearby computer where they could navigate the site more easily; finally, consider someone laying on the couch and continuing to consume a TV program they are not enjoying, rather than switching to the fun book sitting right next to them on the side table. In a survey of 118 adults, 94% reported having experienced behav-

ioral ruts, and over 50% said they find themselves exhibiting such behaviors at least once a week.

Behavioral ruts are perplexing and important, detracting from consumer, organizational, and societal well-being. In this research, we investigate this phenomenon and identify a novel underlying cause: behavioral entrenchment—a state of increasing task-set accessibility. As entrenchment deepens, the task procedures become increasingly accessible (i.e., the ease with which they come to mind), and the accessibility of alternative task procedures decreases. As a result, switching to a different task *feels* more difficult than continuing with the highly accessible task, increasing the likelihood consumers fail to make a change. Five experiments demonstrate that participants entrenched in a less-preferred task actively choose to continue that task, even when given a nearly costless opportunity to switch to something they prefer. This phenomenon is driven by the felt difficulty of change, increases with duration, and is attenuated by disrupting task-set activation (either by dividing attention or breaking repetition).

In all experiments, we assign participants to a tedious task of uncertain length and, part-way through, give them the opportunity to switch to something they prefer. While a naive observer might expect everyone to switch, we predict and find that a significant subset continues the tedious task. In a pilot study, participants rated tasks before being assigned to their less-preferred task (transcribing sideways text). Partway through, half of the participants were automatically switched to their preferred task (Boggle) and half were not. Participants who were automatically switched reported greater satisfaction ($M=3.36$) than those not switched ($M=2.02; t(165.68)=6.34, p<.001$), suggesting that participants who forgo the opportunity to switch to their preferred task will be worse off.

Study 1 tested our prediction that a significant subset of participants would fail to switch to their preferred task when given an explicit opportunity to do so. Participants were assigned to the tedious transcription task, and partway through given one of three opportunities to switch to an alternative task they preferred (Boggle): control (click a button to switch or continue transcribing to stay); cost-equated (click a button to switch or to stay); or new paragraph (click a button to switch or click a button to continue transcribing a new paragraph). As predicted, 23.14% chose to continue their less-preferred task rather than switch, a proportion significantly greater than 0 ($p < .001, 95\% CI [19.87, 26.67]$). Compared to control, the proportion of participants who stayed with their less-preferred task did not differ in the cost-equated ($\chi^2(1, n = 425) = 0.25, p = .619$), or new-paragraph condition ($\chi^2(1, n = 409) = 0.29, p = .59$). These findings suggest that some participants indeed appear to have gotten stuck in a rut, even when the cost to switch or stay was equated and when staying meant they would continue the activated task set but transcribe a different paragraph, reducing concerns of a completion goal.

Studies 2A and 2B examined the relationship between duration of engagement, felt difficulty of change, and switch decision. Participants rated their preferences and were then assigned to the tedious transcription task. At one of three points during the task, participants were asked how difficult it would feel to switch to a different task, on the: 3rd round (low entrenchment); 6th round (medium entrenchment); or, 9th round (high entrenchment). High-entrenchment participants anticipated switching would feel more difficult ($M=2.82$) than low- ($M=2.15$) and medium- ($M=2.37$) entrenchment participants ($bs = .67$ and $.45, ts(319) = 3.09$ and $2.11, ps = .002$ and $.036$, respectively). High-entrenchment participants also anticipated that, given a chance to switch, they would be more likely to continue the less-preferred task (25.49%) compared to low-entrenchment participants

(11.93%; $\chi^2(1, n=211)=6.43, p=.011$), a choice mediated by felt difficulty (95% CI [-.02, .00]). Study 2B replicated these findings with a consequential behavioral measure. When given the switch opportunity, significantly more high- (vs. low-) entrenchment participants chose to continue their less-preferred task (27.55% vs. 15.74%; $\chi^2(1, n=206)=4.27, p=.039$). These results suggest that greater performance duration increases entrenchment, thereby increasing the felt difficulty of switching and decreasing the likelihood of doing so.

Studies 3 and 4 tested whether disrupting engagement—by dividing attention or breaking repetition—increased switching. In Study 2, participants performed the tedious task either on its own (focused-attention), or concurrently with another task (divided-attention). Participants were more likely to continue their less-preferred task in the focused-attention condition (22.86%) than in the divided-attention condition (12.82%; $\chi^2(1, n=257)=4.30, p=.038$). In Study 4, participants performed a tedious task either repeatedly or intermixed with another task. Participants were more likely to continue their less-preferred task in the repeating condition (29.79%) than the intermixed condition (21.77%; $\chi^2(1, n=656)=5.50, p=.019$). Thus, both dividing attention and breaking repetition reduced entrenchment and increased participants' likelihood of switching to their preferred task.

This research offers new insights into why consumers continue less-preferred behaviors and offers a mechanism that may shed light on other well-known phenomena in which consumers needlessly stick with suboptimal behaviors. We further show that entrenchment, and its associated consequences, can be attenuated and begin to uncover methods to overcome the difficulties of behavior change. This talk will be of interest to a broad audience including academics, practitioners, and policymakers.

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For a Greener World: Consumers' Attitudes and Behaviors toward Sustainable Practices

Chair: Ms. Sylvia Chang, University of Washington, USA

Paper #1: Affording Disposal Control: The Effect of Circular Take-Back Programs on Psychological Ownership and Valuation

Anna Tari, Boston University, USA
Remi Trudel, Boston University, USA

Paper #2: You're More Expendable: Consumers' Perceptions and Usage of Repurposed Products

Sylvia S.E. Chang, University of Washington, USA
Jennifer D'Angelo, Texas Christian University, USA
Francesca Valsesia, University of Washington, USA

Paper #3: The Effect of Perceived Control on Local Consumption

Arani Roy, McGill University, Canada
Ashesh Mukherjee, McGill University, Canada

SESSION OVERVIEW

Consumers and marketers are placing increasing interest and importance on sustainable practices. A recent survey found that 23% of US marketers indicated sustainability as one of the leading social causes they focused on in 2021 (Advertising Perceptions 2021). Consumers are also concerned about sustainability, with 28% of adults worldwide indicating climate change and protecting the environment as the top personal concern (Deloitte 2021). However, not all sustainable practices are equally well received by consumers and yield positive consequences. Therefore, the current session addresses this important topic by bringing together three papers that explore consumers' perceptions of sustainable business practices. Sustainable practices come in many forms, from how a product can be disposed of, what a product is made of, and who makes the product. These papers examine consumers' perceptions of different types of sustainable practices and how these perceptions affect subsequent attitudes and behaviors.

Tari and Trudel will begin the session with their investigation on consumers' perceptions of take-back programs that many companies offer. The authors find that offering take-back programs increases consumers' perceptions of control over disposal, which, in turn, increases consumers' psychological ownership of the product. As a result, consumers have higher valuations of a product when there is an opportunity to participate in a circular take-back program.

Material from products given to take-back programs are often repurposed into new products. Chang, D'Angelo, and Valsesia examines consumers' perceptions of such products made from repurposed materials. The authors find that consumers perceive these repurposed products as more expendable, meaning consumers are more likely to use these products in risky contexts or occasions that require less care. This effect is driven by consumers' belief that repurposed products have already provided value to society.

The sustainability of a product is not only dictated by the product's material, but also who produces the product. For example, local producers (e.g., local farmers) impart less of an environmental impact in the production process of goods. Roy and Mukherjee find that consumers perceive consumption from local producers as providing a warm glow. This warm glow is particularly attractive to those low in control, as they seek to counteract negative affect. As such, those low in control are more likely to engage in local consumption.

Taken together, the three papers provide insights on consumers' perceptions of various sustainable practices. Some of these perceptions, like control over disposal and warm glow, can lead to positive outcomes related to valuations and support for local producers. However, other perceptions, like product expendability, may lead to greater

waste as products become more quickly damaged. These findings not only broaden our understanding of sustainable consumption from theoretical standpoint by contributing to existing literature (Kamleitner, Thurridl, and Martin 2019; Trudel, Argo, and Meng 2016; White, Habib, and Hardisty 2019; Winterich, Nenkov, and Gonzales 2019), but also provide important implications for consumers and businesses in promoting sustainable decision-making.

Affording Disposal Control: The Effect of Circular Take-Back Programs on Psychological Ownership and Valuation

EXTENDED ABSTRACT

The circular economy, a "closed-loop" system designed so that products flow back into the production cycle after use, presents a fundamental shift in consumption, where considering disposal happens during or even before making the purchase decision. Companies like Adidas, Patagonia, H&M, and IKEA are embedding circular principles into their marketing strategy and implementing circular take-back strategies that allow consumers to bring products back to them so that they can be put back into the production cycle (Stahel 2016).

Based on prior research, we know that people are strongly averse to creating waste and that wastefulness is aversive enough to motivate people and to influence consumer behavior (Bolton and Alba 2012; Donnelly, Lambertson, Reczek and Norton 2017; Sun and Trudel 2017; Trudel and Argo 2013; Trudel et al. 2016). We investigate whether making consumers think of disposal at acquisition through the promotion of take-back strategies increases product valuation. We base our hypothesis on the basis that participating in a take-back program uniquely affords increased perceived control over the product by allowing for a product to be fully utilized and allowing consumers to avoid the self-threat of being wasteful (Bolton and Alba 2012; Trudel et al. 2016).

Method and Data

As preliminary evidence, we report field data consisting of 2368 consumers participating in a retailer's take-back program. The field data provides evidence that clients who participated in a take-back program increase spending over time.

Study 1 ($N = 300$) tested our main effect in an online experiment. Participants were randomly assigned to one of the two between-subjects conditions, which manipulated the saliency of disposal at purchase by the firm's circular take-back program advertising (no disposal information vs. circular program salient). Respondents ascribed a significantly higher value to a product promoted in a circular take-back program ($\$28.93$, $SD = 9.23$) vs. without the circular program ($\$26.07$, $SD = 8.24$; $F(1, 299) = 7.984$, $p = .005$).

It is possible however, that consumers ascribed more value to the product because of a general halo effect of the brand engaging in a sustainable initiative. This possibility is ruled out in Study 2 ($N = 590$) where participants were randomly assigned to one of four between-subjects scenarios, where we manipulated the type of information shown in the ad (no information vs. circular program salient vs. donation to curbside recycling vs. CSR diversity commitment). Participants attributed a significant higher value to a product promoted in a circular take-back program ($\$28.58$, $SD = 9.42$) vs. promoted together with information about the company donating to curbside recycling campaign ($\$25.69$, $SD = 9.51$; $t(586) = 2.89$, $p = .008$); vs. a campaign

on CSR diversity commitment ($\$24.93$, $SD = 8.42$; $t(586) = 3.65$, $p = .001$).

In Study 3 ($N = 298$), we show mediation process (Hayes 2013). Participants were randomly assigned to one of two between-subjects scenarios (circular program salient vs. no disposal information). Participants in the circular disposal condition reported greater willingness to pay ($\beta_{\text{circular_ad}} = 9.42$, $SE = 3.63$, $95\% \text{ CI} = [3.63; 17.95]$) and loyalty ($\beta_{\text{circular_ad}} = .10$, $SE = .04$; $95\% \text{ CI} = [.042, .184]$) for the product (i.e., a sofa) because they experienced more disposal control and in turn more psychological ownership over the product.

Study 4 ($N = 801$) replicates our main effect and shows support to our process explanation. Participants were randomly assigned to a 2 (circular program salient vs no disposal information) \times 2 (disposal control: companies-*hold-control* vs consumers-*hold-control*) between subjects' design. We manipulated disposal control by showing participants an article stating that companies (vs. consumers) hold control over what happens to products when consumers give them back through take-back programs. As predicted, and consistent with positive valuation due to enhanced psychological ownership by disposal control, when participants read the article revealing that companies have control over products in take-back programs the boost in willingness to pay disappeared ($M_{\text{CircularAd_CompaniesControl}} = \25.24 , $SD = 9.068$) in comparison to when the article states that take-back programs give consumers more control ($M_{\text{CircularAd_ConsumersControl}} = \27.26 , $SD = 8.629$; $F(1, 800) = 5.200$, $p = .023$).

Summary of Findings

Across a variety of products and using externally valid take-back program promotional materials, we show that people ascribe more value to the same product when they expect to participate in a circular take-back products. Underlying the increase in product valuation and loyalty is the affordance of additional disposal control that is unique to circular take-back programs, which increases the capacity for the product to garner psychological ownership.

Key Contributions

Our research makes two important theoretical contributions. First, we contribute to the psychological ownership literature and identify a product affordance, disposal control, that is unique to circular take-back program products, which increases the capacity to garner psychological ownership. Prior work has shown that physically controlling products by touching (Atasoy and Morewedge 2017; Peck and Shu 2009) or controlling when, how, where, or how much a product is used (Baxter, Aurisicchio, and Childs 2015), can garner psychological ownership. We introduce disposal control as a determinant of psychological ownership. Second, we add to the literature on disposal behavior and sustainable consumer behavior (e.g., Donnelly et al. 2017; Trudel and Argo 2013; Trudel et al. 2016; Winterich, Nenkov, and Gonzales 2019) by considering the effects of circular strategy on consumer decision making.

Our findings provide implications for managers debating whether to implement circular take-back strategies that make consumers think about disposal at acquisition. Our findings are also relevant for government and policymakers trying to encourage companies to implement EPR (Extended Producer Responsibility) schemes (Wang and Ming 2011). Our research shows that companies can benefit from implementing circular take-back programs because it affords consumers increased disposal control which they value.

You're More Expendable: Consumers' Perceptions and Usage of Repurposed Products

EXTENDED ABSTRACT

Many brands (e.g., Allbirds, Cotopaxi, H&M, and Patagonia) are promoting sustainability by manufacturing products with repurposed materials (e.g., clothing made out of recycled fabric; Kamleitner et al. 2019; Winterich et al. 2019). This research examines how consumers perceive and use such products. We find evidence that consumers perceive products made of repurposed materials as more expendable, as demonstrated by their intention to use these products in contexts that could be risky. Moreover, we find this effect is driven by consumers' perception that these kinds of products have already provided value.

Study 1 (material type: repurposed vs. control; $N = 202$) provided initial evidence that consumers are less careful in using products made out of repurposed materials. Participants were asked to imagine purchasing a new cotton t-shirt. Those in the repurposed condition also read that the new cotton t-shirt was made with fabric that had been recycled. Then, participants were asked to rate how likely they were to wear their t-shirt during various occasions (1 = Not likely at all, 9 = Extremely likely), including occasions a pre-test indicated could be risky to the shirt (painting a wall, working out, cooking) and a neutral occasion (watching TV). There was a significant effect of material type on the risky usage index ($\alpha = .759$), with those in the repurposed condition ($M = 6.09$, $SD = 1.87$) more likely to wear the t-shirt during risky usage occasions compared to those in the control condition ($M = 5.36$, $SD = 2.15$), $F(1, 200) = 6.58$, $p = .011$). However, there was no effect on the likelihood of wearing their t-shirt during the neutral occasion (i.e., when watching TV), $F(1, 200) = .29$, $p = .591$.

Study 2 (2 (material type: repurposed vs. control) \times 2 (usage occasion: risky vs. neutral); $N = 601$) replicated our findings using a different product category. We asked participants to imagine buying a new cup made of glass (control condition) or a new cup made with repurposed glass (repurposed condition) and explained the production process of making that cup. We then asked participants to rate their likelihood of using the cup in the risky usage condition (going to a busy outdoor picnic) or the neutral usage condition (having dinner at home). Consistent with study 1, we found a significant interaction between the material type and usage occasion, $F(1, 597) = 24.94$, $p < .001$, such that when the usage occasion was risky, those in the repurposed condition were more likely to use their cup compared to those in the control condition, whereas there was no difference between the two material type conditions when the usage occasion was neutral.

Study 3 (material type: repurposed vs. control; $N = 201$) tested the underlying process of extracted value. As in study 1, we asked participants to imagine purchasing a new t-shirt made from cotton vs. repurposed cotton and indicate their likelihood of wearing the t-shirt in risky usage occasions. Then, we asked participants to rate the extent to which the t-shirt has provided value thus far, which served as our underlying process measure. We replicated the finding that those in the repurposed condition ($M = 6.06$, $SD = 2.05$) were more likely to wear their t-shirt in these potentially risky occasions compared to those in the control condition ($M = 5.02$, $SD = 2.00$), $F(1, 200) = 10.48$, $p = .001$. Those in the repurposed condition ($M = 4.36$, $SD = 1.58$) also rated their t-shirt higher on extracted value compared to those in the control condition ($M = 3.31$, $SD = 1.56$), $F(1, 199) = 22.36$, $p < .001$, and this perception mediated the link between material type and usage intentions, $B = .36$, $SE = .13$, $95\% \text{ CI} = .15, .65$ (Hayes 2013, model 4).

Study 4 and 5 tested the marketing implications that consumers prefer repurposed products for usage occasions that could be risky. Study 4 (material type: repurposed vs. control; $N = 326$) gave undergraduate students a chance to enroll in a lottery to win a cotton t-shirt

(vs. a repurposed cotton t-shirt). Students were asked to choose between a t-shirt appropriate for workouts (reflecting a risky context) and a t-shirt appropriate for classes (reflecting a neutral context). We found that those in the repurposed (vs. control) condition were more likely to choose the workout t-shirt, $\chi^2(1) = 3.15, p = .076$, demonstrating implications of our findings using a consequential choice.

Study 5 (within-subjects design; $N = 298$) asked participants about three product categories (cotton t-shirt, suede shoes, wine glass). For each product category, participants thought of two usage occasions, one reflecting a risky occasion (e.g., outdoor gardening shoes) and one reflecting a neutral occasion (e.g., outdoor lounge shoes). For each usage occasion, participants chose between a product made from repurposed versus new material. Results indicated that participants were more likely to choose the repurposed product when the usage occasion was risky (vs. neutral), and this replicated across all three product categories of t-shirt ($\beta = 4.10, SE = 0.97, t(297) = 4.22, p < .001$), shoes ($\beta = 1.12, SE = 0.46, t(297) = 2.42, p = .016$), and wine glass ($\beta = 9.82, SE = 0.98, t(297) = 10.04, p < .001$). Thus, marketers in product categories with heightened potential for risk (e.g., gardening supplies) may particularly benefit from offering repurposed products.

Across five studies, we demonstrate a novel effect that consumers have higher intentions to use products made of repurposed materials in risky usage occasions. This effect is driven by consumers' perceptions that repurposed products have already provided value. Our research makes theoretical contributions by extending prior research examining the associations eco-friendly products have (Brough et al. 2016; Luchs et al. 2010) and their intended usage. Moreover, our findings have practical implications for marketers, as we provide evidence that consumers prefer repurposed products for occasions and needs that are risky.

The Effect of Perceived Control on Local Consumption

EXTENDED ABSTRACT

Local consumption such as buying from neighborhood stores or local farmers helps communities create jobs, circulates money within communities, and reduces the ecological footprint of marketing activities. Despite the importance of local consumption, research on this topic is sparse with prior work focusing on concern for the environment (Bougherara et al. 2009), concern for the prosperity of the local economy (Young 2021), and consumer identity (Zhang and Khare 2009) as drivers of the likelihood of local consumption. We extend this research by proposing that lower perceived control increases the likelihood of local consumption. Further, we propose that the effect of perceived control on the likelihood of local consumption is mediated by feelings of anticipated warm glow. This research makes two key theoretical contributions. First, we identify perceived control as a novel antecedent of the likelihood of local consumption. Second, we show that feelings of anticipated warm glow underlie the effect of perceived control on the likelihood of local consumption.

Prior research has shown that perceived control is an essential element of wellbeing (Whitson and Galinsky 2008), with high control associated with positive emotions and mental health (Landau et al. 2015) they respond to events and cognitions that reduce control with compensatory strategies for restoring perceived control to baseline levels. Prior theory and research have documented 3 such strategies: bolstering personal agency, affiliating with external systems perceived to be acting on the self's behalf, and affirming clear contingencies between actions and outcomes within the context of reduced control (here termed specific structure and low control associated with negative emotions and anxiety-provoking thoughts (Tangney et al. 2018). Research has also shown that individuals experiencing negative affect

make judgments and decisions associated with positive affect in a bid to improve their affective state. For example, individuals in a negative mood have been shown to engage in mood repair by choosing indulgent food (Gardner et al. 2014).

These prior findings indicate that low-control consumers experience negative affect, which they should seek to counteract with sources of positive affect. In the present context, we argue that one potential source of positive affect is anticipated warm glow associated with local consumption. This is because local consumption helps local sellers, and thinking about helping others has been shown in prior research to create positive feelings of warm glow (Andrews et al. 2014; Bezençon et al. 2020). If local consumption is tied to positive feelings of anticipated warm glow, then low-control consumers should focus on and act consistently with these positive feelings by expressing a higher likelihood of local consumption. On the other hand, high-control consumers do not experience negative affect from lack of control. Hence these consumers should be less likely to focus on anticipated warm glow and thereby express lower likelihood of local consumption.

Hypothesis 1: Compared to high perceived control, low perceived control will lead to a greater likelihood of local consumption.

Hypothesis 2: The effect of perceived control on the likelihood of local consumption stated in H1 will be mediated by anticipated warm glow.

STUDY 1

We created a screen capture of a fictional local grocery delivery app called 'Shoplocalfarmers' and ran a Facebook advertising campaign in India for this app. We manipulated perceived control in a naturalistic manner by exploiting differences between states in India on COVID-19 cases and regulations (high COVID cases/low perceived control: Kerala; low COVID cases/ high perceived control: Uttar Pradesh). We measured the click-through rate (CTR) of our target ad, which is the ratio of clicks on the ad to unique views of the ad. Consistent with hypothesis H1, CTR was significantly higher in the low control (.060%) than high control condition (.040%, $\chi^2 = 10.47, p = .001$).

STUDY 2

We partnered with an Indian e-commerce retailer named 'Imli' (<https://imlishop.in/>) that sells household products made by locals. We ran a Facebook ad campaign for 'Imli' in India that highlighted the local nature of sellers by showing pictures of local art forms in the ad. The low control version of the ad included a sentence reminding people of lack of control, while this information was absent in the high control version. Consistent with hypothesis H1, CTR was significantly higher in the low control (1.412%) than high control condition (1.224%, $\chi^2 = 6.35, p = .012$).

STUDY 3

This study was designed as 2 (perceived control: low vs. high) x 2 (seller positioning: local vs. non-local) between-subjects. Perceived control was manipulated using a ranking task. Participants then browsed a fictional home décor website we developed for this study called DAFA and saved products they were interested in buying to the website's shopping cart. We manipulated seller positioning by varying text on the website landing page, describing the websites as selling locally-sourced home décor products or simply home décor products. Finally, we measured the dollar value of the items added in the cart.

Supportive of hypothesis H1, in the local seller positioning condition, dollar value was higher for low control than high control respondents ($M_{\text{Low-control}} = \93.77 vs. $M_{\text{High-control}} = \74.98 ; $p = .022$). In contrast, there was no difference in dollar value between low control and high control respondents in the non-local seller positioning condition ($M_{\text{Low-control}} = \79.18 vs. $M_{\text{High-control}} = \84.20 ; $p = .554$).

STUDY 4

This study leveraged the fact that the social media platforms of Facebook, Whatsapp, and Instagram were unavailable for much of the day on October 4th, 2021. Participants in the low control condition were asked to write about how this event affected them, while those in the high control condition wrote about their favorite movie. Participants then indicated their usage intent of a local grocery delivery app 'Shoplocalfarmers'. Supportive of H2, there was a significant indirect effect of perceived control on app usage intent through anticipated warm glow ($\beta = -.16$, $SE = .08$, $LCI = -.32$, $UCI = -.01$).

STUDY 5

In this study, we investigated the role of personal agency and empathy as potential alternative explanations for the proposed effect. Supportive of H2, bootstrap mediation analysis (Hayes 2013, Model 4) showed a significant indirect effect through anticipated warm glow ($\beta = -.15$, $SE = .07$, $LCI = -.30$, $UCI = -.01$). Results further showed that the indirect effects through personal agency ($\beta = -.01$, $SE = .04$, $LCI = -.09$, $UCI = .06$) and empathy ($\beta = -.05$, $SE = .05$, $LCI = -.15$, $UCI = .03$) were not significant thus excluding these alternative explanations.

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Trust Issues in the Daily Coexistence with Advanced Technology

Chair: Ms. Sonia Kim, Columbia Business School

Paper #1: The Effect of Digitally Altered Images on Consumers

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Jen H. Park, UBC Sauder School of Business, British Columbia
Liyin Jin, Fudan University School of Management, China

Paper #2: The Consequences of Relying on YouTube Recommendation Algorithms

Sonia S. Kim, Columbia University, USA
Jaeyeon Chung, Rice University, USA
Gita V. Johar, Columbia University, USA

Paper #3: Does Automation Lower Meaningful Work?

Sarah Ward, Gies College of Business, University of Illinois at Urbana-Champaign, USA
Roshni Raveendhran, Darden School of Business, University of Virginia, USA
Tami Kim, Darden School of Business, University of Virginia, USA

Paper #4: Preferring People but Listening to Algorithms: Anticipated Preferences vs. Utilization of Algorithmic Advice

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Rachel J. Schlund, Cornell University, USA

SESSION OVERVIEW

The high speed with which technology is advancing and becoming an integral part of our daily lives has caused some “trust issues.” Artificial intelligence (AI)-based recommendation systems suggest what products people should consume (Longoni and Cian 2022), and even work human employees at work (Wilson and Daugherty 2018). When consumers interact with other people on social media, they also borrow the help of advanced technology such as photoshopping or video editing tools. Consumers realize this intrusion of technology in their daily lives and question whether they can fully trust advanced technology and use it. The four papers in this session discuss how consumers interact with technology and suggest ways to maximize consumer welfare, given this backdrop of evolving technology.

The first two papers shed light on the effect of advanced technology on the credibility of information sources, specifically whether consumers trust information from a product endorser or information on a video platform, when more sophisticated technology is involved. The first paper demonstrates, through both archival magazine data and experiments, that a moderate (vs. little) digital alteration on the image of a product endorser can increase the intention to purchase the advertised product; however, too much digital alteration decreases consumers’ purchase intentions. Next, the second paper investigates the effect of relying on YouTube’s recommendation system when deciding which videos to watch. They demonstrate that higher reliance on the recommendation system erroneously increases trust towards YouTube as a source for information, leading to higher belief in unverified videos on the platform. These papers highlight the effect of advanced technologies, such as digital alterations of images or recommendation systems, on trust. Trust in turn affects consumer decision on whether to purchase the endorsed product or believe the information on the platform.

The next two papers focus on discovering interventions to aid interactions with advanced technology, so that consumers can trust and rely on advanced technology. The third paper finds that AI assistance in the workplace decreases how meaningful people think their work is, due to the decreased perception of task complexity. Importantly,

they demonstrate that increasing the complexity of a task assisted by the AI helps restore the meaningfulness one feels about their work. The fourth paper finds that, while people anticipate preferring advice from people (versus an algorithm), they actually utilize algorithmic advice more. Breaking the decision-making process down to specific point estimates increases appreciation of algorithmic advice relative to human advice. Taken together, these four papers contribute to the literature by elaborating on the nature of consumer interactions with advanced technologies and the unintended effects of these interactions. They also offer practical implications for firms to maximize welfare among their consumers and employees who co-exist with advanced technology.

The Effect of Digitally Altered Images on Consumers

EXTENDED ABSTRACT

Digital alteration of images—through editing software like Photoshop, or popular mobile apps like Meitu and Facetune—has become ubiquitous in the beauty and fashion industries, social media, and other consumer domains. For decades, image alteration had been regularly used by professional photographers and marketers/advertisers. But the explosive growth of software and mobile app filters has allowed even amateurs to easily smooth, slim, or skew their faces and bodies with just a few clicks. In fact, 90% of young women reportedly use a filter or edit their photos before posting online (Gill 2021). As more consumers and marketers rely on image alteration, a question looms: How do digitally altered images affect consumers’ perception and choice?

We examine the effect of digitally altered images on consumers’ perception and purchase intentions. While digitally altered images may increase persuasion by making the model and the message more attractive (Pallak 1983; Till and Busler 2000), research on self-verification (Swann 1983) and source trustworthiness (Petty and Wegener 1998; Pornpitakpan 2004) suggest the opposite: unrealistic images of human faces and bodies might induce negative reactions for the model and the message. Two competing forces combined, we explore the possibility that the relationship between image alteration and consumer response is curvilinear, such that a moderate level of alteration can increase liking and induce positive response, whereas more extreme alternations conversely reduce liking and result in negative response. We find evidence for this hypothesized inverted U-shaped curve across a secondary dataset and two experiments. In doing so, we connect classic research on source characteristics with technology-enabled marketing actions (i.e., image alteration), revealing valuable insight on what is trusted and persuasive (Beverland and Farrelly 2010) in the new world overtaken by digitally altered images.

Study 1 examined the relationship between digital image alteration in advertisements and product purchase using archival magazine dataset matched with actual sales data. We obtained yearly unit sales data in China in 2016–2018 of 334 unique beauty products (158 makeup products of 22 international brands, 176 skincare products of 21 international brands). For these 334 beauty products, we collected ad images used in top magazine, social media, and outdoor advertisements during the same time period. This resulted in 1,305 unique ad images that contained human faces (e.g., celebrity, endorser), see figure 1. Two blind coders coded each of these images on the alteration level (“To what extent do you think the image (the face of the person) is photoshopped?” 1 = not at all, 5 = very much). Then, we analyzed how the image alteration level was related to product unit sales. A lin-

ear regression revealed that the alteration level of ad images positively influenced product sales ($B = 102418$, $SE = 36851$, $t(1255) = 2.78$, $p = .006$) as well as the quadratic term of the alteration level ($B = 15044$, $SE = 6266$, $t(1255) = 2.40$, $p = .016$) after controlling for covariates (i.e., brand, year, type (makeup vs. skincare), price).

Given that advertisements in magazines were generally photo-shopped, we directly manipulated the full spectrum of digital alteration levels in two follow-up experiments to more cleanly examine the causal effect of digital alteration on purchase intentions. In Study 2 ($N = 440$), we directly manipulated how much the face is altered across five levels (0%, 20%, 40%, 80%, 100%) using a popular image editing mobile app Meitu, figure 2. Undergraduate students in China ($M_{age} = 22.5$, 69.3% female) were randomly assigned to see one of the five digitally altered images of a female social media influencer and her post promoting a tea brand. After reading the post, participants indicated their purchase intention across three items ($\alpha = .92$) such as “How likely is it that you would purchase the recommended tea?” (1 = very unlikely, 7 = very likely). We found a curvilinear relationship between image alteration level and purchase intentions ($B = .17$, $SE = .05$, $t(437) = 3.266$, $p < .001$), figure 3: Participants who saw the 40% altered image ($M = 4.40$, $SD = 1.55$) reported the highest purchase intention, which was significantly greater than those who saw the 0% altered image ($M = 3.79$, $SD = 1.67$; Fisher’s LSD: $p = .012$) and those who saw the 100% altered image ($M = 3.53$, $SD = 1.55$; Fisher’s LSD: $p < .001$).

The goals of Study 3 ($N = 500$, pre-registered) were to examine the generalizability of this effect with the non-Asian population using full-body images and explore consumers’ perceptions in addition to purchase intentions. U.S. young women aged 18–30 recruited from Prolific ($M_{age} = 24.0$) examined a social media post similar to Study 2. We manipulated how much the influencer’s body in the ad was altered across five levels (0%, 25%, 50%, 75%, 100%) using the SNOW app, figure 4. After reading the ad, participants indicated their purchase intention of the recommended product and perceived authenticity, attractiveness, expertise of the influencer on 7-point scales (1 = not at all, 7 = very much). As hypothesized, there was a curvilinear relationship between the image alteration level and purchase intentions ($B = .08$, $SE = .04$, $t(497) = 2.00$, $p = .046$), figure 5. Participants who saw the 50% altered image ($M = 2.58$, $SD = 1.58$) reported the highest purchase intention. Relatedly, perceived authenticity positively affected purchase intentions ($B = .50$, $SE < .03$, $t(496) = 14.69$, $p < .001$) and perceived authenticity of the influencer was the lowest at the 100% level ($M = 3.15$, $SD = 1.63$). In contrast, the perceived attractiveness of the influencer did not significantly differ between 50% level ($M = 4.54$, $SD = 1.37$) and 100% level ($M = 4.28$, $SD = 1.36$), $p = .185$, as well as perceived expertise ($M_{50\%} = 2.99$, $SD = 1.21$ vs. $M_{100\%} = 3.01$, $SD = 1.09$), $p = .904$. A critical drop of perceived authenticity and a lack of increase in attractiveness and expertise could account for the negative impact of highly altered images on consumers; new studies closely examining these possibilities are underway.

The Consequences of Relying on YouTube Recommendation Algorithms

EXTENDED ABSTRACT

YouTube serves as a primary ground for information for many consumers, as it provides them access to information, ranging from health, hobbies, education, and news (YouTube 2022). In fact, our survey data suggests that consumers spend on average over 13.4 hours on YouTube per week. The particular success of YouTube can be attributed to its effective recommendation algorithm (Zhou et al. 2016) that caters content to individuals based on their watch history

and interest. However, its system has also invited a criticism that it puts consumers at risk by exposing them to misleading or even false content: from misinformed health facts to wild conspiracy theories (Nicas 2020). This phenomenon calls for the need to better understand the root psychological causes that promote such consumer tendency and to find ways to mitigate such negative effects.

The current research proposes that reliance on a personalized recommendation system on YouTube makes consumers believe that YouTube is a trustworthy source for information. This subsequently leads consumers to absorb any information on the platform, being dismissive of the credibility of various channels that upload this information. We test the theorizing using unverified historical, scientific, and health facts. Of six studies, this abstract presents four studies.

The goal of **study 1** was to test our hypothesis that reliance on recommendation increases consumers’ tendency to believe in misinformation. To demonstrate this effect, participants ($N = 202$; pre-registered) were randomly assigned into one of the two conditions (recommendation-reliance: high vs. low). Under the cover story of a “video watching task,” we explained that their video preferences would be fed into the YouTube algorithm, which will be used to recommend a subsequent video. All participants first watched a filler video and indicated their liking. Then we purposefully showed subsequent videos that either matched their taste (*high-reliance* condition) or did not match their taste at all (*low-reliance* condition), as the reliance on the algorithm is heavily based on how well the algorithm caters the users’ tastes (Liang, Lai, and Ku, 2006). After feeding their input of each video into a loop, participants were led to a final fifth video which featured a historian who argued that the Sphinx—believed to have a human’s head shape—in fact may have originally had a lion’s head shape. After watching the video, participants reported how much they believed this theory (DV-two items; $= 0.88$) and whether they thought that YouTube is a dependable source for information (mediator-three items; $= 0.94$). Supporting our prediction, participants in the high (vs. low) reliance condition thought that YouTube is a trustworthy source for information ($M_{high} = 5.05$ vs. $M_{low} = 4.63$; $p = 0.043$), which then led them to believe the final video more ($M_{high} = 5.30$ vs. $M_{low} = 4.96$; $p = 0.031$). A mediation analysis revealed a significant relationship (Indirect Effect = 0.16, $CI = [0.0058, 0.3315]$).

Study 2 ($N = 200$) replicated study 1 by replacing the final video with a conspiracy theory video that argues that the human brain can be downloaded onto computer software. In this study, we also measured alternative explanations including critical thinking, anthropomorphism of the recommendation system, and emotional reaction to videos. The manipulation was identical to that in study 1. Results again revealed that participants in the high (vs. low) reliance condition trusted YouTube as an information source ($M_{high} = 4.14$ vs. $M_{low} = 3.69$; $p = 0.030$) and believed the conspiracy video more ($M_{high} = 3.38$ vs. $M_{low} = 2.91$; $p = 0.047$). Mediating relationship was again robust (Indirect Effect = 0.16, $CI = [0.0159, 0.3423]$). None of the alternative accounts explained the results ($ps > 0.19$).

Building on these two studies, the goal of **field study 3** ($N = 109$ college students) was to train our participants to either rely (vs. not rely) on the recommendation system over four days, then to examine whether the habit of relying on recommendations affects their tendency to believe in misinformation. Students were randomly assigned into two conditions (recommendation-reliance: high vs. low). Every day, students watched a video that either YouTube personally recommended to them based on their browsing history (high-reliance condition) or not (low-reliance condition). On the fourth day, participants were shown the Sphinx video and asked how

much they believed in its argument. Again, those in the high reliance condition believed the final video more ($M_{\text{high}} = 4.52$ vs. $M_{\text{low}} = 4.02$; $p = 0.036$).

Why does relying on recommendation systems impede consumers' ability to discern misinformation? We hypothesized that, once participants trust the YouTube platform as an information source (through its repeated recommendation of videos that match user interests), they become less sensitive to the credibility of a particular channel. Do note here that channels can be created by any user without specialty or verification. To test this idea, participants in **study 4** ($N = 201$) were randomly assigned into two conditions (channel credibility: high vs. low). All participants watched the Sphinx video, either uploaded by either the Smithsonian Museum (high credibility) or the House Historia (a fictitious channel; low credibility). Participants again responded to the belief DV and trust on YouTube as a mediator. The IV, reliance on YouTube's recommendation system, was measured as an individual differences measure (three items; $\alpha = 0.86$). Consistent with earlier findings, consumers who tend to rely more on recommendations believed the Sphinx video more ($\beta = 0.19$, $p = 0.010$). Importantly, people who tend to be *more* reliant on YouTube recommendations were much more insensitive to the credibility of the channel. By contrast, this was not the case for people who were *less* reliant on it (interaction: $\beta = -0.20$, $p = 0.040$).

So far, we tested our hypotheses using one of the leading information-sharing platforms, YouTube. We believe that this insight from the current findings can easily be applied to other platforms where users are guided to content through recommendation systems. This ongoing research is currently testing two different ways to mitigate this negative effect, which we are excited to share in the upcoming ACR conference 2022.

Does Automation Lower Meaningful Work?

EXTENDED ABSTRACT

Workers are increasingly seeking meaningful work—80% of college graduates consider having meaningful work highly important (Gallup 2019). Meaningful work involves pursuing important, personally valued goals that contribute to others and aid in one's personal growth and development (Steger et al. 2012). Meaningful work is beneficial, as it is linked to higher work engagement, career commitment, and performance (Lips-Wiersma and Wright 2012; Steger et al. 2012). Although meaningful work is strongly desired and advantageous, it is infrequently experienced. Most workers in the United States believe that their current work lacks meaning (Dhingra et al. 2021; Gallup 2019).

Given the rapid increase in automated work tasks assisted by artificial intelligence (AI) (Chui et al. 2017), it is important to understand how automation impacts workers' experience of meaningful work. Although automation can enhance productivity and effectiveness (Bucklin et al. 1998), it may also heighten workers' fear about their future employment and utility at work (Frank et al. 2019; Nazareno and Schiff 2021). In this research, we explore how completing automated tasks influences meaningful work and identify a mechanism for this association.

Meaningful work involves pursuing challenging tasks that foster new knowledge, personal development, and growth (e.g., Steger et al. 2012). Frequently completing automated work tasks—rather than completing tasks fully on one's own—may reduce meaningful work because it makes workers feel that they are not being challenged or learning new skills. Because automated tasks generally involve less creativity and input than tasks completed on one's own (e.g., Vries et al. 2020) they may reduce perceived task complexity. Tasks lacking complexity may promote beliefs that work lacks pur-

pose and social impact, decreasing meaningful work (e.g., Hackman and Lawler 1971; Hackman and Oldham 1976). Taking stock of these findings, we hypothesize that (1) completing AI-facilitated tasks (vs. control tasks) will reduce perceptions of meaningful work and (2) task complexity will explain why AI-facilitated tasks reduce meaningful work.

We conducted three preregistered experiments with occupationally diverse working professionals. In all studies, participants rated perceptions of *task meaning* (e.g., "The task felt meaningful"; adapted from Steger et al., 2012) and *task complexity* (e.g., "The task required me to use a number of complex or high-level skills," "The task provided an opportunity to learn new things;" adapted from Hackman and Oldham 1974) after experimental manipulations.

In Study 1, participants ($N=301$) were randomly assigned to evaluate four hypothetical work tasks (e.g., HR representative evaluating resumes) completed either fully by workers (control condition), with the assistance of AI (AI-facilitated condition), or with the assistance of a coworker (human-facilitated condition). Participants in the AI-facilitated condition thought the task would be less meaningful ($M(SD)=4.13(1.26)$) than participants in the control condition ($M(SD)=4.49(1.21)$; $p=.03$) and the human-facilitated condition ($M(SD)=4.53(1.15)$; $p=.02$). Participants in the AI-facilitated condition also thought the task would be less complex ($M(SD) = 3.93(1.05)$) than those in the control condition ($M(SD)=4.41(0.99)$; $p<.001$) and the human-facilitated condition ($M(SD)=4.44(0.95)$; $p<.001$). These findings rule out the possibility that task facilitation broadly, rather than AI-facilitation, reduces task meaning. Task complexity significantly mediated the effect of condition on task meaning; indirect effects between the AI-facilitated and control conditions= $.51$, $CI_{\text{Boot}} [.21, .82]$ and between the AI-facilitated and human-facilitated conditions= $.54$, $CI_{\text{Boot}} [.25, .83]$.

In Study 2, participants ($N=256$) were randomly assigned to complete a sentiment analysis task on their own (control condition) or with the help of a website using AI-based technology (AI-facilitated condition). Participants who completed the AI-facilitated task reported lower task meaning ($M(SD) = 3.62(1.47)$) than those in the control condition ($M(SD)= 4.53(1.23)$; $p<.001$). Task complexity followed the same pattern, such that those in the AI-facilitated condition ($M(SD)= 2.32(1.17)$) thought the task was less complex than those in the control condition ($M(SD)=3.49(1.20)$; $p<.001$). Task complexity mediated the effect of condition on task meaning; indirect effect = -0.86 , $CI_{\text{Boot}} [-1.10, -0.63]$.

Study 3 aimed to identify an intervention to mitigate the negative effects of AI on meaning. Specifically, we manipulated task complexity on an AI-facilitated task. Participants ($N=252$) were randomly assigned to one of three conditions before completing the sentiment analysis task from Study 2. The control and AI-facilitated condition were identical to those in Study 2. Participants in the new "AI-facilitated with added complexity" used their own input and judgment for the initial stages of the task and then used the AI-based website to complete the task.

Consistent with the findings of Studies 1-2, those in the AI-facilitated condition thought the task was less meaningful ($M(SD)=3.44(1.64)$) than those in the control condition ($M(SD)=4.63(1.34)$; $p<.001$). Similarly, perceived task complexity was lower amongst participants in the AI-facilitated condition ($M(SD)= 2.44(1.28)$) than those in the control condition ($M(SD)= 3.72(1.25)$; $p<.001$). Making the task more complex by getting participants to first provide their own input and judgment for the initial stages of the task mitigated the negative effect of AI on task meaning. Those in the AI-facilitated with added complexity condition reported higher levels of task meaning ($M(SD)= 3.93(1.35)$) as well as task complexity ($M(SD)= 2.98(1.26)$) compared to the AI-

facilitated condition ($ps < .001$). Thus, added complexity on the AI-facilitated task increased task meaning and complexity relative to the full-AI facilitated task condition; however, it did not lead to levels comparable to the control condition, as task meaning and complexity in the control condition remained higher than the AI-facilitated task with added complexity condition.

This research helps us understand how and why automation impacts meaning while also suggesting novel insights regarding how to implement technologies without reducing meaningful work. Work tasks automated by AI may be experienced as lacking meaning because they are less inclined to contribute to novel skill and knowledge acquisition, thus hindering personal development. Despite the efficiency and performance benefits of automation, automated tasks may be avoided if they are perceived as less meaningful and stimulating than non-automated tasks. Workers may be able to experience meaningful work when completing AI-facilitated tasks if they can be actively engaged and feel challenged.

Preferring People but Listening to Algorithms: Anticipated Preferences vs. Utilization of Algorithmic Advice

EXTENDED ABSTRACT

The rise of “big data” has introduced a new source of information into our lives: algorithms. More and more organizations are investing in the power of algorithms, scripts for mathematical calculations. This is especially true for hiring and promotion decisions. Historically, people have made hiring and promotion decisions for their organizations. But more are relying on algorithmic hiring for efficiency to sift through the massive number of applications they receive. For instance, Amazon receives more than 18 applications per minute (Biron 2019). Very little is known about how people think about these new processes.

Past work suggests that people rely more on identical advice when they think it comes from an algorithm than from a person (Logg et al. 2019), both in objective and subjective domains (geopolitical, business, cultural events and interpersonal interactions). In contrast, people prefer human to algorithmic judgment when they consider hiring and promotion decisions (Newman et al. 2020), when applicants consider how they want their own application packet assessed (Logg and Tinsley 2022), medical decisions (Longoni et al. 2019), and others (Castelo et al. 2019).

At first blush, people’s utilization of advice when making specific point estimates for forecasts appears at odds with stated anticipated preferences about complex decisions. Are people more willing to listen to algorithms when making forecasts than when they consider complex decision processes at a more abstract level? If so, simply breaking down complex decision processes into specific forecasts could provide a simple and free intervention to increase algorithm appreciation.

In Study 1 ($N = 760$), participants considered the outcome of a promotion decision, based on reading resumes. Participants were randomly assigned to one of three conditions. Participants in two of the conditions considered the probability that one employee would receive a promotion over two other employees within a JAS paradigm where advice was labeled as coming from a person or algorithm (between subjects). In the third, within-subjects condition, participants considered how they thought the promotion decision should be made, based on the same resumes. Here, they chose between an algorithm and person.

When making forecasts, participants relied more on the same advice when they believed it came from an algorithm ($M = .53$, $SD = .37$) than from another person ($M = .35$, $SD = .36$), $t(453) = 5.05$, $p < .001$,

$d = .48$. In contrast, this preference reversed when participants considered the same situation as a scenario: 73% of participants preferred the person ($N = 216$) over the algorithm ($N = 78$), $\chi^2(1, 293) = 64.78$, $p < .001$. These results help reconcile seemingly conflicting results from past work, as we created conditions to make them as similar as possible to past work. Study 2 included a decision process scenario more similar to the decision process forecast.

In Study 2 ($N = 600$), participants considered the probability of an employee receiving a higher performance review relative to others, based on reading resumes. Here, we increased the specificity of the decision process scenario to make it more similar to the forecast. We compared participants’ forecasts to how participants thought they would follow advice. This allowed us to compare how much people anticipated they would rely on advice directly to actual utilization. We fully crossed the context with source for a 2 (context: JAS, scenario) \times 2 (source: algorithm, person) between-subjects design. The main effects of source and context were significant ($ps < .001$), along with the interaction, $F(1, 536) = 0.73$, $p = .001$, $\eta^2 = 0.20$. When making forecasts, people utilized algorithmic advice more than advice from a person, $t(536) = .179$, $p < .001$, $d = .51$. But when considering a decision process scenario, people are indifferent between the sources, $t(536) = .004$, $p = .914$, $d = 0$; see Figure 1 and Table 1). These results suggest that when decision processes are made more specific, people do not show aversion to algorithms, and instead are indifferent. Most importantly, breaking down decision processes into specific point-estimates increases individuals’ utilization of algorithmic advice.

In Study 3 ($N = 454$), participants considered the probability that a certain employee would outperform other employees based on reading resume. Using the same design as Study 2, we directly compared actual utilization of advice to anticipated preferences. The one difference is that here, we compared participants’ forecasts to how participants how much they thought a hiring manager should utilize the advice to make this forecast. Again, the main effects of source and context were significant ($ps < .001$), along with the interaction, $F(1, 450) = 11.77$, $p < .001$, $\eta^2 = 0.25$. When making forecasts, people utilized algorithmic advice more than advice from a person, $t(450) = .21$, $p < .001$, $d = .55$. But when considering a decision process scenario, people are indifferent between the sources, $t(450) = .005$, $p = .902$, $d = .04$; see Figure 2 and Table 2). These results provide more evidence to suggest that breaking down decision processes into specific point-estimates may increase individuals’ utilization of algorithmic advice.

Our results from three pre-registered experiments ($N = 1,814$), show that people prefer human judgment when considering complex decisions processes, including promotions (Study 1) and hiring decisions (Study 2 and 3). Yet, when these same decisions are framed as specific forecasts, people prefer algorithmic judgment. The results suggest a difference between peoples’ anticipated preferences and their actual utilization of advice. Our results also suggest that compared when decision processes are themselves described more specifically (Studies 2 and 3), participants may be more amenable to algorithmic judgment (compared to the more abstract decision process in Study 1). We are collecting data to directly manipulate specificity of the decision processes scenario within one experiment to better test this difference in results across studies. Overall, these results have important practical implications because using algorithms to make decisions can prove more accurate than relying on human judgment (Meehl 1954; Meehl 1957). If breaking down complex decision processes into specific point estimates increases willingness to utilize algorithmic judgment, it could provide a simple and free intervention with consequential outcomes for organizations.

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Customer Response to New Digital Technologies in Public and Private Sectors

Chair: Ms. Jianna Jin, The Ohio State University, USA

Paper #1: Overgeneralization of Failures of Artificial Intelligence in the Government

Chiara Longoni, Boston University, Questrom School of Business, USA

Luca Cian, University of Virginia, Darden School of Business, USA

Ellie J. Kyung, Wharton School, University of Pennsylvania, USA

Paper #2: Conversations with Machines: The Impact of Self-presentation Concerns on Consumer Engagement when Interacting with Chatbots versus Human Service Providers

Jianna Jin, The Ohio State University, USA

Jesse Walker, The Ohio State University, USA

Rebecca Walker Reczek, The Ohio State University, USA

Paper #3: “Click to Read More” Biases Consumers’ Memory and Preference

Jen H. Park, Stanford Graduate School of Business, USA

Szu-chi Huang, Stanford Graduate School of Business, USA

Paper #4: A Feast for the Eyes: How Augmented Reality Influences Food Desirability

William Fritz, Saïd Business School, University of Oxford, UK

Rhonda Hadi, Saïd Business School, University of Oxford, UK

Andrew Stephen, Saïd Business School, University of Oxford, UK

SESSION OVERVIEW

Whether it is government agencies using Artificial Intelligence (AI) to make decisions that affect public welfare (e.g., calculating social benefits) or firms deploying conversational automated agents, both the public and private sector are increasingly relying on new digital technologies (Puntoni et al. 2021; Schmitt 2019). Four papers explore how these emerging technologies - decisions by algorithm (paper 1), conversational AI agents (i.e., chatbots; paper 2), interactive clicks (paper 3), and Augmented Reality (paper 4) – shape customer experiences and the mechanisms by which they do so. The first paper focuses on the use of the technology in the public sector, while the last three papers complement this work by examining the use of technology in various consumption contexts including online shopping (papers 2 and 3) and the food industry (paper 4).

First, **paper 1** explores how consumers understand the public service decisions made by AI. The paper demonstrates what the authors term “algorithmic transference,” whereby algorithmic failures are transferred to another algorithm at a higher rate than human failures are transferred to another person. This is because consumers systematically differ in how they mentally represent a non-human versus human agent: AIs (vs. comparable humans) are perceived as an out-group that possess greater homogeneity.

Shifting gears from the use of new technologies in the government to firms, **paper 2** investigates how consumers differently respond to conversational AI (i.e., chatbots) versus a human service provider in online shopping contexts. Leveraging interactions with an actual chatbot, the paper demonstrates that in a purchase context when self-presentation concerns are active, consumers are more likely to engage with a chatbot (vs. a human service rep) because they ascribe less mind to a chatbot and thus feel less embarrassed in front of it.

The next two papers investigate new digital technologies used by firms to provide information to customers. **Paper 3** explores how

using an emerging technology-enabled information-retrieval feature, namely “clicking and expanding,” influences customers. The paper finds that consumers engage in motivated forgetting when using this feature, such that clicking positively biases their recall and impulsive choices.

Investigating customer response to another emerging modality through which information is conveyed, **paper 4** investigates how customers respond to Augmented Reality (AR) increasingly adopted in the food industry. Utilizing a field setting (e.g., a local restaurant), the paper demonstrates that AR increases the desirability of, and purchase likelihood for, the food depicted with AR by increasing consumers’ mental simulation of consuming the food.

Taken together, the papers in this session deepen the understanding of customer response to new digital technologies. The session not only provides a more nuanced understanding of the unique ways in which consumers perceive these technologies (social categorization: paper 1; mind perception: paper 2) but also sheds light on how digital technologies, in turn, influence consumers’ decision making (memory: paper 3; mental representation: paper 4). We hope that the session can generate a fruitful and timely discussion that enriches the understanding of consumer response to emerging new technologies.

Overgeneralization of Failures of Artificial Intelligence in the Government

EXTENDED ABSTRACT

Artificial Intelligence is transforming the deployment of public services. Despite popular belief that the public administration relies on antiquated procedures, AI decision systems are being deployed to supplant traditional decision-making in many public sectors of the United States, from government benefits, to justice, policing, social services, education, and health (de Sousa et al. 2019). AI algorithms are used to allocate a variety of public benefits, from Medicaid to Medicare, food stamps, unemployment, and Social Security disability.

The spread of AI to the public sector is premised on reducing costs and improving service quality, ultimately making agencies more effective and citizens more satisfied. Yet despite technological improvements, these AI systems are fallible and commit errors. In the recent years, the press has reported a number of algorithmic errors in the provision of public services. How does the public respond to these errors in the provision of public services? What inferences and generalizations do people make when learning of AI (vs. human) errors? What is the basis of these generalizations? And what are the downstream consequences for the perceived legitimacy of core institutions?

In twelve preregistered studies ($N=3,814$) across a range of policy areas and diverse samples, we examine these questions. We show that algorithmic failures are transferred to another algorithm at a higher rate than human failures are transferred to another person, an effect we term *algorithmic transference*, as it is an inferential process that transfers information from one member of a group to another member of that same group. Rather than reflecting generalized algorithm aversion (Dietvorst, Simmons, and Massey 2015), algorithmic transference is due to group categorization processes and how people perceive and mentally represent non-human compared to human agents: AIs are viewed as *out-groups* characterized by greater homogeneity than *in-groups* of comparable humans. Because AI algorithms are viewed as a highly homogenous group, information learned about one algorithm is transferred to another algorithm at a higher rate than information

learned about a member of a more heterogeneous group—a person. We provide evidence of perceived group homogeneity as a driver of algorithmic transference through mediation, moderation, and by delimiting the scope of the effect. Finally, we show how algorithmic transference can have detrimental consequences for consumer propensity to access public services.

Studies 1A-1C ($N=205,300,202$) provide evidence of algorithmic transference—a higher generalization of algorithmic than human errors to other group members—across three domains using real news articles. Participants read brief news articles describing errors in the allocation of disability benefits (1A), calculation of social security benefits (1B), and determination of insurance fraud claims (1C). Between-subjects, we manipulated the agent making the target error: algorithm versus person. We then measured inferential generalizations via performance (probability estimates that another agent of the same group—algorithm or person—would make the same error). A convenience sample (1A), nationally representative sample (1B), and sample of experts (1C), all showed algorithmic transference—greater propensity to generalize algorithmic than human errors (all $ps < .017$; all $ds > .34$).

Study 2 ($N=502$) offers evidence that perceptions of group homogeneity underlies the process while ruling out perceived locus of causality and lack of knowledge as alternative explanations. Participants read information about a federal-state unemployment insurance program where either an algorithm or person made errors calculating unemployment benefits at the same base rate. We measured inferential generalizations via performance and indices of perceptions of group homogeneity, perceived locus of causality, and algorithmic literacy. This experiment replicated the effect of algorithmic transference: participants were more prone to generalize algorithmic than human failures ($M_{AI}=5.44$ vs. $M_H=4.77$, $t(500)=6.13$, $p<.001$, $d=.55$.) Participants perceived algorithms as more homogenous than human agents ($p<.001$, $d=.96$). Furthermore, mediation analysis revealed that perceived homogeneity and not locus of causality mediates the effect of agent on transference and that algorithmic literacy does not moderate the effects.

Studies 3 ($N=403$), **4** ($N=400$), and **5** ($N=304$) investigate three moderators that further test the role of perceptions of group homogeneity underlying the effect. **Study 3** demonstrates that making out-group heterogeneity salient eliminates transference. An algorithm aversion account would suggest that transference should remain, regardless of whether out-group heterogeneity is made salient or not. When out-group heterogeneity was made salient, the effect of transference ($p < .001$) was eliminated ($p = .308$). **Study 4** demonstrates that people with greater discomfort with technology—those more likely to see algorithms as an out-group—are more likely to manifest algorithmic transference (agent \times discomfort with technology interaction: $\beta=.538$, $t(395)=2.68$, $p=.008$). **Study 5** demonstrates that when algorithms work on conjunction with human oversight, they are no longer perceived as an outgroup, and the effect of transference is eliminated ($p=.12$).

Studies 6A-6C ($N=299, 201, 200$) investigated the implications for consumers, testing whether algorithmic transference is detrimental for consumer propensity to apply to use public services. **Studies 7** ($N=299$) and **8** ($N=200$) examined the generalization of brand transference to brand scandals and the implications for trust in the government.

Our research makes theoretical contributions to the literatures on psychological responses to automated systems (Castelo et al. 2019; Granulo et al. 2020; Longoni et al. 2019; Longoni and Cian 2020) and decision making in the public sector. In contrast to previous work delimiting the conditions under which algorithm aversion, appreciation,

or indifference occurs (Dietvorst et al. 2015; Dzindolet et al. 2002; Berger et al. 2021), our research shows that consumers view disembodied AI as social agents and the consequences of mental representation of social categorization. Furthermore, we identify the novel effect of algorithmic transference, an inferential judgment emerging from group-level representational processes. This contribution is particularly important in the public sector, where people cannot typically choose whether to interact with a person or an automated agent but their propensity to use services can be influenced by the news they encounter in the popular press. Our findings highlight how the premature or unregulated spreading of AI technologies to the public sector might undermine legitimacy of the very institutions it is meant to modernize.

Conversations with Machines: The Impact of Self-presentation Concerns on Consumer Engagement when Interacting with Chatbots versus Human Service Providers

EXTENDED ABSTRACT

Firms increasingly rely on automated conversational agents instead of human service representatives for online customer service interactions. However, little work has explored customer response to chatbots in the marketplace (for notable exceptions see Cronic et al. 2021 and Luo et al. 2019). Building on Theory of Mind (Gray and Wegner 2012), we demonstrate how preferences for chatbot (vs. human) occurs when consumers' self-perception concerns are active. Because we expect consumers to see chatbots (vs. humans) as having less ability to feel emotions, and because embarrassment is an emotion driven by the judgments people perceive to exist in the minds of others (Savitsky, Epley, and Gilovich 2001), consumers are likely to believe that a chatbot is less capable than a human of making a judgment about them and, in turn, are less likely to feel embarrassed in the presence of a chatbot.

Studies 1a ($n = 309$ undergraduates) and 1b ($n = 304$ undergraduates) test the proposed effect in a 2 cell (service rep type: chatbot vs human) between-subjects design. In both studies, the only differences between the conditions were (1) the name ("Chatbot" vs. "Sam") and (2) the icon representing the service rep (chatbot icon vs. woman's photo). In study 1a, participants saw an image of a live chat window with either the chatbot or the human sales rep that offered a free sample of over-the-counter anti-diarrheal pills (an embarrassing product used in prior literature; Dahl, Manchanda, and Argo 2001). Participants could either close the chat window by clicking on an "X" in the upper right hand corner or continue the interaction by clicking on a space labeled "Type your message here" on the window. As expected, more participants chose to continue the interaction when the agent was a chatbot (61.0%) rather than a human sales rep (39.0%; $\chi^2(1, 309) = 4.85$, $p = .03$). Study 1b replicates the effect using a different purchase context likely to activate self-presentation concern (an online dating service) and a different measure of engagement. Participants interacted with a real chatbot that was said to be either a chatbot or live human service rep. In both conditions, participants were asked 10 questions with a multiple-choice format that included an option to "Skip the question." Replicating the finding of study 1a, participants answered more questions in the chatbot ($M = 9.29$) than the human condition ($M = 8.42$; $F(1, 302) = 15.40$, $p < .001$).

Study 2 ($n = 595$ MTurk workers) demonstrates the mediating role of mind perception and embarrassment by again utilizing real interactions with a programmed chatbot. The study examined the effect in the context of a personal care brand and recruited participants prescreened to have high self-presentation concerns in this domain. As in study 1b, the chatbot asked 10 questions. The last question asked

participants for their email address in exchange for a free sample from the brand. Participants then rated the chatbot/customer rep on the two components of mind perception, perceived experience (e.g., “the capacity to feel pain”) and perceived agency (e.g., “the capacity to exercise self-control”; Gray et al. 2007) and indicated their embarrassment, each on a 7-point scale. As expected, participants answered more questions when they were asked by the chatbot ($M = 7.90$) than the human ($M = 7.15$, $F(1, 593) = 11.81$, $p = .001$) and were more likely to provide their email address to the chatbot (62.3%) than the human service rep (37.7%; $\chi^2(1, 595) = 6.13$, $p = .01$). Further, participants attributed less experience ($M_{\text{chatbot}} = 2.34$ vs. $M_{\text{human}} = 3.60$; $F(1, 593) = 91.89$, $p < .001$) and agency ($M_{\text{chatbot}} = 3.94$ vs. $M_{\text{human}} = 4.67$; $F(1, 593) = 35.71$, $p < .001$) to the chatbot than the human. Participants were also less likely to feel embarrassed when interacting with the chatbot ($M = 2.22$) than the human ($M = 2.53$; $F(1, 593) = 6.35$, $p = .01$). A serial mediation analysis (PROCESS MODEL 6, Hayes 2017) with the number of total questions answered and email address provision as the dependent variables, respectively, revealed a significant indirect effect of the experience component of mind perception and embarrassment for both dependent variables (index_{no. of questions} = .0513, 95% CI [.0230, .0872]; index_{email} = .0390, 95% CI [.0156, .0724]).

Study 3 employed a 2(between-subjects factor: self-presentation concerns active vs. none) X 2(within-subjects factor: chatbot vs. human) mixed design. Participants ($n = 403$ MTurkers) imagined they needed to buy anti-diarrheal or hay fever medicine. In both conditions, participants were asked to choose between two online drug stores, store A and store B, that differed only in the type of service rep offered (chatbot vs. human). Participants chose the drugstore they would visit and described the reason behind their choice in an open-ended question. A chi-square test revealed a significant difference in choice of store by condition ($p < .001$). When participants were shopping for diarrhea medication and self-presentational concerns were present, more participants preferred the store with a chatbot (57%) than with a human (43%); however, this effect was reversed when participants were shopping for hay fever medication and thus their self-presentation concerns were minimal (Human = 74.2% vs. Chatbot = 25.8%). Further, participants were significantly more likely to mention embarrassment as a reason for store choice in the anti-diarrheal ($M = 2.66$) than the hay fever condition ($M = 1.1$; $F(1, 389) = 141.51$, $p < .001$), which significantly mediated the effect of condition on store choice (index = 3.02, 95% CI [2.15; 6.59]).

Past research has suggested ways that marketers can help consumers cope with embarrassment in the marketplace (Krishna, Herd, and Aydinoglu 2019). Our research contributes to this discussion by suggesting that using non-anthropomorphized chatbots can be an important marketer intervention to aid consumers in coping with embarrassment when shopping online. When self-presentation concerns are active, consumers are more likely to choose stores with chatbots than human customer service agents, to interact with chatbots than humans in order to get help or receive personalized recommendations, and to accept a free sample from a chatbot than a human.

“Click to Read More” Biases Consumers’ Memory and Preference

EXTENDED ABSTRACT

Interactive clicks that load product information have become ubiquitous in the online retail space. This is because marketers often cannot display the enormous volume of product information that is available, and instead, prompt consumers to click a button to load additional information such as customer reviews. Despite the prevalence of “click to read more” features in online/mobile retail, little work has

explored the impact of these technology-enabled information-retrieval features on consumers’ memory and decision-making.

In this research, we connect the emerging work on modality (Brasel and Gips 2014; Krishna and Schwarz 2014; Shen, Zhang, and Krishna 2016) with literature on motivated forgetting (Mather, Shafir, and Johnson 2000; Dalton and Huang 2014; Reczek et al. 2018) and test whether clicking to load (vs. direct display) product information, such as customer reviews, could alter how those reviews are remembered and which product consumers subsequently choose. We find that clicking (vs. no clicking) *positively* biased the recall and choice of impulsive choices in the context of digital food menus, mobile apps, and investment portfolios.

Study 1A ($N = 700$) tested the effect of clicking to load customer reviews on people’s recall in digital food menus. We used a 2 (click vs. no click; between-subjects) X 2 (reviews: positive vs. negative; within-subjects) mixed design. All participants reviewed six entrée options (pretested as unhealthy but attractive) from the TGI Friday’s digital menu. To ensure that the study was incentive-aligned, participants could win a restaurant gift card through a lottery to order their choice of entrée. All participants saw six entrées and rated each entrée. On the next page, they saw their top-rated entrée and read 10 reviews—five positive and five negative—from previous customers who had ordered this entrée. In the *click* condition, participants clicked the “customer reviews” button to load these reviews. In the *no-click* condition, the reviews were directly displayed without a click; see table 1. After reading the reviews, participants freely recalled the reviews of the entrée. We observed a significant click X reviews interaction ($p = .012$) in that participants who clicked a button to load customer reviews recalled more positive reviews ($M_{\text{click}} = 1.49$) than those who saw the same review information without clicking ($M_{\text{no-click}} = 1.31$), $p = .039$. The number of negative reviews recalled did not differ based on whether the reviews were loaded with a click ($M_{\text{click}} = 2.68$ vs. $M_{\text{no-click}} = 2.77$; $p = .311$); see figure 1. Clicking thus positively biased the recall of reviews in support of the preferred, impulsive food choice. In Study 1B ($N = 398$), we replicated this finding with hedonic mobile apps in the productivity domain.

Study 2 ($N = 903$) explored whether the effect is driven by the act of clicking or having the freedom to click. To that end, we added a forced-click condition in which participants had to click the buttons for all products. Participants examined four hedonic apps from Study 1B and freely clicked as many or as few apps (*click* condition) or had to click all four apps (*forced-click* condition) or did not click (*no-click* condition) to view the average rating (e.g., 3.89/5.0) and customer reviews—one positive and one negative—for each app; see table 2. Then, all participants recalled the average rating and reviews for each app. We observed a significant effect of clicking on recall: regardless of whether the click was autonomous or forced, clicking resulted in positively biased recall of hedonic apps ($M_{\text{click}} = .09$, $M_{\text{forced-click}} = .07$ vs. $M_{\text{no-click}} = -.10$; $p < .001$). Further analyzing the free-recall data of positive vs. negative reviews, we found that the observed biased recall was driven by greater memory of positive reviews when involving a click (vs. no click; click X review interaction: $p < .001$): clicking—whether by free will or forced—resulted in greater recall of positive reviews ($M_{\text{click}} = 49.4\%$, $M_{\text{forced-click}} = 47.7\%$ vs. $M_{\text{no-click}} = 35.9\%$; $p < .001$) but not of negative reviews ($M_{\text{click}} = 19.6\%$, $M_{\text{forced-click}} = 19.4\%$, $M_{\text{no-click}} = 17.6\%$; $p = .405$); see figure 2.

Study 3 ($N = 600$) had two extensions: we included non-impulsive choices for comparison and tested the clicking effect on choice. Participants reviewed eight—four hedonic, four utilitarian—mobile apps, whose average ratings (e.g., 3.89/5.0) were displayed with or without a click depending on the condition. All participants recalled the rating for each app and chose an app to download for free. We

found the predicted click x app interaction ($p = .029$): participants who clicked to read ratings recalled the hedonic apps as more positive ($M_{\text{click}} = .10$ vs. $M_{\text{no-click}} = -.06$; $p = .010$) but not the utilitarian apps ($M_{\text{click}} = .02$ vs. $M_{\text{no-click}} = -.03$; $p = .455$). Importantly, we found evidence for motivated forgetting through moderation: among those who clicked, the positively biased recall occurred only from the participants who ultimately chose a hedonic app ($M_{\text{hedonic}} = .08$ vs. $M_{\text{utilitarian}} = -.08$; $p = .018$), and not from those who chose a utilitarian app ($M_{\text{hedonic}} = .10$ vs. $M_{\text{utilitarian}} = .07$; $p = .668$).

Finally, Study 4 ($N = 380$) examined the effect of click in investment portfolio choices. Participants were asked to make an incentive-compatible investment choice between an impulsive (pretested to be more volatile) vs. a non-impulsive company stock. Those in the *click* condition had to click to load analyst reviews—one positive and one negative—for each stock, whereas those in the *no click* condition read the reviews in direct display. Consistent with Study 3, clicking positively biased the recall of the impulsive option, but not the non-impulsive option (click x stock interaction: $p < .001$) and increased the choice of the impulsive option ($M_{\text{click}} = 51.4\%$ vs. $M_{\text{no-click}} = 41.3\%$; $p = .049$).

Together, we found that clicking to load (vs. direct display) information of products positively biased consumers' recall and preference of impulsive choices. This effect was driven by the physical act of clicking rather than the perceived autonomy to click and did not occur for non-impulsive choices.

Paper 4: A Feast for the Eyes: How Augmented Reality Influences Food Desirability

Augmented Reality (AR) technology, the projection of digital content into the real-time physical environment (Hilken et al. 2019), has generated enormous amounts of industry investment and buzz. Unlike virtual reality, which typically requires expensive headsets, AR only requires a camera-equipped smartphone or tablet and allows the user to see virtual objects overlapped in the real world (Ko et al. 2013).

Interestingly, the US\$65 billion food and beverage industry has been quick to embrace AR technology, in hopes of enhancing the customer experience. For example, Domino's Pizza paired up with Snapchat to create a "shoppable AR" lens, allowing users to see a floating pizza through their camera for direct ordering (Swant, 2018). Magnolia Bakery recently debuted an AR catering menu, letting customers view virtual cakes directly in front of them, prior to making a final decision (Lamb, 2018). Despite the excitement surrounding such applications, no research has empirically explored how presenting food in AR might actually influence consumer responses. We propose and demonstrate that because AR has the ability to visually superimpose objects into a consumer's current real-time environment (via a device-enabled camera; Moro et al., 2017), this increases consumers' mental simulation of consuming a food (since it appears to actually be present). This in turn increases overall desirability and purchase likelihood for the pictured food.

Three studies support our theorizing. Study 1 ($N=101$) was a 2-level (presentation format: control versus AR) between-subjects design run at a local restaurant. We created two versions of the restaurant's dessert menu according to condition (we worked with a professional AR developer to create the stimuli in all studies). While both menu formats were viewed on a handheld tablet, the control menu displayed photos of the desserts on static blank backgrounds, whereas the AR menu used the device's camera to superimpose the desserts in the diner's real-time environment (i.e., the restaurant table; see Figure 1 for illustrations of the conditions and a link demonstrating the AR manipulation). A binary logistic regression demonstrated a significant effect of presentation format on purchase likelihood (Wald $\chi^2(1)=6.21$, $p=.01$) in that diners were significantly more likely to order a dessert if

they viewed options in the AR menu (41.2%) versus the control menu (18.0%).

Study 2 ($N=130$) was run at a business school café. The study was again a 2-level (presentation format: control versus AR) between-subjects design. Diners were intercepted during lunchtime and were shown one of two digital dessert menus. In the control condition, the menu featured the 3D renderings of each dessert over a static blank background (this conservative control condition allowed us to isolate the effect of superimposition from visual dimensionality). The AR condition was created as in Study 1. After viewing the menu, participants chose the dessert they would like to receive. They then indicated the desirability of the dessert ("I am craving the dessert I chose,") and responded to a one-item measure of mental simulation ("When viewing the dessert, I could imagine myself eating it," from Elder & Krishna, 2012). ANOVA results demonstrated a significant effect of presentation format on both dessert desirability ($M_{\text{Control}}=4.90$ versus $M_{\text{AR}}=5.46$; $F(1, 127)=8.40$, $p<.01$) and mental simulation ($M_{\text{Control}}=5.49$ versus $M_{\text{AR}}=5.90$; $F(1, 127)=5.19$, $p=.02$). To assess whether mental simulation could explain the increased desirability induced by the AR (versus control) presentation, we ran a mediation analysis (model 4, Hayes, 2013) with 10,000 resamples. Results demonstrated a significant indirect effect (indirect effect=.1159, 95% CI: .0082 to .2816).

In Study 3 ($N=205$), we replicate the effect of AR presentation on desirability in a more controlled laboratory environment using multi-item scales, and also test the moderating effect of nutritional information. We used a 2 (presentation format: control versus AR) x 2 (nutritional information: absent versus present) between-subjects design. Participants were shown one of three foods on a tablet (comprising both indulgent and non-indulgent categories): french fries, an arugula salad, or a fruit platter (data was collapsed as there were no differences across categories). To manipulate the presence of nutritional information, half the participants were presented with the pictured food's nutritional label as they viewed the food. Afterwards they indicated the desirability of the food (e.g., "How strong is your urge to eat this food item?"), $\alpha=.93$, mental simulation (adapted from Hildebrand et al., 2019, e.g., "I could imagine myself eating the dish displayed," $\alpha=.82$), realism (e.g., "This dish looks realistic," $\alpha=.91$) and mood ($\alpha=.94$). ANCOVA results revealed a significant interaction between presentation format and nutritional information on desirability of the food ($F(1, 199)=4.82$, $p=.03$, $\eta_p^2=.02$). An analysis of contrasts revealed that when nutritional information was absent, AR presentation has a significant positive effect on desirability ($M_{\text{Control}}=4.73$ versus $M_{\text{AR}}=5.35$; $F(1, 199)=7.29$, $p<.01$, $\eta_p^2=.04$), consistent with results in both previous studies. However, when nutritional information was present, the simple effect of presentation format was no longer significant ($M_{\text{Control}}=4.99$ versus $M_{\text{AR}}=4.76$; $F(1, 199)=.76$, $p=.38$). Results also demonstrated participants in the AR condition engaged in significantly more mental simulation ($M_{\text{Control}}=3.42$ versus $M_{\text{AR}}=3.73$; $F(1, 199)=4.78$, $p=.03$). Neither the main effect of nutritional information nor its interaction with presentation format were significant (both p 's $>.55$). A mediation analysis (model 8, Hayes 2013) with 10,000 resamples showed that when nutritional information was absent, the indirect effect of AR presentation format on desirability through mental simulation was significant (indirect effect=.2668, 95% CI: .0455 to .5219), consistent with results in Study 2. However, this indirect effect was not significant in the presence of nutritional information (indirect effect=.2130, 95% CI: -.1882 to .6361). ANCOVA results did not produce significant effects of presentation format, nutritional information, or their interaction on visual realism or mood suggesting these are unlikely to be alternative process explanations.

We contribute to literature on imagery and mental simulation by demonstrating that AR technology, due to its ability to visually superimpose products into a consumer's real-time environment, is uniquely able to generate mental simulation above and beyond visual stimuli that are not superimposed. We also add to the growing body of consumer-technology research in marketing exploring how technological features in mobile devices are meaningfully altering the ways consumers behave.

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Consumer Behavior in the Field: Semblances of Success and Heterogenous Effects

Chair: Mr. Rafael Batista, The University of Chicago Booth School of Business, USA

Paper #1: The Semblance of Success in Nudging Consumers to Pay Down Credit Card Debt

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Paper #2: Understanding Co-Holding Through Informational Nudge Abstract

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Paper #3: Nudging Misperceptions

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Paper #4: Using Information Architecture to Address Individual Behavioral Differences and Reduce Retirement Savings Gaps

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SESSION OVERVIEW

Field experiments, when designed well, can uncover deep psychological insights while also providing direct empirical evidence for the real-world effects of a policy, product, or deliberate intervention. Yet, for a host of reasons, field experiments are often hard to execute or to interpret. In this session, we highlight recent field experiments in marketing, with special attention to the complexities of studying consumer behavior in the field.

The papers in this session speak to field experiments with “mixed results”. We examine these mixed results from two different perspectives. The first is variation across time: when an experiment yields a different set of results for the same set of people across time. The second variation across people: when an experiment yields heterogeneous effects across people over the same period. Whereas traditional experiments tend to focus on single outcomes averaged and compared across groups at the level of randomization, field experiments --- through their sheer size and breadth of consumer characteristics and outcomes --- allow researchers to glean insights otherwise unseen.

In the first two papers, the researchers partner with large financial institutions to implement nudges aimed at reducing credit card debt. The first of these, **Paper #1**, studies a choice architecture change for credit card holders deciding whether to enroll in automatic debt repayments (‘Autopay’). This change makes salient an option to pay a fixed amount rather than the monthly minimum. This intervention leads to a 21-percentage point increase in the number of people opting for the salient Autopay option while reducing the likelihood of paying exactly the minimum amount by 7 percentage points. Despite

this semblance of success, the intervention produced no observable downstream effects on overall debt amounts or outcomes such as spending or borrowing costs.

The second paper, **Paper #2**, tests the effect of providing customers with information. Customers who were seen to be “co-holding” or maintaining a positive savings balances while consistently accruing interest on their credit card debt, were sent a notification designed to call attention to their behavior and highlight the costs involved. Like the first paper in the session, this nudge led to large short-term effects, but no meaningful effect on debt balances over time.

In the third and fourth papers in this session, the authors examine how the same behavioral interventions can produce different results depending on the consumer receiving them. In **Paper #3**, customers of a food delivery platform were nudged to take up a premium subscription only in cases when having had a subscription could have saved them money in the 30 days prior. These nudges have a substantial effect on consumer use of the platform. Yet, there is a significant amount of heterogeneity in the treatment effects of the nudge. These results have an ambiguous effect on consumers’ welfare as only some consumers are made better off from purchasing the subscription. The paper then leverages a structural model to show how policy makers and firms can leverage heterogeneous treatment effects in forming nudge targeting policies that either maximize consumer or producer surplus.

In the final paper, **Paper #4**, the authors explore a novel retirement savings rate information architecture using a “pennies per dollar” of salary framing instead of “percent of salary” framing. This small change of reframing had a positive impact on savings rates and reduced gaps between those with lower and higher income. Notably, the effects are largest for those with lower salaries.

The Semblance of Success in Nudging Consumers to Pay Down Credit Card Debt

EXTENDED ABSTRACT

We study how consumer responses to a “nudge” (Sunstein & Thaler, 2008) counteract its intended effect to reduce credit card debt. We show despite the nudge having a large proximate effect on consumer choices it has no distal effect at reducing credit card debt. This study advances literatures evaluating the effects of nudges (e.g. DellaVigna & Linos, 2022), understanding credit card behavior (e.g. Agarwal et al., 2015), and designing consumer financial protection regulation (e.g. Campbell, 2016; Loewenstein & Chater, 2017; Laibson, 2020). Prior studies have shown information and nudges on monthly statements or sent via letters or emails to existing cardholders to be ineffective at changing real behavior (e.g. Agarwal et al., 2015; Seira, 2017; Adams et al., 2022). Our study is a far more forceful intervention: changing choice architecture cardholders are presented with at card opening.

The nudge changes the choice architecture a cardholder observes after opening a new credit card and deciding whether to enroll in automatic payments (‘Autopay’). More specifically, the treatment group shrouds the option to automatically pay only the minimum due -- automatic minimum payment -- and increases the salience of an alternative option -- automatic fixed payment-- to automatically amortize debt faster.

We focus on changing Autopay choices as consumers on automatic minimum payments are the segment of the credit card market most likely to persistently only pay the minimum and incur high interest costs as a result (Adams et al., 2022; Sakaguchi et al., 2022). By one regulatory definition of credit card holders in persistent debt – making 9+ minimum payments in a year on interest-bearing cards – 75% had automatic minimum payments. 43% of total interest and fees across UK credit cards is held by those on automatic minimum payments (Sakaguchi et al., 2022). While automatic minimum payments appear good helping consumers forgetting to miss a payment and incurring a late fee, the estimated interest costs incurred from inertly only paying the minimum far exceed this benefit: it is estimated to be worth 8% of all interest and fees ever paid on credit cards (Sakaguchi et al., 2022).

We test this using an RCT field experiment of 40,708 newly issued U.K. credit cards at a lender as an ex-ante test to inform the U.K. financial regulator on whether to make this nudge a consumer financial protection regulation.

Our experiment was pre-registered to evaluate its effects across ten primary outcomes after seven completed statement cycles. Along with specifying primary outcomes we also included regression specification thresholds for statistical significance.

We gathered detailed administrative data on all credit cards in the trial collected from the lender and also match this to these cardholders' credit files. For a subset of cardholders we also observe linked checking and savings account data to liquid balances.

The intervention caused large proximate effects on consumer choices. It increases enrollment to this salient Autopay option 21 percentage points and it also reduces the likelihood of paying exactly the minimum by 7 percentage points. These effects are persistent over time. We also ran the experiment with another lender where the proximate effects were consistently replicated and, indeed were so large that the lender prematurely ended the trial before the pre-agreed sample size was reached - preventing reliable analysis of its distal effects on debt or other outcomes.

Despite these large and persistent proximate effects, the nudge has no distal effects on debt or other outcomes such as new card spending or borrowing costs. Furthermore, it also causes a small increase in missed payments, an undesirable outcome, although this does not translate into severe arrears.

The lack of distal effects on debt are explained by three offsetting consumer responses. First, automatic fixed payment amounts selected often bind at or just above the minimum due. Second, automatic payment (autopay) enrollment decreases -- increasing missed payments. And third, non-automatic (manual) payments decrease. These responses show that credit cardholders using Autopay are not as inert as they first appear.

Why are cardholders not paying more to reduce their credit card debt and interest costs? One potential reason is liquidity constraints (e.g. Gross & Souleles, 2002) - ultimately the economics of their budget constraint binds swamping psychological factors. For a selected subsample of cardholders who bank with their credit card provider we are able to examine this. For this subsample we observe liquid savings data linked to their credit card repayment behavior.

We show that when we construct a new measure of liquidity constraints - the minimum liquid cash balance over 90 days (robust to other time horizons) leading up to card opening - we find this sorts consumers into two heterogeneous types of repayment behavior. We observe bunching of this measure of minimum liquid balances just above zero. This suggests there are a type of sophisticated consumers carefully managing their finances to ensure they do not run out of liquid savings. Then we also observe credit card debt repayment

is discontinuously lower (with a discontinuously higher probability of paying in full) seven statement cycles later when the measure of minimum liquid balances fall below zero. This indicates consumers who are not able to keep positive liquid balances experience a binding liquidity constraint recently and thus do not repay more on their credit card.

Understanding Co-Holding Through Informational Nudge Abstract

EXTENDED ABSTRACT

It is hard to imagine why anyone would refuse a \$20 bill in order to receive a \$1 bill instead. Equally puzzling then is the number of people who consistently carry low-yielding savings balances while *also* holding onto high-interest debt. This project explores this behavior, often referred to as “co-holding,” through a large-scale field experiment.

A number of studies have documented and attempted to study co-holding in consumer credit markets (Telyukova & Wright, 2008; Telyukova, 2013; Bertaut, Haliassos, & Reiter, 2009; Fulford, 2012). In the U.S., Gross and Souleles (2002) show 33% of consumers with credit card debt have over one month's disposable income in liquid savings. Co-holding is prevalent even for households with high incomes and education levels, indicating that the phenomenon is not limited to a single demographic group (Gross and Souleles, 2002). In the U.K., Gathergood and Weber (2014) finds approximately 12% of households maintain revolving consumer credit – an average balance of £3,800 (\$6,870) which accrues interest – alongside low yielding liquid savings.

Consistent with the existing evidence, nearly 1 in 5 customers banking with our partner organization are seen to be co-holding. That is, these customers have maintained \$500 or more in both liquid assets and credit card debt. In aggregate, these customers show no signs of being any more or less educated than non-co-holding customers, nor is there any indication that they have less experience with financial products.

Earnings ranged from 0% per annum (p.a.), for standard checking accounts, to 2% p.a. if the money was kept in a promotional savings account. Yet customers were paying a minimum of 5% p.a. on their revolving debt balances, with some customers paying over 20% p.a. in interest on their credit card debt. That is, amongst customers who had \$100 in savings and owed \$100 in debt, some were paying \$20 to earn \$1. Why?

Through a large-scaled randomized controlled trial (RCT) we sought to test two hypotheses. The first was that consumers were *unaware* that they were co-holding. Consumers have limited attention and therefore may have overlooked the amount they had available in savings when looking at their credit card balances and deciding what to pay off. The second hypothesis was that even if they were aware that they were jointly holding onto savings and debt, they may not have realized the costs of doing so. Rarely does a bank remind its customers of the no-arbitrage principle and we have yet to come across an example where they explicitly display the interest rates side-by-side.

We conducted an experiment that randomly varied the information provided to customers when they logged onto their account via the retail bank's mobile application. Altogether, 125,328 customers met a pre-specified criteria of ‘co-holding’ --- i.e. who for three consecutive payment cycles prior to the start of the experiment held at least \$500 of credit card debt (on which they were incurring interest) and at least \$500 in savings. The customers were randomly assigned to one of three conditions. Those in the *control* condition would see

no new information. Those in the *co-holding notice* condition would receive a notification in the app reminding them that they had outstanding credit card debt and that the savings they had could be used to pay this off --- “You usually have at least \$500 available to pay your credit card debt. Every \$100 you pay off could reduce your interest charges.” Finally, those in the *co-holding cost* condition received a notification in which the first sentence was identical to the *co-holding notice* condition, but the second sentence was replaced with “... Every \$100 you pay off could reduce your interest charges by about \$20 per year. Saving \$100 only earns about \$1 in interest per year...” Differences in the central outcomes were not statistically distinguishable across information conditions, and so we collapse across these conditions in reporting the results that follow.

One complete billing cycle after the intervention, consumers who received the information notifications were more likely to repay their debts than those in the control conditions.

Specifically, consumers receiving information about co-holding were 2.6% more likely to repay more than they had prior to the intervention ($p_{Adjusted} < .001$) and 1% more likely to repay more than the minimum amount ($p_{Adjusted} < .001$). However, while differences in these binary outcomes were statistically significant, differences in repayment amounts were not economically meaningful. On average, credit card payments were 1.4% larger in the information conditions compared to the control ($p_{Adjusted} = .162$).

Intriguingly, the small responses seem partly due to a “boomerang effect”, in which treated individuals made large payments immediately, in response to the treatment message but later offset this difference with relatively smaller payments throughout the rest of the payment period. In particular, among customers who opened the notification and then clicked on the call to action button “Pay Now,” approximately 40% made a credit payment that day. Unconditional on clicking “Pay Now” average payments were just over \$150. By comparison, among control group consumers who had the same due date, only 15% made a payment and the unconditional average was less than \$50. Over the remainder of the payment period the pattern reverses, with payments among control consumers outstripping those by treatment individuals by roughly \$100. These results suggest that the intervention, while getting consumers to act, was unable to get them to internalize the lesson that we were trying to impart.

We have since conducted a survey with a subset of participants where we seek to understand how they account for various expenses. For example, when faced with a large unanticipated expense, are they more likely to pay using a credit card or cash? The data has already been collected and we, together with our institutional partners, are in the process of linking the survey data with the transaction data to better understand consumer behavior.

Nudging Misperceptions

EXTENDED ABSTRACT

In the era of big data, researchers, policy makers, and firms possess increasingly detailed records of individuals’ behavior. They can document past decisions made by consumers and leverage them in their policy or product design. When consumers make systematic mistakes in their decisions, firms and policy makers can document such behavior and then construct optimal policies that are consumer or producer welfare maximizing.

Nudges are a popular tool utilized by researchers, policy makers, and firms to move individuals towards a desired choice (Thaler and Sunstein, 2008). Further, nudges act as information treatments that make elements of a specific choice alternative salient, so it is more palatable to individuals. For fully rational consumers, nudges

provide no further information and do not shift their optimal choices, whereas for behavioral consumers, nudges may provide relevant information that alter their final decisions. However, recent research has found nudges possess a limited effectiveness across a myriad of environments (DellaVigna and Linos, 2022). While the average effect of these nudges may be small, there is often still significant heterogeneity in response to the nudges across individuals which suggests that some individuals may benefit or even be harmed by the nudges.

Our context is distinct because we utilize consumer level choice data with a field experiment using nudges. In this scenario, standard reduced form approaches are often limited in capturing the available heterogeneity and providing normative implications because the outcome variable is not directly a proxy for consumer welfare, as in standard behavioral welfare economics (Bernheim and Taubinsky, 2018). However, firms and policy makers can leverage structural models to utilize such heterogeneous effects for policy making (DellaVigna, 2018). Structural models further enable policy makers and firms to analyze nudges from a welfare perspective. In turn, we provide an integrated framework that allows firms to construct targeted nudging policies that are geared toward maximizing consumer or producer welfare.

The first part of this paper documents the nudge’s effects on consumer behavior in the context of a subscription service for a food delivery platform. The food delivery platform enables customers to order food from restaurants and manages the order fulfillment. The offered subscription service lasts thirty days, costs ten dollars, and waives delivery fees. Customers who use the platform make a repeated monthly decision to subscribe or not. We can determine if they have made a subscription decision mistake ex-post by examining if consumers subscribe to the service but do not use it enough to merit the subscription fee, or if customers could have saved money by subscribing.

We leverage a large, randomized field experiment run by the platform where customers who could have saved money from subscribing in the last thirty days were randomly nudged. We find that these nudges have a substantial effect on consumer usage of the platform. We further document a significant amount of heterogeneity in the treatment effects of the nudge. These results have an ambiguous effect on consumers’ welfare as only some consumers are made better off from purchasing the subscription. To work out the full ramifications of the nudge on consumer welfare, we incorporate the customer’s decisions in a structural model.

The second part of this paper provides a framework for welfare analysis of nudges when consumers hold potentially biased beliefs. We estimate a structural model of the influence of nudges on consumer beliefs and purchasing decisions. Nudges shift consumers’ biased beliefs in the model, which provides a link between the effect of the nudge on consumers’ decisions and their welfare. Consumers decide to subscribe based on their beliefs of their anticipated future usage on the platform, and repeated subscription mistakes from a rational expectations benchmark would thus ex-post identify their biased beliefs.

Using our model, we demonstrate how policy makers and firms can leverage heterogeneous treatment to form nudge targeting policies that either maximize consumer surplus or producer surplus. In the former, consumers are only targeted with a nudge if it increases their consumer surplus. In the latter, consumers are nudged only if the firm makes more profit by doing so.

We evaluate our targeting policies on a hold-out set of the experimental data and compare them to targeting policies generated from the reduced form treatment effect estimates in the first part of

the paper. We find that using the targeting policy geared towards maximizing consumer surplus will lead to fewer consumer subscription mistakes. These results illuminate the benefit of the structural model over standard reduced form methods in providing normative implications for optimal nudge targeting policies.

Our paper expands on the extant literatures on nudges, subscription services, and structural behavioral economics. Recent work has examined the heterogeneous effects of nudges (Choudhary et al., 2021; Misra, 2021) and the efficacy of nudges across a variety of contexts (DellaVigna and Linos, 2022). Contracts and subscription services have been used to evaluate behavioral biases from online grocery subscriptions (Goettler and Clay, 2011) to cell phone plans (Grubb and Osborne, 2015). Lastly, we contribute to the recent trend of structural behavioral economics (Strulov-Shlain, 2019; Hortacsu et al. 2021) where we intertwine structural methods from the industrial organization literature to behavioral concepts to provide normative implications.

Using Information Architecture to Address Individual Behavioral Differences and Reduce Retirement Savings Gaps

EXTENDED ABSTRACT

Strong forms of choice architecture, such as auto-enrollment, can have a big impact on improving outcomes in retirement plans (Madrian and Shea, 2001; Beshears et al., 2009). However, these types of retirement plan designs are not always feasible. For example, there are plan sponsors in the public sector which have legal restrictions (National Association of Government Defined Contribution Administrators, 2016). There are also plan sponsors who do not wish to implement auto features, and adoption may be leveling off (Alling and Clark, 2021; Plan Sponsor Council of America, 2019). Additionally, even for those plans that do use auto-enrollment, there may be opportunities for other non-automatic touchpoints and decision contexts where end-users engage more actively with decisions (Carroll et al., 2009). Example touchpoints include, but are not limited to, marketing communications or when users make periodic changes to their plan elections, such as opting into savings rate escalation.

Since strong forms of choice architecture are not always feasible, it is also important to consider the role of information architecture, which is how choices are described (Johnson et al., 2012), recognizing that end-user judgments and behavior may differ as a result of different framings. In environments that rely on information architecture instead of strong forms of choice architecture, there may be more cognitive demand on end-users, and individual differences and goals may have more of an influence on outcomes (Mertens et al. 2022). However, heterogeneity is a relatively under-researched area within marketing and behavioral science more generally (Bryan et al., 2021).

On one hand, information architecture can be used to influence outcomes broadly. For example, changing the description of fuel consumption from miles per gallon to gallons per mile has helped people to better understand the financial consequences of replacing certain cars (Larrick and Soll, 2008). Also, presenting retirement wealth in terms of monthly income instead of equivalent lump sums led to different assessments of retirement income (Goldstein et al., 2016), and reframing a savings program from \$150 per month to \$5 per day quadrupled the number of people who decided to participate (Hershfield et al., 2020).

However, information architecture can also be used in a more targeted way to help reduce inequities in behavioral outcomes between different groups of consumers. For example, when health

risks were framed in terms of frequency rather than percent (e.g., “10 out of every 100 patients get a bad blistering rash” versus “10% of patients get a bad blistering rash”), consumers who scored higher in numeracy rated the riskiness of a pill similarly whether they saw frequencies or percentages, but those who were less numerate saw differences in risks depending on the framing (Peters et al., 2011). Crucially, differences between the less numerate and more numerate were eliminated by using frequency instead of percentage framing. In the financial domain, reframing a savings program opportunity as \$5 a day instead of \$150 per month had a disproportionately larger impact on those who were lowest in income, and eliminated the savings program participation gaps between those with lower and higher income (Hershfield et al., 2020).

In this paper, we test whether a specific type of information architecture – reframing savings behavior in terms of pennies contributed per dollar earned rather than percent of salary – can disproportionately help those consumers at the lower end of the income spectrum. It is noteworthy to mention that people with lower income also tend to have lower numeracy (Bjälkebring, and Peters, 2021).

We test these propositions in two studies. In Study 1, we conducted an online study using hypothetical choices in which we compared a pennies-based framing to a more traditional percent-based framing. Relative to a percent-framing, the pennies-framing approximately doubled the intended savings rates of participants. Directionally – but not significantly – we also found that subjective numeracy moderated framing, with lower-numerate participants being most impacted by the pennies frame relative to the percent frame.

In Study 2, we employ a field study design and find that for employees who submitted a savings rate, the pennies framing had positive results on increasing submitted rates (50 basis points with 8.02% for pennies versus 7.52% for percent). Yet, a crucial moderation occurred: the effects are largest for those with lower salaries, and those in the lowest salary tercile elevated their savings rates by approximately 115 basis points from a baseline control savings rate of 6.88%. Floodlight analysis suggests that those with less than \$50,000 in annual salary may be those most helped by pennies reframing.

These studies offer evidence that a small change in eliciting savings choices using pennies versus percent framing can reduce gaps in retirement savings elections between income groups. Prior research has demonstrated that companies and policymakers can use choice architecture tools, such as auto-enrollment and auto-escalation, to help reduce gaps in financial outcomes between different segments. However, while choice architecture is an effective tool, it is not the only tool. We suggest that strategies relying on information architecture (e.g., reframing of information) should also be part of the broader toolkit used to address financial outcome gaps.

REFERENCES AVAILABLE UPON REQUEST

Decoding the Language of Success

Chairs: Matthew D. Rocklage, D'Amore-McKim School of Business, Northeastern University, USA
Shiri Melumad, The Wharton School, University of Pennsylvania, USA

Paper #1: Beyond Sentiment: The Value and Measurement of Consumer Certainty in Language

Matthew D. Rocklage, D'Amore-McKim School of Business, Northeastern University, USA
Sharlene He, John Molson School of Business, Concordia University, Canada
Derek D. Rucker, Kellogg School of Management, Northwestern University, USA
Loran Nordgren, Kellogg School of Management, Northwestern University, USA

Paper #2: Style, Content, and the Success of Ideas

Jonah Berger, The Wharton School, University of Pennsylvania, USA
Grant Packard, Schulich School of Business, York University, Canada
Reihane Boghrati, W.P. Carey School of Business, Arizona State University, USA

Paper #3: The Effects of Diverse Language in Reference Group Associations

Jeffrey K. Lee, Kogod School of Business, American University, USA

Paper #4: Now That I Say it, I'll Have the Escargot: How Speaking Alters Preferences

Shiri Melumad, The Wharton School, University of Pennsylvania, USA
Robert Meyer, The Wharton School, University of Pennsylvania, USA
Yoon Duk Kim, The Wharton School, University of Pennsylvania, USA

SESSION OVERVIEW

Products that are widely anticipated often disappoint. Others turn from sleepers to striking sensations. Correctly orchestrating and predicting success in the marketplace has garnered the attention of both practitioners and researchers alike (Babić Rosario et al. 2016). Yet, researchers have empirically observed just how difficult it can be to understand the success of everything from products, to advertisements, to services (Salganik, Dodds, and Watts 2006).

To help overcome this obstacle, the papers in this session use advances in linguistic analysis to ask and answer questions that uncover patterns of success in the marketplace: When sentiment analysis fails, what facet of linguistic sentiment can marketers look to for predicting success? How does writing style forecast what catches on and what falls by the wayside? How can language help discern distinct user groups and can these groups predict social media popularity? And, how might the way consumers express their choices change researchers' understanding of preference structures?

Rocklage et al. begin by noting that traditional sentiment analysis and its focus on valence can have difficulty predicting behavior. To that end, they construct and validate a novel measure of linguistic *sentiment certainty*. They find that the certainty with which consumers hold their opinion can predict advertising success where traditional sentiment analysis cannot.

Berger et al. show that the success of academic articles is affected not just by their content but also their writing style. Four field and experimental studies show that, beyond non-language factors like

the content of ideas and author prominence, an article's linguistic features—such as use of personal voice, function words, and simplicity—tend to increase its citation counts and perceived importance.

Next, **Lee** investigates the relationship between language and content success from a different perspective: does whether consumers describe social media platforms as having more (vs. less) diverse followers predict the platforms' popularity? Results show that the less participants viewed a platform as stereotypically associated with one type of user, the more likely they were to use it, and the greater the platform's market share.

Finally, **Melumad et al.** explore how the modality consumers use to express their choices online alters their preferences. Results from two experiments show that consumers who say their choices out loud to an online interface (vs. clicking on it) are more likely choose socially desirable options due to heightened self-presentational concerns—even when these preferences are expressed in the absence of other people.

Drawing on both theory- and data-driven linguistic approaches, this session brings together diverse perspectives to allow for a more complete understanding of the linguistic drivers and predictors of success. This session should attract researchers interested in language, text analytics, and naturalistic field data. It should also interest those seeking to learn about the latest natural language tools and computational approaches. Finally, this session will appeal to those wanting to know more about the nature of success and our ability to predict the future. By appealing to these diverse audiences, this session has the ability to bring researchers and their ideas together.

Beyond Sentiment: The Value and Measurement of Consumer Certainty in Language

EXTENDED ABSTRACT

Sentiment analysis allows marketers to discern opinion on a scale never before possible. Yet, sentiment analysis focuses almost exclusively on quantifying the positivity or negativity of consumers' attitudes. Recent work indicates, however, that valence is not always a reliable predictor of behavior (de Langhe, Fombach, and Lichtenstein 2016).

To move the field beyond valence, we demonstrate that consumer sentiment – i.e., attitudes – is much richer in depth. One facet of attitudes that has received considerable attention is the subjective sense of *certainty* an individual has about an attitude. Greater certainty predicts stronger attitudes across numerous contexts (Tormala and Rucker 2018)

To enhance sentiment analysis, we construct the Certainty Lexicon (CL) to quantify certainty in language. We find that the CL is more generalizable and accurate in its measurement compared to other tools. It also predicts behavior where traditional sentiment analysis cannot.

Constructing the CL. We first created a list of candidate words and phrases – i.e., n-grams – that people might use to communicate certainty. Succinctly, we used data-driven approaches that used participant-generated words, analysis of natural text, existing wordlists, and their synonyms. We then refined this wordlist to n-grams that were detected with some frequency in natural language and rated by participants as at least somewhat likely to signal certainty or uncertainty. This refined the wordlist from 36,618 n-grams to 5,104.

Next, we obtained normative certainty ratings for each n-gram. These ratings form the basis of the CL as they are imputed each time the n-gram is used. Participants ($N = 489$) rated the n-grams on the extent to which each implied certainty (0: Very uncertain, 9: Very certain). Then, we averaged participants' ratings for each n-gram – e.g., “beyond any doubt” ($M = 8.81$) and “just don't know” ($M = .63$). These scores are put in place of each n-gram when it is encountered.

To further refine the wordlist using these scores, we obtained all data from Good Judgment Open (www.gjopen.com) up to 2020 ($N_{\text{entries}} = 169,954$). Briefly, people on this website predict outcomes across a wide variety of domains by assigning a numeric probability to each possible outcome. The more certain individuals are about the outcome, the less their probabilities spread across the outcomes. They then write why they issued those probabilities. An n-gram was retained if its normative rating was consistent with the assigned probabilities. There were 3,485 n-grams left for the final Certainty Lexicon wordlist.

Validating. Study 1 examined how well the CL correlated with “ground truth” certainty. We assigned 284 participants to think of an opinion they were very certain or uncertain of across a wide range of topics and then write a message to explain that topic to a friend.

We compared the CL to the standard “certainty” and “tentativeness” dictionaries from LIWC (Pennebaker et al. 2015). We combined these measures into a single index (certainty minus tentativeness). Results are similar when analyzing each separately.

Prior work suggests that LIWC's approach can be unreliable for brief pieces of text (Rocklage and Rucker 2019). The CL's approach, however, should be more reliable regardless of length. Thus, participants were also assigned to write either a longer or shorter message to their friend. Finally, they self-reported their certainty (1: Very uncertain, 7: Very certain).

CL certainty correlated with self-reported sentiment certainty for both long and short length conditions. However, LIWC showed a significantly weaker correlation in longer texts and a non-significant correlation in shorter texts.

In Study 2, we validated the CL with real-world text. Using all online product reviews from BeerAdvocate.com until 2012 (1.43 million reviews), we examined two phenomena that research indicates should influence consumers' sentiment certainty. First, individuals are less certain of their attitude when there is little existing social consensus (Tormala and Rucker 2018). Second, people are less certain when their attitude is at odds with the social consensus (Petrocelli, Tormala, and Rucker 2007).

As expected, less consensus about a beer when a consumer wrote their review (the greater the ratings' standard deviation) predicted less certainty from that consumer. Similarly, the more discrepant a consumer's rating was from the average rating, the less certain they were.

LIWC provided inconsistent results: replicating Study 1, for longer reviews (+1SD) LIWC showed similar results to the CL. However, for shorter reviews (-1SD), LIWC conflicted. Less consensus predicted less certainty, but, against expectations, greater discrepancy predicted *more* certainty. CL certainty provided consistent results regardless of length.

Demonstrating value. In Study 3, we sought to demonstrate the real-world value of the CL beyond traditional sentiment analysis. We predicted the success of Super Bowl advertisements across the 2016 and 2017 Super Bowls via the number of new Facebook followers a company accrued in the two weeks after each Super Bowl (94 commercials).

We obtained all real-time tweets that occurred the day of the Super Bowl that referenced each commercial (130,000 tweets). We quantified tweet sentiment using the Evaluative Lexicon (Rocklage, Rucker, and Nordgren 2018) and LIWC's positive and negative va-

lence categories. Reflecting a common marketing challenge, most tweets were positive, thereby making sentiment less diagnostic (Rocklage, Rucker, and Nordgren 2021).

We predicted the average number of daily new followers from the average sentiment and certainty. We controlled for the average daily followers each company accrued before each Super Bowl to assess the *change* in daily followers. Using regression, the greater the certainty of the tweets, the more followers a company accrued over the next two weeks. Both valence and LIWC were not significant predictors, further demonstrating the CL's unique value.

The current work highlights the importance of moving beyond traditional sentiment analysis. We provide researchers the opportunity to explore the impact of sentiment certainty both in-the-lab as well as “in the wild” via the Certainty Lexicon (www.CertaintyLexicon.com).

Style, Content, and the Success of Ideas

EXTENDED ABSTRACT

People want their ideas to catch on. Politicians want policies to be adopted, health officials want messages to diffuse, and marketers want products to succeed. Not surprisingly, then, decades of research have examined things like new product adoption and diffusion. But why do some things succeed in the marketplace of ideas?

While content clearly matters, we suggest that how an idea is presented also plays an important role. To provide a particularly stringent test of presentation style's importance, we examine it in a context where one might imagine content is paramount and style is not: academic research. Science prides itself on being an objective exercise, where writing is merely a disinterested way to communicate unobstructed truth (American Psychological Association 2020; Pinker 2014). Consequently, if style shapes success (i.e., citations) even in such a content focused domain like academic research, it highlights its importance to an idea's success more broadly.

Testing style's impact, however, is challenging. It's one thing to theorize that certain presentation styles make ideas more successful, but actually measuring adherence to stylistic approaches and linking them to a consequential outcome is difficult. Further, it can be tough to separate style from content. Even if papers that write certain ways (e.g., use more emotional language) are cited more, this could be driven by the subject matter.

To address these challenges, we focus on a small class of words that play a unique role in communication. Function words (e.g., conjunctions, grammatical articles, and prepositions, such as “and,” “the,” and “on”) make up only a tiny portion of the English vocabulary (i.e., ~0.04%; Baayen, Piepenbrock, and Gulikers 1995) but appear in every sentence. They convey little semantic value on their own, but bind and enrich the nouns, adjectives, verbs, and some adverbs that make up communication content (Ireland and Pennebaker 2010). Indeed, decades of research refer to function words as “style words” because they are seen as reflecting things about a communicator's linguistic style rather than what is being discussed. Consequently, if how authors use function words helps explain writing's impact, above and beyond any impact of content, it suggests that writing style shapes the success of ideas.

To test our theorizing, **Study 1** analyzes almost 30,000 academic articles from five social science disciplines. We use natural language processing to extract both content (i.e., topics using topic modeling) and style features (i.e., the prevalence of each function word category). We also control for a range of non-language features (e.g., journal, publication year, author prominence and gender).

Results suggest that above and beyond the variance explained by non-language features and article content (*adj. R*² = 0.208), adding

style features helps explain how many citations articles receive (*adj. R*² = 0.217, *F* = 2.665, *p* = .004). Results are the same using a machine learning model optimized for prediction and controlling for things like author prominence, institution, and where authors are from.

While Study 1 suggests that style shapes success, it brings up some important questions. Which ways of writing might increase impact, and why?

To address these questions, **Study 2** explores three specific ways writing style might shape success: Personal voice, temporal perspective, and simplicity.

Personal Voice. While academic writing guides have argued that authors should write in a manner that is distant, objective, and devoid of self-reference (e.g., first-person pronouns like “I” or “we”; Bem 2003; Strunk Jr and White 1999; c.f., American Psychological Association 2019), we suggest that using personal voice may sometimes be beneficial.

In particular, we suggest that taking personal ownership of arguments, hypotheses, findings, and contributions (e.g., “we reveal” vs. “the present research reveals”) may make the authors seem more prescient, increasing the research’s perceived authority. Taking personal ownership of methods and results (e.g., “we asked participants to do X” vs. “participants did X”), however, may make methodological choices seem more subjective. Consequently, whether personal voice is beneficial or not may depend on where it is used (i.e., front end vs. methods and results). We use manual coding and machine learning to separate articles into these different sections.

Consistent with our theorizing, papers whose front ends are written with more self-referencing function words (i.e., first person pronouns) are cited more (*b* = 0.083, *p* < .001). Papers written with more first-person pronouns in the middle, usually empirical section, however, are cited less (*b* = -0.033, *p* < .05).

Temporal Perspective. Beyond personal voice, temporal perspective may also play a role. While journal style guides, and academics themselves, commonly recommend describing research using past tense (American Psychological Association 2020), we suggest present tense may lead to greater impact.

Specifically, while a paper’s content (i.e., theorizing, methods, and results) occurred in the past, using present tense may make that content seem more current (Lieberman et al. 2007). This, in turn, may make the ideas seem more relevant, applicable, and important, which may increase the number of citations a paper receives.

Consistent with our theorizing, results suggest that papers written with more past-focused language (i.e., auxiliary verbs) are cited less (*b* = -0.100, *p* < .001), and those written with more present-focused language (i.e., auxiliary verbs) are cited more (*b* = 0.072, *p* < .01).

Simplicity. While academic ideas are often quite complex (Gray 2021; Metoyer-Duran 1993), communicating them more simply should make them easier to understand, remember, and build on (Chater 1999), which might increase their impact (Chater 1999; Fogg 2009). We suggest this may be particularly important when ideas are first being explained (e.g., in the beginning of an article where authors are laying out their thinking).

Consistent with our theorizing, results indicate that simplicity is linked to citations. Papers that use fewer function words linked to cognitive complexity (i.e., articles *b* = -0.030, *p* < .001 and prepositions *b* = -0.016, *p* < .01) in the front end are cited more.

To further test the causal impact of the identified features, **Studies 3 and 4** manipulate them experimentally. Results demonstrate that they lead research to be seen as more important and impactful.

Overall, this work demonstrates the important role of presentation style in the success of ideas and highlights specific ways of writing that can increase impact.

The Effects of Diverse Language in Reference Group Associations

EXTENDED ABSTRACT

The reference group – a socially meaningful group reflecting particular lifestyles (Englis and Solomon 1995; McCracken 1989) – is an important concept in consumer behavior, and language is a critical component of reference group influence. When consumers label consumption options using associative or dissociative language (e.g., this brand is for “jocks” or this product is for “nerds”), such labels can impact consumer choice (see Escalas and Bettman 2003, Berger and Heath 2007 or White and Dahl 2006). Despite the wealth of research on this topic, surprisingly little is known about the diversity of words and expressions used by consumers to label consumption options with specific groups. Notably, more diverse words and expressions used by a consumer (e.g., to describe a brand) might reflect a greater diversity of reference group associations held by that consumer. To the best of our knowledge, the topic of diversity in reference group language, and the possible effects of more diverse group associations on consumer behavior, have been largely unexplored.

In this work, we employ a language-based approach to study the diversity of reference group associations, and their potential for shaping consumer behavior. As an initial test, we explore the words used by consumers to describe reference group associations for twenty major digital platforms such as Facebook, Instagram, and TikTok. Because these platforms are relatively large, consumers may list a diverse set of groups when asked about the typical users of each platform (e.g., consumers may use the words “dancers” and “comedians” to describe TikTok users). As the perceived diversity of existing users can provide “social proof” of the widespread adoption of a product (Lee and Kronrod 2020), we explore whether more diverse language used to describe a platform (reflecting more diverse group associations) can be suggestive of its perceived cultural success as well as one’s own interest in adopting it.

First, we selected twenty platforms for our study based on an mTurk pre-test (*n* = 111, *m*_{age} = 39.7, 49 female) in which participants indicated their familiarity with a larger set of platforms. Platforms that were familiar to at least 40% percent of participants were retained. Next, we used a survey design from recent research (Nicolas et al. 2021) in which we asked 1,104 mTurk participants (*m*_{age} = 40, 612 female) to provide five nouns and five adjectives describing the type of person who uses the platform (selected at random from the list of twenty). To process this language, we followed Lee and Junque de Fortuny (2021) and associated each unique description generated by a participant with a ConceptNet word embedding vector (Speer, Chin and Havasi 2018). Next, we employed a Weighted Dirichlet Process Gaussian Mixture Model to link each vector to one of 100 broader reference group clusters. Finally, following prior reference group research (Chaplin and Lowrey 2010), we counted the total number of clusters mentioned by a participant for a given platform, to infer the multitude of associations held for it.

As an example, common words used to describe Instagram users included “hip” and “trendy” (reflecting the “fashionable” group cluster) as well as “social butterfly” and “sociable” (reflecting the “social” group cluster). A participant who described Instagram users as both “hip” and “trendy” would evoke one group cluster, whereas a participant who used the words “hip” and “sociable” would evoke two. Beyond our language-based measures, we also asked participants questions relating to the success and desirability of the platforms. First, participants estimated the perceived market share of a given platform (“What percentage of the US population do you think uses this platform at least once a month?”) as an indicator of the cultural success

of the platform. Second, following Ng (2020), participants indicated whether they intended to use the platform in the coming six months, as a measure of future adoption intention. Finally, participants answered a series of demographic questions.

We explored the relationship among diversity of group associations (in participants' words used to describe the platform), perceived cultural success, and future adoption intention. First, we found that the number of group clusters mentioned is positively associated with a platform's estimated market share ($\beta = .569$, $SE = .194$, $p = .003$). Second, we found that estimated market share is positively associated with the intention to use the platform in the next six months ($\beta = .009$, $SE = .002$, $p < .001$). Finally, using Hayes' PROCESS Model 4, we found evidence of mediation. Specifically, diversity of reference group associations increases the perceived market share of the platform, ultimately influencing future intentions to use the platform (effect = .005, $SE = .002$, $LLCI = .002$, $ULCI = .010$). However, the direct effect of diverse group associations on future usage intentions also remained significant (effect = .054, $SE = .022$, $LLCI = .012$, $ULCI = .096$). Our mediational model is significant after controlling for platform-specific effects, and outperforms alternative models where the ordering of mediational variables is adjusted (e.g., using diversity of associations as the intervening variable).

Our findings suggest that a consumer's diversity of reference group language for a platform relates to key perceptual variables (e.g., perceived market share) as well as downstream consequences such as the consumer's decision to use the platform in the future. From a practical standpoint, these results indicate that management of the platform's group associations may be critical to the platform's ability to maintain and grow its user base, and advertising and WOM that evokes diverse associations (e.g., using words and language that bring to mind multiple group clusters) could be effective to this end. Beyond platforms, the relationship among our focal variables of study (diverse associations, perceived cultural success and adoption decisions) may extend to other contexts where perceptions of ubiquity are important for the success of brands or products. Finally, our work leverages novel methods in computer science (e.g., Natural Language Processing) to show that the language employed by consumers can be mined to understand perceptions of diversity and the potential consequences of diverse group associations.

Now That I Say it, I'll Have the Escargot: How Speaking Alters Preferences

EXTENDED ABSTRACT

In recent years advances in voice recognition technology have allowed consumers to make choices and gather information online using voice commands rather than using a mouse to click on a screen. Google dictation, for example, allows consumers to search the web using voice commands, and products can be ordered by speaking to an Alexa voice assistant. Voice technologies are also increasingly being used by marketing researchers to gather consumer insights, such as by allowing participants to complete surveys by speaking their responses out loud (e.g., Stuart and Page 2020). In this work we explore a question that follows from this trend: Might the mere act of vocalizing alter the preferences that we express?

Results from two large-sample experiments show that when participants expressed their choices by saying them out loud (vs. clicking on a screen), they tended to make more socially desirable choices. In particular, we propose that because speaking is an inherently social act (e.g., Akinaso 1982), users vocalizing to a computer screen tend to experience similar self-presentational concerns as those that arise in human conversations, even when no human counterpart is present

(e.g., Shen and Sengupta 2018). Thus, we predict that when consumers indicate preferences online by saying them out loud (vs. clicking on a screen), they tend to make choices that are more socially desirable, akin to the social desirability biases that arise when decisions are made in public versus private (e.g., Ariely and Levav 2000; Cialdini and Goldstein 2004; Huh et al. 2014).

To test for the basic effect, in Experiment 1 we recruited 930 participants from Turk Prime and asked them to choose among six entrée options from a hypothetical restaurant menu. Importantly, participants were randomly assigned to click on a button to express their choice, or clicking a record icon and saying their choice out loud. To ensure that the menu options varied in their degree of social desirability, we had pretested them by asking external judges to rate their agreement with two statements about each entrée (on a 1: "Strongly disagree" to 5: "Strongly agree" scale): "Ordering this would say something positive about who I am" and "If I were trying to impress someone, I would order this item" ($\alpha = .69$). The results of the main experiment confirmed that, as predicted, participants who expressed their choice by speaking to (vs. clicking on) the screen were more likely to choose the most socially desirable options (sushi; salmon), but less likely to choose the least socially desirable one (burger). These results obtained regardless of whether participants had completed the study alone versus near other people.

To provide a more rigorous test of this hypothesis and its underlying mechanism, in Experiment 2 we recruited 800 participants from Turk Prime and had them complete a choice-based conjoint task (e.g., Louviere and Woodworth 1983) that presented them with six pairs of hypothetical restaurants and asked them to express their choices for each pair either by clicking on a screen or vocalizing. The restaurants were described in terms of whether they contained each of eleven attributes, five of which had been pretested as highly socially desirable (e.g., a nationally known chef), four as low (e.g., free refills), and two as neutral (e.g., convenient to home). After making each choice and before proceeding to the next, participants were asked to report which attributes were most responsible for their decision by either saying or typing them; this allowed us to examine whether any differences in the social desirability of choices also arose in terms of the attributes they viewed as most integral to these choices. Finally, participants were asked to respond to a series of follow-up questions, including three items that captured the extent to which they agreed that they had experienced self-presentational concerns during the task (e.g., "I was conscious of how my decisions would come across to others").

To test for the predicted effects on choice, we first computed an index of the social desirability of each option defined by $SD_i = \sum_j r_j d_{ij}$, where d_{ij} took the value 1 if the chosen option possessed attribute i and 0 otherwise, and r_j was a rating of how socially desirable the attribute was based on ratings from external judges. We then ran a logistic regression where the predictors were modality (voice=1, click=0), social desirability of the options, and their interaction, and the outcome variable was whether a given option was chosen. First, the results revealed a main effect of social desirability such that the more socially desirable an option was, the more likely it was to be chosen on average ($b = .099$, $SE = .003$, $p < .001$). More importantly, the results confirmed a modality x social desirability interaction, such that the more socially desirable an option was, the more likely it was to be chosen when speaking versus clicking (voice x SD interaction: .021; $SE = .003$, $p < .001$). To illustrate, when presented with a pair of restaurants with one pretested as 20% above the average social desirability score and the other as 20% below, a participant who vocalized (vs. clicked) was 6.7% more likely to choose the more socially desirable option.

Consistent with the effects on restaurant choice, when asked which attributes drove participants' choices, those who vocalized (vs.

clicked) were more likely to reference socially desirable attributes (Figure 2). For example, participants who vocalized were more likely to mention the presence of a nationally known chef as a reason, while those who clicked were more likely to admit to the availability of early-bird specials.

Finally, consistent with the proposed underlying mechanism, participants who vocalized experienced greater self-presentational concerns ($M_{\text{voice}}=3.56$ vs. $M_{\text{text}}=3.13$; $F(1, 771)=6.64$, $p=.010$), which mediated the effect of modality on the social desirability of choices (voice-vs.-click \rightarrow SPC: $b=.146$, $t=4.14$, $p<.001$; SPC \rightarrow SD: $b=.442$, $t=14.27$, $p<.001$; indirect effect: $b=.061$, $t=3.94$, $p<.001$).

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Out of Touch? Multi-Methodological Approaches to the Evolving Role of Haptics in Consumers' Experiences

Paper #1: Coping with the Loss of Touch During the COVID-19 Pandemic: Insights from A Longitudinal Qualitative Study of Shoppers

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Paper #2: Am I Confident in the Weight? Conveying Product Weight in Digital Media using a Hand

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Paper #3: Consumer Responses to Haptic Augmentation of Brand Storytelling

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SESSION OVERVIEW

This session documents the varied roles of touch and the possibility of other sensory stimulations to replace, augment or supplement actual touch. All researchers in the session focus on ways for how consumers, through their practices and experiences, or marketers/advertisers, through their communication strategies, deal with limitations placed on product touch, whether due to restrictions placed on the shopping environment or because of the technological interface.

The session centers on three interrelated questions of how consumers cope with the inability of touch (paper 1), how imagery in digital media can allow consumers to process information about a product without touching it (paper 2), and how consumers respond to augmented touch when haptic effects are integrated into audiovisual mobile content (paper 3). Each paper presents novel insights on touch-related aspects of consumer experience, information processing, and brand understanding. The studies to be presented span a range of contexts, from the retail environment (paper 1) to digital media (paper 2) and mobile platforms (paper 3).

Embracing the ACR conference theme of togetherness, we document these developments in haptics from multiple theoretical angles and methodological approaches.

Drawing on a phenomenological perspective, the first paper explores how consumers coped with the limitations to touch products in their shopping experiences during the COVID 19 pandemic. Drawing on data from semi-structured interviews, including some with auto-driving, field observations, and surveys, the research uncovers a grief-like process for how consumers reacted to and coped with the loss of touch.

The second paper adopts an information processing perspective to assess whether and how the visual of a hand in a communication message can assist consumers in judging a salient haptic attribute; product weight. Four experiments reveal that the image of a hand with an appropriate orientation can communicate a specific haptic attribute of a product and impact consumers' evaluations of products in the digital space.

The third paper extends current knowledge at the intersection of haptic perceptions and message source characteristics by experi-

mentally documenting the impact of haptic augmentation of communications on brand responses. Three experiments document the novel effect of haptically-augmented brand storytelling, which the authors define as the synchronic integration of haptic effects into audiovisual mobile content, particularly movement.

The session discussant, Aradhna Krishna, an expert on sensory marketing, will bring all these perspectives **together**. They will add their own 'touches' and insights into the evolving role of touch and other senses in consumers' experiences. We believe that the variety of perspectives and novel insights will attract a diverse and engaged audience. We will leave time to engage the audience in a discussion about the evolution of haptics in a digital world where it is increasingly easy to be 'out of touch.'

Coping with the Loss of Touch During the COVID-19 Pandemic: Insights from A Longitudinal Qualitative Study of Shoppers

EXTENDED ABSTRACT

Shopping can be an inspirational experience, where consumers go on a journey as they peruse up and down the aisle of their favorite retailers. The predominant reason consumers enjoy in-store shopping is for its ability "to see, touch, feel, and try out items" (Skrovan 2017, 1). An abundance of literature shows the positive effects of touching products in retail settings, which can influence and increase product evaluation confidence, purchase intentions, and consumer attitudes (Grohmann, Spangenberg, and Sprott 2007; Peck and Wiggins 2006). Many view touch as central to the shopping experience and is especially important to consumers who have a high need for touch (NFT) which Peck and Childers (2003, 431) "conceptually define as a preference for the extraction and utilization of information obtained through the haptic system."

Consumer researchers have long documented the many facets of shopping. Consumer fun-seekers, shop for the thrill of the adventure, sensory stimulation, and enjoyment of it (Hirschman and Holbrook, 1982; Sherry, McGrath, and Levy 1993). Evaluating products in an autotelic fashion reflects hedonic tendencies and compulsive motivations (Peck and Childers 2003). On the other hand, shopping can also be seen as 'work' and some research also documents utilitarian and problem-solver themes, emphasizing shopping as "efficient and timely" (Peck and Childers, 2003, 431; Babin, Darden, and Griffin 1994; Sherry 1990). Touch is instrumental to evaluate products with purposeful intention based on a specific goal that guides behavior (Peck and Childers 2003).

The COVID-19 pandemic added another degree of uncertainty for consumers during in-store shopping experiences and impacted how some consumers perceive and initiate with products haptically. Pandemic-related distress created anxiety and apprehension that likely influenced shopping behavior. The goal of this project is to garner a deeper understanding of how consumers coped and adjusted their behaviors given their lessened ability to touch products due to the pandemic.

The study adopted a longitudinal qualitative design, focusing on a panel of 31 consumers who were the primary shoppers in their homes prior to, after, and during the height of the COVID-19 pandemic. Participants were recruited using purposeful sampling. Using videoconferencing, the researcher interviewed all participants once and half of the panelists were also interviewed a second time over the

course of the study. Participants also completed short surveys around the same time as the interviews to measure their Need for Touch and capture sociodemographic information. In the first phase of interviews (March and April 2021), participants were prompted to reflect on how they shopped pre-pandemic, during the height of the pandemic, circa March 2020, and to describe their current shopping behaviors and experiences. The second phase of interviews (August 2021-February 2022) relied on autodiving with visual stimuli depicting shopping situations to guide the exchange. For a small subset of the consumer panel, the pre-interview using autodiving was followed by in-store observations, and a post-interview to validate findings.

The dataset includes 45 hours of video footage and 651-pages of single-spaced transcripts. In the tradition of grounded theory, the analysis involved a combination of open, axial, and selective coding that “enables a cyclical and evolving data loop” (Williams and Moser 2019, 47). Longitudinal coding was also utilized to compare and contrast codes over time. Additionally, survey measures, specifically the NFT scale, were compared across timepoints to assess any change in the autotelic and instrumental dimensions. The quantitative analyses supplement the qualitative insights.

Using a Consumer Culture Theory technique, retextualization, “whereby theoretical insights and constructs from one paradigmatic conversation are reconceptualized and reworked in relationship to a different paradigmatic vernacular” researchers were able to bridge how consumers reacted to the loss of touch and the coping mechanism instituted (Arnould and Thompson 2005, 876; Thompson, Stern, and Arnould 1998). There is clear evidence of the “risk perception of becoming infected with the coronavirus influences emotional responses associated with shopping considerations” Szymkowiak et al., (2020, p. 53). The findings also indicate a decline in autotelic touch tendencies, i.e., haptic engagement for fun, and a rise in instrumental touch, touch with purposeful intention. The in-store shopping experience changed especially for high-need for touch consumers.

Findings show that the stressors associated with the inability to touch triggered coping phases that resembled many of the facets and experiences evident in models of the grief process, such as Bowlby and Parkes' (1970) four-stages grief model. In the first stage, Shock & Numbness, panelists discussed a sense of loss due to their inability to freely engage haptically with products as they once did. In the second stage, Yearning & Searching, consumers longed for what they lost, and spoke of experiencing anxiety, frustration, and sadness, and began searching for alternate ways to get back what was lost. In the third stage, Despair & Disorganization, participants reported feelings of anger, despair, and hopelessness while the initial acceptance of the loss brought the need to withdraw from activities once enjoyed. In evidence of the fourth and final stage, Reorganization and Recovery, participants spoke of intense feelings, such as anger and sadness that began to subside, and fond memories of past shopping experiences surfaced.

The project highlights consumers' coping mechanisms in response to a traumatic experience and the limits the pandemic placed on in-store haptic interactions with products. The grief-life process for coping with the absence of touch has implications for retail marketing strategies given the role of haptic senses as providing shoppers with a “full and complete cognitive experience” even when sight, smell, sound, and taste are “absent or temporarily isolated” (Balconi et al. 2021, 8). The findings also open new avenues for thinking about how trait-like consumer variables like need for touch may be more malleable than previously sought, especially as a result of traumatic experiences. The data signal that some of the sensory adjustments consumers made to their shopping experiences may be permanent and have lasting implications for retailers and brands.

Am I Confident in the Weight? Conveying Product Weight in Digital Media using a Hand

EXTENDED ABSTRACT

The weight of any hand-held product is an important attribute, particularly if a consumer needs to hold or carry it, such as the weight of a mobile phone. In a physical retail setting, a shopper may choose to interact with a mobile phone to evaluate its weight. However, the way an online retailer communicates weight is to show a product image or provide objective product weight information in a product description, assuming consumers can simulate the process of weighing the product in their hand. The current research argues that the inclusion of a hand image interacting with a product in a specific manner may engender a focused weight evaluation more effectively than just showing the product image or objective weight information in a digital space. More specifically, the image of a hand hefting a product illustrates the matching unsupported holding exploratory procedure, an efficient hand movement to determine the weight of a product (Klatzky et al. 1991; Lederman and Klatzky 2009). While online retailers use hand images in the advertised product's image, little is known about the effectiveness of this to communicate weight information and subsequent product evaluation. Therefore, the present research seeks to address this paucity of knowledge by exploring the appropriate use of a hand image to enhance positive evaluations of products with weight as a salient haptic attribute.

We conduct four studies to test the central thesis – a hand image depicting a specific gesture (e.g., unsupported holding) corresponding to a haptic attribute (e.g., weight) will result in a favorable product evaluation. Findings of our work contribute to the theory and practice in significant ways. First, our research contributes to the literature on multisensory online experiences. More specifically, past studies contend that online retailers use visual cues (e.g., pictures) to improve customers' sensory experience (Petit, Velasco and Spence 2019). We show that the image of a hand interacting with the product in a specific manner (e.g., hefting or unsupported holding) can facilitate mental representation of a weight experience in a digital space, thereby, resulting in a more favorable product evaluation. Second, past research has shown that orienting a product towards a dominant hand elicits a positive product evaluation (Elder and Krishna 2012; Maille, Morrin and Reynolds-McIlroy 2020; Shen and Sengupta 2012). However, the current research illustrates that the image of a hand with an appropriate orientation can communicate a specific haptic attribute (e.g., unsupported holding for weight) of the product through re-enactment, which in turn, can also affect a consumer's product evaluation in the digital space.

Third, prior studies in marketing have shown that making changes in structural or graphical elements of a product can influence consumer evaluation of product weight (Deng and Kahn 2009; Sharma and Romero 2020). Instead, we propose a novel approach of using a hand image to visually convey the haptic attribute of the weight of the product. Fourth, past research has found that closing one's eyes to recall haptic attributes of a product from memory or immediate experience may be a surrogate for actual touch (Peck, Barger and Webb 2013). However, this may not be feasible while shopping online (Krishna, Cian and Sokolova 2016). In this work, we show that a hand image transfers the haptic information of a product and may compensate for actual touch to ascertain specific haptic attribute information. Finally, providing weight information in a product description has been found to enhance confidence in judgment (Peck and Childers 2003a). However, the current research shows that the inclusion of a hand in a product image is more effective than providing the actual weight of the product.

Our findings offer practical implications for online retailers. We illustrate how the use of a hand image interacting with a product in a specific orientation can communicate a haptic attribute in a digital space. Online retailers can use a hand image hefting a product to evoke consumers' perceptions of a weight evaluation for products with weight as a salient haptic attribute such as a mobile phone. We suggest that online retailers need to be careful of using a hand image to communicate haptic attributes of a product. Specifically, using the image of a hand with the matching orientation to ascertain the required input (e.g., unsupported holding for weight) can generate imagery of the haptic attribute of weight, which in turn, positively impacts the product evaluation. Thus, depicting a product with a hand image (unsupported holding) is an effective way of guiding the weight evaluation of the product in digital space.

Consumer Responses to Haptic Augmentation of Brand Storytelling

EXTENDED ABSTRACT

While consumers' prolific smartphone usage provides a fruitful advertising avenue, small screen and limited ad visibility present a challenge to marketers (Bart et al., 2014). One way to circumvent these shortcomings and exploit the handheld nature of smartphones is to utilize *haptic feedback technology*, which takes advantage of the sense of touch by applying vibrations to the user in synch with displayed movement and content (Brewster et al., 2007). In the marketplace, some brands have begun to provide such "haptic augmentation" of their experience (e.g., mobile ads for Stolli vodka, users feel their phone vibrate when a woman shakes a cocktail; Johnson, 2015).

Importantly, unlike visual or auditory cues, tactile exchanges require direct contact with a stimulus (Peck, 2010). Touch is considered the most "proximal" sense (Montagu & Matson, 1979) and has an idiosyncratic capacity to evoke a sense of psychological closeness (Troepe & Liberman, 2010). Computer science research suggests that "mediated social touch" is possible, and that haptic feedback from devices may symbolize the touch of another person (Gallace & Spence, 2010; Haans et al., 2006).

Drawing from this interdisciplinary literature, we propose that haptic augmentation experienced in brand storytelling delivered through mobile phones can be perceived as a form of touch from the sender (i.e., the brand). Further, because haptic sensations are so uniquely associated with immediate proximity and contact, haptic augmentation in mobile advertising may have the ability to make these consumer-brand exchanges feel more engaging and personal, ultimately augmenting brand storytelling effectiveness. However, any positive effect of haptics will likely depend on the brand's characteristics since the source of haptic sensations plays an important role in their interpretation (Martin, 2012).

IPG Media Labs recruited 1,136 Android mobile phone users in the U.S. from an online panel (Median_{Age} = 25-34 years; 51.67% female). Participants took a mobile survey, ostensibly about video content of their choosing. Before viewing the selected video content, all participants were served one of four pre-roll advertisements, which were either haptically augmented or not. Several other factors were manipulated, including: density of the haptics (high versus low), the presence/absence of a "bumper" notifying participants that they would be experiencing haptics, whether or not the "bumper" was branded, and the ability to skip the ad or not. We accessed this dataset and analyzed it to test whether the effect of haptic augmentation was universal or contingent on the brand being advertised. To do so, we employed a logit specification to investigate customer's purchase intentions (Top Box and Second Box of purchase intentions were assigned a value

of 1) as a function of haptic augmentation at the category level while controlling for gender (due to the nature of the categories) and advertisement evaluation. We were also able to control for: (i) the density of haptic effects (ii) whether the ad was skippable, and if so, whether it was watched to its completion and, (iii) whether there was a branded bumper/notification at the beginning of the advertisement. Overall, we found that while the overall impact of haptic augmentation on purchase intention was positive and significant, a closer look revealed the effect only manifested for certain brands. The model confirms (as suggested by IPG itself) that high haptic density and the possibility to skip the advertisement has a negative impact on purchase intentions, but that adding a notification of haptics generates a positive effect instead.

We propose that brands can differ not only in how familiar they are to consumers (Kent & Allen, 1994) but also in their personality dimensions (Aaker 1997; differences in perceived brand warmth are particularly robust; Kervyn et al., 2012). We expect that haptic augmentation delivered from warm brands will exert a positive effect on downstream consumer responses, whereas the same haptic sensation delivered from cold brands will not. We conducted a series of experiments to explore these predictions. All haptic effects (low density, no bumper, no skipping) were professionally integrated by a developer of haptic augmentation technology.

Study 2 held brand familiarity constant, varied product category as a within-subjects variable, and manipulated brand warmth and haptics between-subjects. Study 3 (N=174) was a 2(Haptic Augmentation: absent versus present) x 2(Brand Warmth: low versus high) x 2(Product Category: Insurance versus Retail) mixed-model design. Within a video reel, participants viewed two advertisements: one for a retailer and one for an insurance provider. In the high brand warmth condition, participants viewed advertisements for Target and Geico, and in the low brand warmth condition, participants viewed advertisements for Walmart and Allstate (all brands were selected based on pretest results). Afterwards, participants indicated their brand attitudes and those in the haptics-present conditions described how haptic augmentation felt to them. A repeated-measures ANOVA revealed no significant main effect of haptic augmentation on brand attitude, but a significant interactive effect of haptics and brand warmth on brand attitude ($F(1,170)=5.91, p<.02$). Planned contrasts revealed that as expected, haptic augmentation had a positive effect on attitudes towards high-warmth brands ($F(1,170)=3.83, p<.06$) but not towards low-warmth brands. Notably, this pattern did not differ across product categories ($F(1,170)=.06, p>.80$). In the haptics-present condition, independent coders coded participants' description of how the haptics felt. We also found a significant effect of brand warmth on affective reactions to haptic augmentation ($F(1,72)=8.80, p<.01$).

Study 3 examined the effect of haptic augmentation on a consequential downstream variable: product choice. Participants (N=85) viewed one of two 30-second advertisements on mobile phones according to a 2 level (Haptic augmentation: absent versus present) between-subjects experimental design. The advertisement was for the chocolate brand Cadbury, which pre-test results revealed to be high in both familiarity and warmth. Afterwards, participants were offered a snack as a gift (either a Cadbury chocolate bar or an equivalently-sized cereal bar). Binary logistic regression results revealed a main effect of haptics on choice ($\chi^2=3.80, p=.05$). Participants in the haptics-present condition were more likely to choose the chocolate than those in the haptics-absent condition (80% versus 59%, respectively).

This is the first academic research to explore the effects of haptic augmentation on consumer responses. We investigate an intersection between haptic feedback and source characteristics allowing us to differentiate between the nature of the haptic sensation and its evaluative implications.

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The Financial Consequences of Change

Chair: Ms. Jocelyn Grabke, Northwestern University, USA

Paper #1: Untouchable Lockbox or Rainy-Day Fund? The Effect of Generosity of Employers' Retirement Plan Contributions on Leakage from Cashing Out at Job Separation

John G. Lynch Jr., University of Colorado, USA
Yanwen Wang, University of British Columbia, British Columbia
Muxin Zhai, Texas State University, USA

Paper #2: Precedented Times and Purse Strings: How Perceived Stability in Financial Well-Being Affects Money Disordered Behaviors

Jocelyn Grabke, Northwestern University, USA
Aparna Labroo, Northwestern University, USA

Paper #3: Get your head out of the sand! Reconciling disparate findings on the ostrich effect.

Matthew Hilchey, University of Toronto, Canada
Dilip Soman, University of Toronto, Canada

Paper #4: Psychological Ownership of Money and Other Resources: A Scale

Stephanie Tully, University of Southern California, USA
Eesha Sharma, San Diego State University, USA
Suzanne Shu, Cornell University, USA

SESSION OVERVIEW

People change over their lifetime, so do their circumstances. Past research has documented how momentary situational circumstances—for instance, momentary resource scarcity, financial literacy, current needs, etc.—affect financial decision-making. However, the effects of changing circumstances on these decisions have received less attention. Consumers tend to resist change because of the uncertainty it creates. Uncertainty increases the desire for control, including control over one's finances. This session ties together four papers about how consumers react to actual, perceived, and expectations of change. Using diverse methodologies and novel integrations of theories, a variety of financial behaviors, psychological consequences, and longitudinal effects, this session highlights papers that together to uncover the extent to which change and reactions to change affect consumers financial decisions.

The first two papers begin with the investigation of the effects of real change over lifetime that consumers experience on their financial decisions. The first paper explores change in the form of job separation. The authors find that voluntarily or involuntarily leaving a job leads to draining their retirement account when the account composition has a generous contribution from the employer. The authors test alternative accounts of whether the behavior is rational consumption smoothing or a "behavioral" phenomena, concluding that the data are most consistent with an interpretation that when the employer contributed the bulk of the balance, it is framed as "free money" that can be used as a "rainy day fund" rather than something with greater psychological ownership that should be an untouchable lock box for retirement.

The second paper introduces the idea that perceived stability in financial well-being over one's lifetime can increase money disordered behaviors because they experience power over financial resources and outcomes. The authors suggest that perceived stability in financial well-being can lead to spending own and others' money, on products, gambles, or people, because of the belief that it will not change their financial-being. This stability can lead to spending oth-

ers' money as well because of an increased feeling of psychological ownership over their resources.

The third paper investigates how people use positive and negative information when expecting financial change. The authors find that greater demand for information about positive as compared to negative financial returns is lessened significantly when information is useful for taking action.

The fourth paper concludes with a closer look into individual's desire for control over money, including money that is not theirs and other money types. The authors introduce a measure of psychological ownership of money, exploring chronic factors underlying when and why people adopt ownership of money.

Together, the insights from this session calls attention to financial behaviors that arise as consumers cope with change and uncertainty. In this session, we aim to create a dialogue about the financial consequences of change and interventions consumers can practice to mitigate them.

Untouchable Lockbox or Rainy-Day Fund? The Effect of Generosity of Employers' Retirement Plan Contributions on Leakage from Cashing Out at Job Separation

EXTENDED ABSTRACT

Pre-retirement leakage is any form of withdrawal from 401(k) balances before the age of 59.5. Leakage has received attention in industry and media reports. Aon Hewitt's report (2011) suggests that the most significant form of retirement leakage is cashing-out one's balance when changing jobs. Among workers who terminated in 2010, more than 40% took a cash-out distribution. This happened despite of 10% tax penalty on leakage and strong encouragement to either roll over assets to a qualified plan (i.e. new employer plan or IRA), or to keep balances in the current plan. When consumers drain their retirement accounts when changing jobs, the result is that consumers start over from scratch in saving for retirement – a major public policy problem getting increasing attention in policy circles and the business press (Lucas 2022; Madrian 2020).

We investigate the impact of employer matching contributions on leakage at job termination. Most employer-sponsored retirement plans take the structure of match rate of employer dollars to employee contributions, and a match threshold of the maximum percent of employee income subject to that match rate. A typical one-tier matching contribution, for example, specifies that employers match 50% of up to 5% of employees' retirement contributions. The 5% is a matching threshold, while the 50% is a matching rate.

Adding a matching contribution is intended to create an incentive for participation and induce higher contribution rates by employees. A more generous matching rate grows the balance, but critically, it changes the composition of one's account, increasing the proportion of one's 401(k) balance contributed by the employer. We test the hypothesis that retirement plan leakage will increase with the generosity of the employer match, holding constant one's 401(k) balance and a set of controls.

We obtained a unique data set with 162,360 terminated employee contribution records from 28 retirement plans that provide variation in plan generosity in terms of match rates. This affords rich variation in our independent key variable—"composition" of the retirement balance reflected in the fraction of balance contributed by the employer.

We find that of those voluntarily or involuntarily leaving their employer, 41.4% withdrew retirement savings. Conditional on leakage, about 85% of terminating employees drained their retirement account completely. Of that 85%, 64% took a one-time total cashout and another 21% depleted their 401(k) balances in two or more withdrawals within 8 months.

Given that contribution and leakage decisions are subject to unobserved common factors, we jointly model an employee's average elective contribution rate during employment and cashout withdrawal decisions at job separation. The results suggest a strong positive relationship between the incidence of cashout leakage and the proportion of contribution by the employer. We show that the positive relationship between plan generosity and cashout withdrawal is equally strong when turnover at the prior employer is low or high, implying that our composition effect on leakage is not a response to unexpected job termination.

We consider several different economic and psychological reasons for this greater leakage when the employer has contributed a higher proportion of one's balance, each with different qualitative implications for patterns of leakage. We find no evidence for an economic rationale for our account of composition effect and interpret the effect to have a behavioral foundation. We interpret our findings as suggesting that larger proportion of employer contribution to one's balance causes people to frame the balance as "free money" or a "rainy day fund" – so therefore more legitimate to consume at the time of job separation (cf. Sussman and O'Brien 2016).

We simulate the effects of a 50% increase in match rate via two channels: a) increasing account accumulation, therefore reducing leaking, and b) increasing the proportion contributed by the employer, increasing leakage via our "account composition" effect. We estimate that on net, the increased match rate would increase leakage from cashing out by 6.3% at job separation. We ask how much better off the incremental match would leave employees if we could "turn off" the increased leakage from the account composition effect. We find that, a 50% match-rate increase would then have the potential to reduce leakage probability by 35.3%, as employees are less likely to withdraw from an account with a larger balance.

We further evaluate the impact of plan generosity on the cashout amount and the resulting accumulation of total retirement assets after job separation. Our simulated 50% increase in employer match rates increases balances by \$7,341 over an average of 6.53 tenure years. Unfortunately, the cashout amount also increases by \$3,235. Consequently, instead of gaining \$7,341 at job separation due to the 50% higher match rate, employee balances increase by only \$4,106 net of leakage. What if employers could avoid the part of all leakage explained by the account composition effect? In that case, employees would not only benefit from more money in their accounts, they would also have lower rather than higher tendency to leak. As a result, the cashout amount would decline rather than increase, and the more generous match would leave employees \$8,509 more at job separation. We compare the effect of the 50% increase on balances when the account composition is neutralized versus not – leaving \$8,509 vs. only \$4,106 at job separation. Roughly 60% of the benefit of a 50% increase in match rate is dissipated due to the account composition effect, wherein employees increasingly behave as if their 401(k) balances are "free money" not tied exclusively to retirement when they have contributed a smaller proportion of the balance. We discuss policy remedies that would make employees less likely to leak when they change jobs.

Precedented Times and Purse Strings: How Perceived Stability in Financial Well-Being Affects Money Disordered Behaviors

EXTENDED ABSTRACT

In 2019, US residents spent \$18000 on products they do not need. Since the federal ban on sports wagering has rescinded in 2018, \$87 billion has been wagered. In moderation, these behaviors are unproblematic, however they can easily escalate and become psychological money disorders. Several factors can increase these behaviors among consumers—a lack of financial knowledge, managing a bad mood, etc. (Fernandes, Lynch, and Netemeyer 2014; Ordabayeva and Chandon 2011). Adding to these insights, we show that consumers who experience stability in financial well-being also engage in money disordered behaviors—they spend money they might not have, and that might not be theirs, on things they do not need. We posit they do so because they feel powerful over their own and others' financial resources and outcomes.

We propose that financial well-being stability increases feelings of power because consumers seek stability. When consumers perceive change, they feel powerless. Research shows that consumers experience power when they have freedom from external influence and the ability to influence others (Lammers, Stoker, and Stapel 2009). Thus, when they perceive their financial well-being to be exempt from external changes, consumers should feel powerful. We posit that these feelings of power create the expectation that harmful behaviors will not affect their financial well-being and that they can treat others' resources as their own.

We test our theory in five preregistered studies and one replication. Study 1 (N = 405) tested whether those who perceived financial well-being stability were more likely to engage in one type of money disorder—compulsive gambling. To establish causality, we manipulated salience of financial well-being stability against both positive and negative change. Participants were asked to consider how their financial well-being has been stable (improved, worsened) over time. Next, they participated in a gambling task in which they would see up to 5 gambles with increasing risk where they could bet real money and were given the option to end their participation in the gambles at any point. We found that participants engaged in riskier gambles when they perceived stability in financial well-being (M = 2.65) than not (M = 2.31; $t(258) = 1.66, p = .099$).

To test how actual, rather than perceived, stability in financial well-being affects a broader range of money disorders, Study 2 (N = 400) measured financial well-being stability and eight money disorders—compulsive buying (spending on products), compulsive gambling (risky financial wagers), financial enabling (spending on others), financial dependence (spending money provided by others), financial enmeshment (engaging one's children in financial conversations), workaholism (to be highly involved in work), financial denial (to avoid thinking about money), and hoarding (to accumulate and have difficulty discarding objects). Participants first answered questions about their childhood and current SES from Griskevicius et al.'s (2011) scale. They then responded to items from Klontz et al.'s (2012) money disorders scale. We subtracted childhood from current SES to create a measure of improvement in financial well-being. Quadratic regression analyses revealed that those who experienced financial well-being stability also indicated greater engagement in money disordered behaviors ($b = -0.02, SE = 0.01; t(397) = -2.53, p = .012$).

It is possible that stability in general affects these behaviors or that stability in financial well-being decreases positive money management. We posit it increases money disordered behaviors be-

cause they experience feelings of power over their own and others' resources and outcomes. Thus, Study 3 ($N = 197$) tested whether people that experience this stability or stability in general engage in poor money management behaviors, or specifically money disordered behaviors. We counterbalanced four different measures of financial well-being stability and a measure of social status stability with money disordered behaviors and positive money management. Specifically, we used Griskevicius et al.'s (2011) scale, Netemeyer et al.'s (2018) financial well-being scale, Adler et al.'s (2000) objective SES scale, and a direct measure of financial well-being. We measured money disordered behaviors through compulsive buying, compulsive gambling, financial enabling, and financial dependence and measured money management using Dew and Xiao's (2011) scale. We measured power using Anderson and Galinsky's (2006) scale. Quadratic regressions revealed that financial well-being stability was associated with greater money disordered behaviors ($b = -0.05$, $SE = 0.01$; $t(194) = -3.76$, $p < .001$), but not money management behaviors ($b = 0.004$, $SE = 0.01$; $t(194) = 0.44$, $p = .664$). These effects were replicated using all measures of financial well-being. Power mediated the relationship between financial well-being stability and money disordered behaviors (95% CI [0.01, 0.07]). Social status stability did not similarly predict money disordered behaviors ($b = 0.03$, $SE = 0.04$; $t(194) = 0.72$, $p = .47$).

Study 4 ($N = 200$) tested this effect in consumer contexts. We used three purchasing choice sets to measure two key components of money disordered behaviors: unnecessary spending and spending others' money. These choices were counterbalanced with measures of financial well-being stability. Lastly, participants completed measures of power. We replicated that financial well-being stability predicted money disordered behaviors on these choice measures ($b = -0.06$, $SE = 0.02$; $t(197) = -2.73$, $p = .007$) and power mediated this relationship (95% CI [0.08, 0.19]).

Study 5 ($N = 1132$) consisted of two replications. This study tested the moderating role of distant others. Specifically, we expected participants to feel less power over the resources of distant others. Participants were assigned to recall how their financial well-being has been stable (improved, worsened) and completed the same purchasing choice sets as in Study 4, but considered they made these choices with distant (close) others. Participants who recalled stability (vs. instability) were less likely to spend the money of distant others ($M = -0.15$ vs. $M = -0.02$; $t(564) = -1.84$, $p = .066$). Effects on close others did not have a similar effect.

We contribute to the current literatures by distinguishing the effects of financial well-being from perceived changes and its effects on money disordered behaviors. Our research suggests that perceived stability in financial well-being may not only affect the financial state of the individual, but that of others as well.

Get your head out of the sand! Reconciling disparate findings on the ostrich effect.

EXTENDED ABSTRACT

Individual investors are known to pay less attention to potentially bad (negative) than good (positive) financial news. Stockholders log into investment portfolios decreasingly in modestly falling markets (Cai and Lu 2019; Gherzi et al. 2014; Karlsson, Loewenstein, and Seppi 2009;) and, when markets are closed, they check their accounts less often following negative returns (Sicherman, Loewenstein, Seppi, and Utkus 2016). Financial account login rates decrease with decreasing balances and plummet in overdraft (Olafsson and Pagel 2017).

Lower demand for information about possible negative returns is referred to as the 'ostrich effect'. It is a form of selective attention that can occur when consumers anticipate the valence of incoming news and how it will make them feel, with lower (higher) demand for negatively (positively) affecting information (Andries and Haddad 2020; Charpentier, Bromberg-Martin, and Sharot 2018; Golman and Loewenstein 2016). It is problematic when it deprives people of valuable inputs to judgment and decision-making (Golman, Hagman, and Loewenstein 2017; Loewenstein, Sunstein, and Golman 2014;). Consumers cannot make decisions that maximize long-term instrumental value when upsides are preferentially attended.

Are consumers always relatively averse to negative news? The goal of this research is to identify and then test a plausible moderator of the ostrich effect in a novel, well-controlled experimental paradigm. Knowing when the effect does – and does not – happen will provide an effective interventionist approach to reducing ostrich effects in real-world settings.

We take as a starting point frameworks emphasizing that information demand is determined by anticipated hedonic, instrumental and epistemological value (Sharot and Sunstein 2020). We acknowledge that the broader empirical literature on differential attention to potential wins and losses in lottery tasks shows mixed, unreconciled results. People seem to pay more attention to potential financial losses than gains when they can take action to change their outcomes (e.g., Pachur et al. 2018), whereas the opposite pattern emerges when they are stripped of their agency (i.e. the ability to make choices that could influence outcomes; e.g., Hilchey, Rondina, and Soman 2022). People with a stronger internal locus of control show significantly weaker ostrich effects (Blajer-Gołębiowska, Wach, and Kos 2018), and neuroscientific evidence suggests that instrumental and non-instrumental informational value activate a common reward system (Kobayashi and Hsu 2019). Combining these insights, we hypothesized and directly tested the proposition that relatively more attention is allocated to potential gains than losses mainly when people (believe they) cannot take action to affect positive change.

The experiment involved a novel computer-based gambling game in which players were shown a sequence of pairs of mixed risky lotteries ('A' and 'B'), with each offering a 50/50 chance of winning/losing randomly-generated amounts of money between 10 and 99 cents. There were thus four randomly-generated amounts in each pair, but these were not readily visible. Each one was concealed under a win-/loss- marked tile that had to be clicked on to show it. Players were required to reveal 3 amounts but were prohibited from revealing the fourth. This created competition, forcing players to choose between full information about either potential wins or losses. The forced choice enabled assessment of whether information about wins, losses or neither was preferentially exhausted.

To test the focal hypothesis, players ($N = 800$) were randomly- assigned to and split evenly between two versions of the game. In the agency version, players chose which lottery to play each time, whereas in the no-agency version each choice was made by an unbiased algorithm. Outcomes from selected lotteries were shown only at the end, summed up, and then paid out to people won more than they lost. Before lottery outcomes were shown, players were asked to rate on a 7-point Likert scale whether they believed their actions contributed to their payoff, which served as a manipulation check.

Results were consistent with the hypothesis. As intended, people believed (correctly) they had greater control over their outcomes in the agency version ($diff = 2.15$; 95% CI = 1.90 – 2.40). They

acted like it too, with players averaging a profit in the agency version (90.63 cents; 95% CI = 70.07 – 111.20) but not in the no-agency version (-7.04 cents; 95% CI = -27.26 – 13.18). In both cases, players preferred significantly less information about prospective losses than winnings. In the agency version, losses were exhausted on 41.94% (95% CI = 38.66% - 45.22%) of lottery pairs. In the no-agency version, losses were exhausted on 31.42% (95% CI = 28.85% - 33.99%) of pairs. The difference was significant (10.52%; 95% CI = 6.36% – 14.68%) and robust over time, with relative increasing demand for information about potential losses when players could choose between lotteries. Further analyses established that significantly more players tended strongly toward exhausting win information in the no-agency as compared to agency version, whereas significantly more players tended strongly toward exhausting loss information in the agency as compared to no-agency version.

Results indicate that relatively low demand for information about prospectively unpleasant financial news is likely to occur when consumers cannot (or believe they cannot) take action to improve their fortunes. Effective interventions to correct for the “head in the sand” behavior would likely need to cultivate the belief that, based on available information, (attractive) steps can be taken to improve financial outcomes.

Psychological Ownership of Money and Other Resources: A Scale

EXTENDED ABSTRACT

Psychological ownership (PO) refers to the extent to which someone feels that a given target is their own and belongs to them (Pierce, Kostova, and Dirks 2001). Growing research suggests that consumers’ psychological ownership of resources such as money impacts a range of consequential behaviors such as how consumers search for financial products, their interest in acquiring financial products, and their willingness to use certain forms of money (e.g., De La Rosa et. al 2021; Sharma, Tully, and Cryder 2021; Shu 2018). Despite such important implications, the literature seemingly lacks a validated scale that can be used to measure psychological ownership of resources. In the current work, we develop and validate a 5-item scale that measures PO of resources to (a) differentiate PO of resources from related constructs such as possessiveness and greed, and (b) examine whether there is a singular individual difference of PO that varies across people or whether PO differs across targets of ownership (i.e., different resources). As this scale can be applied to a range of different resources (e.g., bank account money, cryptocurrency, furniture), this scale will enable future research to compare psychological ownership of currently available resource types to new and evolving types of resources (e.g., buy now pay later, NFTs) and to examine how psychological ownership of resources is impacted by societal changes (e.g., debt forgiveness).

Study 1 measured 15 measures that could plausibly capture feelings of psychological ownership of resources. To ensure that cohesion of measures was not specific to a single money type, participants answered these measures about either “bank account money” or “borrowed money” they had access to. A factor analysis for each money type was used to identify items that loaded onto a single factor. We then compared the items across money types to identify items that loaded onto the primary factor for both. This yielded 7 items. As pre-registered, we iteratively removed items with the lowest fit (i.e., lowest inter-item correlation) until we reached a minimum Cronbach’s alpha = .8 and had no more than six items for the final scale. The sixth item was deemed to be too colloquial and relied on knowledge of English idioms (“to have dibs on something”) and was

thus removed leaving a 5-item scale. The final 5 items cohered well (both $\alpha = .96$): (1) To what extent does this [resource] feel like your own [resource]?; (2) To what extent does this [resource] feel like it belongs to you?; (3) To what extent do you feel ownership over this [resource]?; (4) To what extent does this [resource] feel like it is yours?; and (5) To what extent does this [resource] feel like one of your possessions? (all measured using a 7-point scale: 1 = not at all, 7 = very much so).

Study 2 examined whether the scale, as applied to “bank account” and “borrowed” money, were differentiable from 8 potentially-related, established scales in the literature: tightwad-spendthrift tendencies, entitlement, possessiveness, greed, egocentric selfishness, financially contingent self-worth, symbolic meaning of money (i.e., status, achievement, security, worry), and debt aversion. All questions were randomized. Psychological ownership of bank account money and psychological ownership of borrowed money were not-significantly correlated with one another. Psychological ownership of borrowed money was most highly correlated with entitlement ($r = .24, p = .001$) and psychological ownership of bank account money was most highly correlated with the meaning of money (security) ($r = .29, p < .001$). Importantly, confirmatory factor analyses revealed that psychological ownership of each money type was differentiable from the constructs with which they were most highly correlated.

Psychological ownership has been shown to increase people’s territoriality and usage of targets of ownership. Study 3 demonstrates that our scale is predictive of these expected behaviors. For instance, psychological ownership of bank account money (but not of borrowed money) positively predicts the likelihood of defending one’s money and a willingness to spend money from one’s checking account on a purchase the consumer wants to make.

Study 4 was a 2-part longitudinal study, designed to assess the test-retest reliability of the 5-item psychological ownership of money scale, and to expand the number of resources by having participants indicate (at both time 1 and time 2) their psychological ownership for 1 of 25 possible money types (e.g., auto loan, social security money). Psychological ownership of money varied across money type, with scores being lowest for “your parent’s money” ($M = 1.73$) and highest for “money in a checking account” ($M = 6.52$). Importantly, PO scores were reliable from time 1 to time 2 ($r = .87, p < .001$). Moreover, a linear regression including fixed effects for money type revealed that POM in time 1 significantly predicted POM in time 2 ($b = .80, SE = .02, \text{Wald } \chi^2 = 2232.23, p < .001$).

Since studies 2-4 find that psychological ownership differs across monetary resources, Study 5 measures the psychological ownership of a broader range of resources within subjects to determine whether there is any predictability in psychological ownership across resource types. Although psychological ownership of each resource type loaded onto a separate factor, significant relationships were found. Specifically, psychological ownership of one’s own money was positively related to psychological ownership of one’s own things, but negatively related to psychological ownership of borrowed things and fantasy things.

The current work validates a scale to measure psychological ownership of resources, finds that this construct differs from potentially related constructs. We show that psychological ownership varies across targets of ownership, although there are predictable relationships across targets. This scale will allow future research to examine changes to PO over time, as a function of policy changes, and as a function of changes in available resources.

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Fresh Insights into Consumer Food Choice and Perceptions in the Emerging Post-Pandemic Normal

Chair: Dr. Lane Peterson, Georgia State University, USA

Paper #1: Digital Technologies and Food Ordering: Using Digital Devices for Restaurant Orders Leads to Indulgent Outcomes

Paper #2: Unitized Food Choice in Public – Understanding and Mitigating Unintended Consequences in the New Normal

Paper #3: Good Things Come To Those Who Wait: How Waiting Increases Perceptions of Food Healthiness

Paper #4: Fueling Against Stress: How Fuel Snacks Affect Consumers at the Intersection of Stress and Gender

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SESSION OVERVIEW

The COVID-19 pandemic and the resulting transformation of the food industry amplify the importance of a refreshed understanding of consumer food choices and perceptions. With more digital ordering options (Holder 2021), greater instances of pre-portioned and pre-packaged foods (Chang 2021), longer wait times (Barone 2021), and greater consumer stress (Gallup 2021), it is important to examine how these factors influence consumers in food-related perceptions and decision-making. Four papers examine various consumer and marketing-related factors that affect food selection and perceptions. Taken together, this session offers a fresh understanding of healthful food choices and perceptions and provides important implications and novel insights for marketers, practitioners, and policymakers.

The first paper, accounting for the dramatic increase of technology in food choice, explores the use of digital ordering technologies in food retail contexts. The authors find that while these technologies can enhance food-service experiences, there can be unintended consequences leading to more indulgent food choices.

The second paper focuses on aspects of the store environments and servicescapes, such as in-store technologies and signage, and examines consumer food selection of unitized foods in public spaces. The authors also investigate consumer-related factors like cognitive load and self-control in food unit selection. The results show how servicescapes and consumer-related factors can unintentionally promote greater total calorie choice as well as variables that aid in mitigating overconsumption.

The third paper examines another aspect of consumers' service experiences by highlighting a silver lining regarding long service wait times. The research shows that, rather than long wait times leading to consumer dissatisfaction, longer wait times lets consumers make positive inferences about the food's healthfulness. Interestingly, consumers hold an intuitive belief that waiting is associated with perceptions of food naturalness, and thereby, healthfulness.

Finally, the fourth paper examines individuals' perceptions and inferences regarding food as a function of consumer-related factors. Specifically, in a series of studies, including a field study, the authors examine how stress and gender influence snack consumption behavior. Furthermore, they explore how labels impact consumers' perceptions about the snack and snack choice.

This proposed session presents a holistic perspective of the path to more healthful food choices in the emerging post-COVID-19 normal, by illustrating how individuals' food selection, consumption, and perceptions of food are influenced by marketer-driven and consumer-related factors. The research in this session will enhance scholarly understanding of consumer food well-being and offer recommendations to policymakers and managers to aid in improving consumer decision-making as it relates to healthfulness. For example, the projects provide novel insights that can help consumers make healthier food choices. Such insights are needed because diet-related illnesses, preventable diseases, and obesity rates continue to increase (American Heart Association 2014; CDC 2021; Siahpush et al. 2015; Warren et al. 2019). The obesity epidemic is further exacerbated by the COVID-19 pandemic (Khubchandani et al. 2022), which is being referred to as 'covidesity' (Khan and Smith 2020). Due to the growing obesity epidemic and resulting health implications, it is critical to understand the drivers and inhibitors of healthy food choices and perceptions of healthiness.

Digital Technologies and Food Ordering: Using Digital Devices for Restaurant Orders Leads to Indulgent Outcomes

EXTENDED ABSTRACT

Technological innovations and changing consumer shopping behavior have led to significant disruptions to the way foods are ordered. For instance, online ordering has been growing at a phenomenal rate and has already become widely prevalent. Restaurants are employing food delivery services and providing tablets, kiosks, and QR codes. Despite the widespread diffusion of digital technologies in the foodservice industry, little is known about if and how digital (vs. non-digital) modes of ordering might influence consumer choice patterns. For instance, how might a consumer's food choice from a menu differ when ordering through a digital mode (e.g., a tablet) versus a non-digital mode (e.g., a paper menu)?

While digital and non-digital modes differ on several factors, they mainly differ on two critical dimensions – interactivity (Hoffman and Novak 1996; Lim 2014) and outsourcing of cognitive efforts or the so-called "Google Effect" (Sparrow et al. 2011). Interactivity with a digital device entails instrumental actions (which work to achieve a goal) that directly influence the user's experience (Kirk and Swain 2018; Liu and Shrum 2009). Higher degrees of interactivity lead to higher levels of experiential engagement with the activity (Blasco-Arcas et al. 2013; Harmeling et al. 2017). Prior research has found that even goal-directed web search tasks can be perceived as engaging, enjoyable, and playful (Mathwick and Rigdon 2004).

The higher hedonic aspects associated with digital (vs. non-digital) modes can also be explained by the "Google-Effect," which is a phenomenon that refers to how the availability of digital tools lead to lower cognitive efforts and activation of a more automated

decision-making system (Danovitch 2019; Sparrow et al. 2011). Based on these literature streams, we propose that consumers associate activities on digital devices with hedonism and greater degree of fun. This digital-hedonic association then puts consumers into a more hedonic mindset.

Inhibiting access to cognitive resources and experiential experiences should lead to choosing more indulgent foods (Shiv and Fedorikhin 1999). This link between hedonic and unhealthy foods has roots in how they are differentiated. Healthy foods are expected to be good for the body in the long run, while unhealthy foods provide short-term benefits like instant gratification (Raghunathan, Naylor, and Hoyer 2006; Shiv and Fedorikhin 1999). Similarly, hedonic associations should be related to hedonic motivations in a choice context, focusing on short-term pleasure. Hence, having associations with hedonic benefits in a digital setting leads to reduced self-control and a greater likelihood of opting for unhealthy foods. The Google-Effect (Sparrow et al. 2011), which suggests reduced cognitive efforts expended when using digital devices, would also suggest a higher degree of unhealthy food choices when ordering through a digital (vs. non-digital) mode since lower cognitive effort leads to more indulgent food choices (Shiv and Fedorikhin 1999).

To test our hypotheses and theoretical claims, we conducted six studies. Study 1a was a between-subjects experiment with two manipulated conditions (mode of food ordering: digital vs. non-digital). The menu used in this study listed four dessert items, two of which were healthy and two were unhealthy. Participants were asked to make a choice from the menu. As hypothesized, a higher proportion of participants in the digital (vs. non-digital) mode chose the unhealthier option (92.86% vs. 68.00%; Wald $\chi^2 = 7.28, p = .007$). Study 1b replicates this effect with a different set of foods (51.28% vs. 37.18%; Wald $\chi^2 = 3.12, p = .077$). Study 2 provides process evidence, for the link between digital and hedonism, through an implicit association test ($M_d = .39, SD_d = .46; t(167) = 10.86, p < .001$).

Then, Study 3 examines the moderating effects of highlighting hedonic aspects of a restaurant. The results show that in the absence of any additional descriptions for the restaurant, digital (vs. non-digital) modes lead to unhealthier choices, consistent with what we observed in Studies 1a and 1b. The tagline (“Your Fun and Exciting Neighborhood Restaurant” vs. “Your Neighborhood Restaurant”) acted as manipulation for the second factor (inducing a hedonic association with the restaurant). A 2 (ordering mode) X 2 (induced hedonic association) logistic regression showed an interaction effect for type of food chosen (healthy vs. unhealthy) (Wald $\chi^2 = 10.60, p = .001$). Follow-up tests showed that in the absence of a secondary source of hedonic associations, participants in the digital mode chose unhealthy foods to a greater extent (Proportion_{digital} = 74.51% vs. Proportion_{non-digital} = 50.00%; $\chi^2 = 6.57, p = .01$). When hedonic associations were induced through a secondary source, the effects directionally reversed (Proportion_{digital} = 46.00% vs. Proportion_{non-digital} = 66.07%; $\chi^2 = 4.33, p = .04$).

The last two studies examined the phenomenon in the field. Specifically, Study 4, a field experiment conducted at an independent restaurant, tested our key hypothesis of ordering mode influencing food choices. The results of this study show that ordering foods digitally versus non-digitally leads to a higher degree of unhealthy food choices ($M_{digital} = 20.01\%$ vs. $M_{non-digital} = 9.96\%$; $F(1, 357) = 11.52, p < .01, \eta^2 = .03$). Study 5, another field experiment conducted at an outlet of a global casual dining chain, with aggregated sales data (with 22,294 food items) show a similar pattern of effects (60.93% vs. 57.10%; Wald $\chi^2 = 9.00, p = .003$).

While the widespread use of digital technologies has had several positive impacts in terms of enhancing efficiencies and conve-

niences, the greater degree of reliance on digital technologies has led to the Google-Effect, whereby the use of digital technology reduces cognitive resources allocated to making decisions. While prior work has examined several factors that can influence food choices (Biswas, Lund, and Szocs 2019; Shen et al. 2016), this research makes an important first step in linking digital versus non-digital modes to food choices.

Restaurants have been incorporating digital technology for various reasons, including automating processes, reducing personnel, attempting to appear more modern, and making ordering more accurate (Kowitz 2016). However, as our studies show, there can be potential unintended consequences of incorporating digital technologies such as kiosks, check-out tablets, and online applications, on the types of foods ordered.

Unitized Food Choice in Public – Understanding and Mitigating Unintended Consequences in the New Normal

EXTENDED ABSTRACT

The COVID-19 pandemic has altered the foodservice industry drastically, forcing restaurants and food retailers to change their offerings and operations to address safety guidelines (Geraghty 2021). Experts recommend food retailers convert their traditional self-serve food bars to pre-packaged formats and pre-portioned food items (Reilly 2020). For example, many hotels, restaurants, and airports have adopted ‘grab-and-go’ approaches for serving food; they now present such pre-portioned, discrete food units (e.g., pre-packaged breakfast cereals and sandwiches, sweet or savory snacks) for consumers to choose in these public settings (Chang 2021; French 2020; White 2020). As these examples highlight, consumers are increasingly presented with pre-portioned foods in public arenas requiring more unitized food choices with others present than ever before. Importantly, industry observers predict these trends are here to stay (Reilly 2020), which suggests that unitized foods represent an important facet of the “new normal” of food presentation and consumer selection in public settings. Understanding the impact of unitized food presentation on consumers’ food choice is critical as obesity has also increased during the pandemic (Khubchandani et al. 2022), especially with children (Lange et al. 2021), and it remains a key driver of poor health and mortality in adults (Aghili et al. 2021). However, seminal research on obesity prevention has highlighted an opportunity for additional marketing research, as it shows that even seemingly trivial food choices have impactful downstream effects on obesity levels (Hill et al. 2003). The notion that such small changes in a person’s food choice, like the presentation of smaller (vs. larger) pre-portioned food units, can be impactful over time has inspired our examination of food unit size.

To do so, we examine the roll of social context in food unit selection. Consumers tend to adjust their behavior to create certain impressions of themselves to others, referred to as impression management (Leary and Kowalski 1990). Impression management motives can influence food intake (Vartanian 2015), as consumers may use social food choices to manage their self-presentation (Jensen, Schau, and Gilly 2003). However, navigating social food choices can be complicated, as consumers may not know how much food is socially acceptable to select (Vartanian et al. 2007). We theorize that consumers therefore *use food units as a guide and choose based on number of units* to evade negative judgments, specifically, avoiding the appearance of selecting too many units. In other words, rather than relying on food *volume* that may result in unfavorable judgments, consumers may instead rely on food *units* to manage social impressions. Introduce the Social Units Effect (SUE), which posits

that people, in the presence of others and due to corresponding impression management motives, choose quantities based on contextually appropriate unit numbers of food rather than relying on food volume. Formally, we predict:

Hypothesis 1: Food unit size and impression management motives interact such that:

(a) When impression management motives are low, consumers select more small units than large units; when impression management motives are high, the number small vs. large units is relatively unaffected, and

(b) Consumers will select fewer small food units when impression management motives are higher (vs. lower); the number larger units selected is relatively unaffected.

We examine SUE and its boundary conditions in eight studies. Hypothesis 1 serves as our foundation as we subsequently further investigate process insights that relate to marketing and consumers. First, we introduce two studies to establish the link between food selection and social judgment; specifically, the Pilot Study demonstrates the social *inappropriateness* of selecting multiple small units (vs. fewer large units). A follow up study shows that consumers' (i) judgments of others and (ii) how they anticipate being judged as a target are consistent; that is, taking multiple small units (vs. fewer larger units) results in negative social judgment.

In the series of main studies, we examine how marketplace and retail factors can influence consumers food quantity choices, to increase or mitigate the effects of SUE. Study 1 examines how managerial decisions related to a company's servicescape and brand positioning can alleviate anticipated social judgement, thereby mitigating SUE. Extending this analytical perspective, Study 2 demonstrates how certain in-store technologies in the servicescape can reinforce SUE (Study 2A, surveillance cameras, bolstering social judgment norms; Study 2B, self-service kiosks, mitigating social judgment norms). Together, Studies 1 and 2 show how managerial decisions in retail contexts affect whether consumers adhere to SUE.

In Study 3, we manipulate cognitive load and show that SUE emerges under low (but not high) cognitive load. Thus, Study 3 shows the cognitive nature of the SUE, and illustrates that consumers themselves might make decisions that affect SUE (e.g., self-inflicted distraction such as making consumption choices while being on the phone). Study 4, analyzing *actual food choice*, shows that relatively low levels of consumer self-control mitigate SUE. Finally, in Study 5, we directly manipulate the social context by observing *actual food choices* (of small vs. large units) when participants are with (vs. without) others. Importantly, Study 5 extends and generalizes the results to a different population of participants – children; the results support H1.

Together, these studies explain when SUE occurs and how the interplay between context-related factors (social judgment concerns), marketing-related factors (semiotics and technologies in the servicescape), and consumer-related factors (attention, self-control) affect SUE, thereby increasing or decreasing food choice.

Good Things Come To Those Who Wait: How Waiting Increases Perceptions of Food Healthiness

EXTENDED ABSTRACT

Waiting for service is a ubiquitous consumer phenomenon that has garnered much attention from academics. Extant research has largely focused on documenting the negative relationship between waiting and consumer evaluations (e.g., Antonides et al. 2002),

prompting service providers to invest in strategies that shorten waiting time (e.g., sophisticated queueing systems; Barbaro, 2007). Yet, research suggests that long waits can sometimes be beneficial as consumers infer quality information from long lines (Debo et al. 2012; Giebelhausen et al. 2011). For example, Giebelhausen and colleagues (2011) found that the presence of a wait (vs. no wait) in front of a popcorn store increased perceptions of the product's quality, which consequently enhanced satisfaction with the popcorn.

We contribute to previous research by uncovering a distinct mechanism through which longer (vs. shorter) waits may enhance consumers' perceptions of food products. Specifically, we propose that consumers hold an intuitive belief that waiting is associated with perceptions of food naturalness (i.e., the extent to which a food is perceived as natural/pure; Rozin, 2005). Because natural foods are perceived as more nutritious (Roman et al., 2017; Rozin 2005), longer waits will consequently enhance perceptions of food healthiness. We posit that this intuition may be generated internally, through personal experiences (Ross and Nisbett, 1991) and externally from environmental cues and formed habits (Morris et al., 2001).

Internally, this intuition may be a manifestation of a more general belief that waiting results in positive outcomes. This principle may be rooted in conventional wisdom expressed in proverbs (e.g., good things come to those who wait) and religious teachings that associate waiting and patience with desirable outcomes. Because humans possess an innate desire for natural things (Kellert & Wilson, 1993), we propose that, in the context of food, this belief will translate into an intuition that waiting is associated with naturalness.

Externally, consumers are repeatedly exposed to cues that are consistent with this intuition. For example, fast-food restaurants, which are characterized by short waiting times, serve highly processed, unnatural meals. Similarly, family dinners are served faster when processed foods are on the menu (e.g., canned soup, instant noodles) compared to more natural, wholesome options (e.g., homemade soup/pasta).

Thus, we predict that longer (vs. shorter) waits will increase perceptions of food naturalness, which will consequently enhance food healthiness perceptions. We next present three studies (2 completed and one proposed) that test our predictions using real and imagined consumption. Importantly, our set of studies control for possible alternative explanations including quality and affect.

Study 1

Undergraduate students (N = 197) were randomly assigned to one of two between-subjects conditions (long vs. short wait time) and were asked to imagine that they were ordering soup in a restaurant. Wait time was manipulated by asking participants in the long (short) wait condition to imagine receiving their order after 15 (5) minutes. Participants then responded to survey questions that measured perceived healthiness (e.g., "How healthy is the soup?" 1 = Not at all, 7 = Extremely; $\alpha = .74$), and perceived naturalness (e.g., "How likely is it that the soup was prepared from natural ingredients?" 1 = Not likely at all, 7 = Extremely likely; $\alpha = .70$). The survey in this and in subsequent studies also included product evaluation, manipulation check and control measures.

ANOVA revealed that the soup was perceived as healthier (M_{long-wait} = 4.71 vs. M_{short-wait} = 4.38; $F(1,195) = 4.36, p = .038$) and more natural (M_{long-wait} = 3.55 vs. M_{short-wait} = 3.06; $F(1,195) = 6.55, p = .01$) in the long (vs. short) wait time condition. Further, mediation analysis (Model 4; Hayes, 2018) revealed that naturalness mediated the effect of wait time on perceived healthiness ($B = .09, SE = .04, C195\% = .0207, .1770$), providing support for our predictions.

Study 2

Given that wait time perceptions can be highly subjective (Baker & Cameron, 1996), the purpose of Study 2 was to replicate our results while manipulating perceived (rather than actual) wait time. Undergraduate students ($N = 154$) were randomly assigned to one of two between-subjects condition: long vs. short perceived wait.

In the first task, participants in the long (short) perceived wait condition wrote about a situation in which they felt that time was moving slow (fast). By asking participants to recall a situation in which they had a distorted perception of time, we aimed to influence their perceptions of wait time in the next task (Williams et al., 1996). Participants then imagined ordering soup at a restaurant and were asked to wait for their order. We implemented a set of lab measures (e.g., hiding the time from computer taskbars) to prevent participants from accurately estimating wait time. All participants then received their soup after 3 minutes and were given the opportunity to consume it before proceeding to the survey. As in study 1, the survey measured perceived food naturalness and healthiness.

ANOVA revealed that the soup was perceived as healthier ($M_{\text{long-wait}} = 3.67$ vs. $M_{\text{short-wait}} = 3.29$; $F(1,146) = 4.23$, $p = .04$) and more natural ($M_{\text{long-wait}} = 3.79$ vs. $M_{\text{short-wait}} = 3.20$; $F(1,146) = 4.56$, $p = .034$) in the long (vs. short) perceived wait time condition. Additionally, mediation analysis (Model 4; Hayes, 2018) revealed that naturalness mediated the effect of perceived wait time on perceived healthiness ($B = .12$, $SE = .06$, $CI_{95\%} = .0094; .2367$).

Study 3

The purpose of this study will be to provide further support for our predictions by experimentally manipulating our mediator, food naturalness. The study will use a 2 wait time (short vs. long) x 2 food type (natural vs. control) between-subjects design. Wait time will be manipulated as in study 1. To manipulate food type, the product will either be described as prepared from fresh (i.e., natural) ingredients or no information about ingredients will be provided. We predict that the effect of longer waits on perceptions of food healthiness will be observed when no information about product ingredients are provided but not when the product is described as prepared from natural ingredients.

Fueling Against Stress: How Fuel Snacks Affect Consumers at the Intersection of Stress and Gender

EXTENDED ABSTRACT

Individuals worldwide are experiencing more stress than ever, with recent reports highlighting 2020 as the “worst and most stressful year” in recent history (Gallup 2021). Most people cannot escape stress – it “is everywhere” and “impacts everyone and pervades all aspects of our lives” (O’Connor et al. 2021, 665). Stress is important to study because it is pervasive and systematically alters the way individuals consume. Often, stress and responses to stress lead to negative consequences that affect personal health and well-being. For example, individuals’ food-related decisions under stress can lead to long-term health problems; for example, there is extensive literature on using food to cope with stress (Freeman and Gil 2004; Wardle et al. 2000). As such, stress contributes to obesity systematically through individuals’ behaviors and choices, and obesity has reached a historic high (CDC 2021). Therefore, due to the relevance and pervasiveness of stress affecting food consumption, this research studies the effects of stress on eating behavior, and more specifically, snacking. We examine stress as *caregiving* stress and operationalize it as parental status and reminders of responsibility for others (Zhang et al. 2014).

Against this background, we investigate how individuals use *fuel snacks*, a novel conceptualization of snacks in the marketing literature, to respond to stress. Fuel snacks contain complex carbs, healthy fats, and protein and provide sustained energy release, giving consumers a boost and energy throughout the day (Rosenbloom 2011). Fuel snacks (e.g., PowerBar and Gameday Energy) “take longer to digest, satisfy hunger, and provide a slow, steady stream of energy” (Cornil et al. 2020; Harvard Medical School n.d.; WebMD 2019). This category of snacks is flourishing in the marketplace, with more and more companies branding their food products explicitly as ‘fuel’ (e.g., Buff Bake Fuel Bar, Foodie Fuel, Nature Fuel, Vida Fuel, etc.).

Prior marketing research has examined the impact of stress on several behaviors (e.g., job performance, spending), but is limited on eating behaviors, with snacking as an “eating pattern that has been understudied” (Keast et al. 2010, 432). As stress undermines a person’s (perceived) capacity to perform, it affects how much and *what* people eat. Stress is associated with a higher preference for energy- and nutrient-dense foods, especially foods high in sugar and/or fat (Moschis 2007). It causes consumers to choose vice snacks (e.g., sweets) and avoid virtue snacks (fruits and vegetables) (Oliver and Wardle 1999). Further, gender predisposes individuals to eat when they are stressed (Zellner et al. 2006) – women tend to choose unhealthy foods (sweet and fatty); in contrast, men tend to eat more hearty, meal-like foods for comfort (e.g., casserole, steak, and soup) (Wansink et al. 2003). However, it remains unclear how stress and gender affect food consumption and choices (Okumus and Ozturk 2021; Torres and Nowson 2007), and especially fuel snacks.

We examine fuel snacking behavior through the lens of compensatory consumption and coping strategies. Compensatory consumption is “motivated by a desire to offset or reduce a self-discrepancy” (Mandel et al. 2017, 134), thereby reducing psychological discomfort. Individuals engage in compensatory consumption in response to “difficult or stressful situations” (Koles et al. 2018, 97). Importantly, eating can also be a compensatory behavior (Mandel and Smeesters 2008), as consumers turn to food when they experience stress (Freeman and Gil 2004; Oliver and Wardle 1999). Accordingly, we focus on snacks as compensatory eating and examine how distinct coping strategies are activated for men and women, impacting their fuel snacking behavior and fuel snack choice as a response to stress.

Four studies (a field study, a pre-test, and two experiments) examine the choice and consumption of fuel snacks at the intersection of stress (e.g., as a function of parental status) and gender. The results show that consumers perceive fuel snacks as neither healthy nor unhealthy, highlighting the need to expand the vice-virtue dichotomy of snacks. The results also show that parents consume more snacks than non-parents; more importantly, fathers (vs. male non-parents) snack differently regarding their (i) snack amount and (ii) snack choices. Finally, fathers (vs. male non-parents) choose fuel snacks more often. Interestingly, after being primed with experiencing an additional stressor (responsibility of caring for others), male non-parents mimic fathers’ behavior and choose a greater proportion of fuel snacks. These results provide meaningful theoretical, managerial, and policy implications.

This research makes the following contributions: First, the analysis of fuel snacks answers calls for a multidimensional view of research beyond the traditional dichotomy of vice-virtue foods (Chandon et al. 2021). This new understanding impacts academic research and the snacking industry, where snacks are now deliberately branded as fuel. Second, we show how a systematic interaction between stress and gender influences snacking overall and *fuel snacking* in particular. Third, we contribute to theory by exploring

stress and fuel snacking through the lens of compensatory consumption and coping strategies (Mandel et al. 2017).

This research also has implications for marketing managers and public policymakers. For marketing managers, we provide insights for promotion and new product development. This research provides initial insights for marketers on the effects of promoting snacks as ‘fueling’ (e.g., ‘fuel snack’ or ‘fuel yourself for a busy day’) and targeting specific consumer segments with these products (i.e., individuals experiencing stress, caregivers, parents). The mere labeling of a snack bar may significantly impact consumer evaluations and willingness to pay, and stress and gender may have additional impacts. In addition, showing that stress has distinct effects on men’s and women’s snacking is important, as gender is a highly actionable marketing variable (Coleman et al. 2021). The finding that stress and gender affect the amount and choice of snacks consumed also has important implications for policymakers, as snacking is linked to mental and physical health outcomes such as obesity, fatigue, anxiety, and depression (Smith and Rogers 2014). For example, our results may inform policymakers on how to educate stressed individuals about how they may respond to certain products and how to cope with their stress in a healthier way. Taken together, this research has meaningful implications not only for consumers but also for marketing managers and policymakers.

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Socializing in the Virtual Realm: Emerging Social Technologies and Implications for Firms and Consumers

Chair: Eric Park, Columbia Business School, USA

Paper #1: How Watching Livestreams Creates Connection and Enhances Enjoyment

Nofar Duani, New York University, Stern School of Business, USA

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Paper #2: The (Virtual) Crowd: Speed of Synchronous Chat affects Popularity in Livestreams

Eric Park, Columbia Business School, USA

Gita V. Johar, Columbia Business School, USA

Paper #3: Influence of Livestreaming Viewership on the Life Cycle of Entertainment Products: Evidence from Twitch and Steam

Travis Tae Oh, Yeshiva University, USA

Jeunghyun Kim, Korea University, South Korea

Paper #4: Consumers Are More Trusting of Influencers When They Know They're Human: The Effects of CGI Influencers on Consumer Trust and the Moderating Role of Consumer Gender

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SESSION OVERVIEW

Technology is changing the nature of human interaction. Perhaps fueled by the desire to be together during the pandemic, the nature of socialization begun to change dramatically with consumers flocking to new online platforms and brands are taking notice. For example, firms are actively launching products and advertising over livestreams, content creators are livestreaming to engage their followers, and brands are using virtual influencers to enhance consumer engagement. With billions of hours already clocked into livestream viewing on Twitch.tv and the virtual influencer market growing rapidly, research is needed to better understand what these new digital environments mean for marketers. The four papers in this session seek to highlight the various implications of these emerging social technologies for firms and consumers.

One emerging technology, livestreams, is fundamentally different from classic content forms in that they are in “real-time,” and communication is triadic, meaning it is between all viewers, streamer, and yourself present in the livestream. The first two papers in this session explore different implications of livestreams for both viewers and streamers. The first paper illustrates that live content is more entertaining than pre-recorded content because viewers feel more connected to the streamers. They show that the socially connecting benefits of livestreams stem from viewers’ enhanced sense of presence in the events on the other side of the screen. The second paper shows how the unique form of communication by viewers in livestreams can affect popularity perceptions of the streamer. Specifically, the authors show that speed of live chat in the chat boxes unique to livestream content can increase perceptions of social density and lead to inferences about the streamer’s popularity.

The next two papers illustrate how firms can utilize online social tools in various stages of the product life cycle and highlight ways in which their efforts may backfire. The third paper uses data collected from Twitch and Steam – a major gaming platform, to illustrate how

livestreams can facilitate a successful product launch. The authors find that featuring the product in livestreams can also make product revivals in late stages of the product’s life by coupling with marketing incentives. Finally, the fourth paper examines how consumers think of virtual influencers that are artificially generated. The authors find that when virtual influencers are framed as female, female consumers are less likely to trust or purchase the item these influencers are selling compared to male consumers. However, gender differences do not occur when virtual influencers are framed as male, and both genders find the male virtual influencer to be less trustworthy.

This session extends the discussion of virtual socialization to emerging technologies, and these four papers are among the first set of papers to understand the implications of livestream and virtual influencers. Taken together, the papers contribute new insights on the impact of novel technologies in marketing and have implications for marketers and influencers hoping to use these tools.

How Watching Livestreams Creates Connection and Enhances Enjoyment

EXTENDED ABSTRACT

Peer-to-peer livestreaming is a rapidly growing phenomenon: in 2020, users spent over 27 billion hours viewing livestreams online, nearly doubling the hours spent in 2019. We examine the viewing experiences of over 2,700 consumers in both naturalistic and carefully controlled environments, and find consistent positive effects of viewing online livestreams (versus identical pre-recorded videos) on feelings of social connection. These enhanced feelings of social connection result in more enjoyable viewing experiences.

We find that the effect of watching livestreaming on social connection operate independently of indeterminacy, which has been shown in prior research to drive viewers’ expected excitement of live broadcast television (Vosgerau, Wertenbroch, and Carmon 2006) even when tape-delayed broadcasts provide the same sensory experience? We propose that indeterminacy is a key reason. Indeterminate consumption experiences (such as watching sports competitions live on television. Moreover, the effects persist even when we control for differences in the salience of other simultaneous viewers, suggesting that they operate above and beyond shared attention with other simultaneous viewers (Shteynberg 2015, 2018).

The socially connecting benefits of watching livestreams are driven, at least in part, by viewers’ heightened sense of “being there” in the events. Simply knowing that one is watching the events unfold in real time increases viewers’ sense of presence in the world on the other side of the screen, and makes them feel more connected to the social entities they see there. Although the concept of presence has received substantial attention in communications research, and features prominently in discussions of new technologies like virtual reality (Slater 2003; Usoh et al. 2000) and the “Metaverse” (CNET highlights 2021), it has been largely unstudied in the marketing literature thus far. Our research helps introduce this increasingly relevant construct to consumer research while also extending prior work on presence to a new domain—online video streams.

In **Study 1a**, MTurk participants (N=523) watched live and pre-recorded videos of their choosing on Twitch, one of the largest video streaming platforms in the world. As expected, participants watching live videos felt more socially connected ($M_{live}=58.65$ vs.

$M_{pre}=48.08$; $F(1,521) = 18.75, p < .001$), and enjoyed the experience more ($M_{live}=49.67$ vs. $M_{pre}=42.89$; $F(1,521) = 7.30, p = .01$) than participants watching pre-recorded videos on the same Twitch channel. **Study 1b** ($N=408$) yielded similar findings in a sample of undergraduate participants.

Study 2 ($N=606$) replicated these findings while controlling for potential differences in the content of the video. Participants watched identical videos on a novel viewing platform, developed for purposes of this research, which held all features of the viewing environment constant. The only difference between conditions was that participants in the live condition were told that they were watching events live, as they occur, whereas participants in the pre-recorded condition were told that they are watching recently recorded videos. Participants who believed they were watching the video live felt more present in the events on the other side of the screen ($M_{live} = 4.22$ vs. $M_{pre} = 3.89$; $F(1,602) = 6.56, p = .01$) and more socially connected in the viewing experience ($M_{live} = 3.63, M_{pre} = 3.30$; $F(1,602) = 5.76, p = .02$; 95%CI[.041,.334]). They also enjoyed the viewing experience more ($M_{live} = 4.74$ vs. $M_{pre} = 4.48$; $F(1,602)=4.46, p=.03$). The socially connecting benefits of livestreams also had important behavioral implications. Participants who believed they were watching the events were significantly more likely to choose to continue watching similar videos (*Live*: 61.6% vs. *Pre-recorded*: 53.0%; $(1) = 4.50, p = .03$), and reported a greater willingness to attend a similar event in the future ($M_{live} = 5.09$ vs. $M_{pre} = 4.73$; $F(1,602) = 5.58, p = .02$).

Studies 3 and 4 build on these findings by exploring the source of viewers' feelings of connection, and by ruling out alternative explanations for the effect.

Study 3 ($N=449$) was conducted in collaboration with Sunny and the black pack, an R&B that streams daily to 50k+ followers. Participants in the live condition watched the band perform in real time on YouTube Live, while participants in the pre-recorded condition watched the same video as pre-recorded on YouTube the following day. We also manipulated the indeterminacy of events by utilizing the manipulation established by Vosgerau et al. (2006) even when tape-delayed broadcasts provide the same sensory experience? We propose that indeterminacy is a key reason. Indeterminate consumption experiences (such as watching sports competitions live on television. As predicted, participants who watched the livestream felt more connected to both the broadcaster ($M_{live} = 51.49$ vs. $M_{pre} = 44.28$; $F(1,445) = 6.40, p = .01$) as well as to other viewers ($M_{live} = 41.28, M_{pre} = 26.80$; $F(1,445) = 27.95, p < .001$), and enjoyed the experience more than participants who watched the same video as pre-recorded ($M_{live} = 57.20, M_{pre} = 48.73$; $F(1,445)= 9.12, p = .01$). There were no significant main effects of indeterminacy ($F_s < 2.54, p_s > .11$), and none of the interactions reached significance ($F_s < .73, p_s > .39$), suggesting that the effects operate independently of the indeterminacy of the events depicted in the video.

Study 4 ($N=396$) was designed to isolate the effects of liveness itself, above and beyond the enhanced salience of other viewers. As in study 2, participants in both stream mode conditions watched the same video in the same viewing environment. To hold the salience of other viewers constant, both stream mode conditions also included a view counter that noted the number of simultaneous viewers currently watching the video. We programed the view counter so that the number of simultaneous viewers is always identical across stream mode conditions. As expected, participants who believed they were watching the events in real time felt more present in the environment on the other side of the screen ($M_{live} = 3.92$ vs. $M_{pre} = 3.48$; $F(1,394) = 9.47, p < .001$), and felt more socially connected to the broadcaster ($M_{live} = 48.43$ vs. $M_{pre} = 41.84$; $F(1,394)=6.26, p=.01$; 95%CI[1.199,5.667]), but not more connected to other viewers ($M_{live} = 22.99$ vs. $M_{pre} = 24.01$;

$F(1,394)=.20, p=.66$) whose salience was held constant across conditions. Participants also enjoyed the video more when they believed they were watching it live ($M_{live} = 59.67$ vs. $M_{pre} = 52.28$; $F(1,394)=9.21, p=.01$). Taken together, these results suggest 1) that there is a unique effect of liveness itself on viewers' feelings of connection to the broadcaster, which cannot be attributed to shared attention with other simultaneous viewers, and 2) that the salience of other viewers—not liveness itself—is responsible for the positive effects of watching livestreams on feelings of connection to other viewers.

These findings have important practical implications. In a world where people increasingly turn to technology to satisfy their social needs, livestreaming presents a novel opportunity for consumers to feel socially connected—and for brands, celebrities, politicians, and aspiring influencers to facilitate this sense of connection.

The (Virtual) Crowd: How the Speed of Synchronous Chat affects Popularity in Livestreams

EXTENDED ABSTRACT

Livestream has been growing exponentially over the past few years further propelled by consumer's desire to socialize during the pandemic. As a social technology, livestream platforms are unique in that they bring many people together virtually ("viewers") who share an experience ("the stream") curated by a streamer. In the past year alone, Twitch – the largest livestreaming platform in the U.S. – had logged over 18.5 billion hours watched in 2019 (Irwin, 2021). Beyond livestream as a content form, livestream is also conducive to extensive socializing due to a unique aspect of livestream: the ability for viewers to directly communicate with the streamer and each other via synchronous chat. In three studies, we show how this unique form of communication in livestreams can influence popularity perceptions of the streamer through feelings of crowdedness leading to various consequences.

While crowdedness is typically conceptualized as requiring physicality, previous research suggests that crowdedness perceptions can arise due to excessively high rates of information (Eroglu and Machlet 1990). In livestreams, this rate of information can be manipulated by how fast the chat moves by having more messages sent per unit of time. When the chat is fast, the viewers are inundated with information (e.g., messages) which would lead to a feeling of crowdedness. Thus, we expect that crowdedness perceptions can form when viewers observe faster (vs. slower) chat speed.

Whereas crowdedness is often considered a negative perception, literature have shown positive consequences can arise from crowdedness (e.g., positive assessment of restaurant quality; Tse et al. 2002). We argue that fast chat speed would contain similar information as it implies crowdedness. Commonly referred to as "in-degree centrality," a person's popularity has been defined by the amount of unidirectional connection (i.e., followers; Lee, Cotte, and Noseworthy 2010). If fast speed denotes an excessive number of viewers (i.e. crowd) who are there to connect with the streamer (Sjöblom and Hamari 2017), this would suggest an excessively high amount of in-degree centrality suggesting the streamer to be popular.

Ultimately, popularity is an important metric for streamers as they build their own brand because it has positive consequences for their revenue streams (Milman, Tasci, and Wei 2020; Lee et al., 2010) and has been shown to result in assisting decision making (Leibenstein, 1950; Tucker and Zhang 2011). Following prior research, we expect that fast chat speed will ultimately result in positive attitudinal (e.g., quality inference) and behavioral consequences (e.g., intention to follow). However, these inferences may be affected by animation (e.g., movement) which has been shown to result in abandonment of

websites (Goldstein et al., 2014) due to it being distracting. Thus, we expect that the positive consequences will only emerge when controlling for annoyance generated by faster chat speeds.

In **study 1**, we investigate the effect of chat speed on crowdedness (MTurk; $N = 400$) with a 4 (Chat Speed: 0.25 msg/second, 0.5 msg/second, 1 msg/second, 2 msg/second) \times 2 (Source: Human vs. Robots) between-subjects design. To control for the number of people in the chat, we looped the same 3 usernames, and the participants watch a 30 second clip of just the chat. As expected, we found a main effect of chat speed ($F(3,394) = 16.78, p < .001$) and found a significant linear trend ($t(1, 394) = 8.81, p < .0001$). We also found that the feeling of crowdedness was agnostic to the source of information ($F(3,394) = 0.46, p = 0.71$).

In **study 2**, a pre-registered study (https://aspredicted.org/863_RQ5), we extend the previous finding and test the effect of chat speed on popularity mediated by crowdedness by simultaneously presenting the chat with an actual livestream (Prolific; $N = 250$). We find that when the chat is fast, perceived popularity is significantly higher compared to when the chat is slow ($M_{\text{Slow}} = 4.02$ vs. $M_{\text{Fast}} = 4.81, a = .92; F(1,243) = 66.6, p < .0001, \eta^2 = .22$). This effect is significantly mediated through crowdedness (CI 95%: [.37, .69]; Process Model 4; Hayes, 2017). Additionally, we rule out an alternative explanation of engagement strength. While a parallel mediation model (Process Model 4; Hayes 2017) suggests that chat speed affects both perceptions of crowdedness (CI 95%: [.37, .69]) and engagement strength (CI 95%: [.02, .17]), we find that the effect of crowdedness perceptions on popularity accounts for more variance ($\eta^2_{\text{crowdedness}} = .25$) than engagement strength ($\eta^2_{\text{engagement strength}} = .03$).

In **study 3** (Prolific, $N = 300$), we test whether chat speed has attitudinal and behavioral consequences. Since popularity should suggest positive information regarding the streamer, we expected that when chat is fast there would be more positive consequences (e.g., quality perceptions and intentions to engage with streamer). We replicate the effect of chat speed on popularity ($F(1,296) = 4.31, p = .04, \eta^2 = .01$) and the mediation through crowdedness (CI 95%: [.21, .51]). Additionally, we find a significant serial mediation of chat speed on livestream quality perceptions (3-items, $a = 0.96$; e.g., entertaining; CI 95%: [.07, .21]; Process Model 6, Hayes 2017) and behavioral consequences (3-items, $a = .96$; e.g., intention to follow; CI 95%: [.06, .19]; Process Model 6, Hayes 2017).

Our research is one of the first to address this novel phenomenon of livestreams and particularly, the chat component of livestreams. We contribute to the literature by extending the traditionally “physical” concept of crowdedness into the virtual realm and uncovering insights that both brands and influencers extending to this emerging social platform may benefit from.

Influence of Livestreaming Viewership on the Life Cycle of Entertainment Products: Evidence from Twitch and Steam

EXTENDED ABSTRACT

Livestreaming has been on the rise. Social media services that enable users to broadcast live videos began in the late 2000s and gained rapid popularity in the 2010s with the emergence of companies dedicated to livestreaming. Specifically, livestreaming platforms allow content creators (i.e., streamers) to broadcast live to online viewers, during which the streamer and viewers interact through the chat box. Though streamers broadcast a variety of content, video gaming is predominantly streamed and watched on Twitch and many other livestreaming platforms. The global games market is estimated to be over 150 billion USD and the livestreaming audience for video games

is expected to be over 700 million in 2021. Thus, we focus our research on the domain of video games.

Despite the rising significance of livestreaming for marketers and consumers, surprisingly little has been empirically studied about its effects on business outcomes. Though broadly similar to other influencer-driven marketing phenomena, such as blogging or social media following, livestreaming has unique characteristics worthy of its own attention: the live, interactive communication between streamers and viewers, the relatively long duration of viewer engagement, and general focus on content related to experiential consumption (Johnson and Woodcock 2019).

To address this gap, we examine the following research questions: (1) How does livestreaming viewership influence consumers’ purchase and usage of the viewed product, particularly during the critical period of new product release? And (2) What is the impact of livestreaming viewership during the later stages of the product life cycle, in conjunction with other known marketing drivers such as price discounts or product updates?

Data. We utilize livestreaming data linked to specific games pulled from Twitch and match the data to the game user data from Steam, the world’s largest digital market for PC games. We finished collecting the data by the end of September 2020, during which approximately 3,700 games were available on Steam. Among these titles, we excluded games released before August 2015, when Twitch API opened for stable data collection, and games that never reach 1,000 maximum concurrent users and those without Metacritic scores. The rationale behind these exclusion criteria was to focus our analyses on commercially relevant games. Our final dataset for analysis draws on 585 individual game titles, with data for each game’s daily maximum concurrent players, daily maximum Twitch viewers, release date, genre type, price history, bundling promotion events, release dates of downloadable contents (“DLCs”), customer review scores, publisher/developer information, and user defined tags.

Main Analyses. Our research aims to shed light on two major performance indicators of entertainment products, namely initial product performance and the occurrence of a product revival during the late stages of the product life cycle (see Foutz 2017). For the first initial performance analysis, we run an ordinary least squares regression with the log of the first week user base as the dependent variable and the log of livestreaming viewership and other marketing-mix covariates as the independent variables. For the second analysis, we run a Cox proportional dynamic hazard model to determine how viewership of livestreaming relative to the number of game users influences the rate of revival after controlling for relevant marketing-mix variables.

Livestreaming and Initial Product Performance Results. Our main model showed that livestreaming viewership can be meaningfully separated into (a) relatively low but stable viewership from smaller streamers and (b) substantial spikes of viewership generated by major livestream influencers, consistent with recent findings on the unique contribution of spikes (Gelper, Renana, and Eliashberg 2018). The elasticity of average levels of livestream viewership excluding spike days is positive and significant ($=.205, p < .001$) as well as the number of livestreaming viewer spikes, which is also significant and positive ($=.346, p < .001$), even after controlling for other known contributors to initial product success, such as promotions, early access, sequels, publisher experience, and critics’ scores.

Livestreaming and Product Revival. Marketing promotional activities such as price discounts, bundling events (i.e., a game is bundled with other games for sale), and DLC releases (i.e., a downloadable update to the game) significantly expedite the rate of revival, encouraging new and old users to re-engage with the game. More importantly, we find that relative livestreaming viewership levels, operationalized

as the viewer-to-user ratio (VUR), expedites revival when games experience an increase in VUR a month prior to a promotional event, such as a price discount ($= .205, p = .034$), DLC update ($= .203, p = .035$), or bundling events ($= .153, p = .067$). Intriguingly, beta coefficients of VUR or VUR lag variables are not significant, suggesting that livestreaming viewership may not necessarily trigger revival on its own. The significant improvement of log likelihood compared to the base model suggests that livestreaming acts as a significant catalyst to revival when increases in livestreaming viewership precede market-mix activities.

Conclusion. In this research, by adjoining two sources of data from Steam and Twitch, we show that livestreaming viewership has a significant and positive association with the initial performance of newly released games, even after controlling for various game-specific and marketing mix drivers. The empirical findings suggest the overall positive role of livestreaming during the introduction of new games, in contrast to some publisher's concerns that live streamers could spoil the game for potential players. Our research also provides empirical evidence of product revival, a phenomenon that has been largely underexplored in the product life cycle literature. Based on our conceptualization of decline and revival, our data show that approximately 20% of games experience a form of revival after entering the decline phase, some even after four years from release. Although we do not find a significant positive effect of livestreaming viewership or its lag on the rate of revival, our results suggest that increases in livestreaming viewership *prior to* a major update and/or price promotions can enhance the effect of such initiatives on the likelihood of revival. As one of the first empirical analysis of livestreaming viewership, our research offers preliminary insights into how livestreaming can be used to promote products for marketers and researchers.

Consumers Are More Trusting of Influencers When They Know They're Human: The Effects of CGI Influencers on Consumer Trust and the Moderating Role of Consumer Gender

EXTENDED ABSTRACT

Influencer marketing is a 13.8-billion-dollar industry (Statista, 2021) driven by consumers' preference for the recommendations of a person rather than a brand. In social media, influencers can build their desired image by employing multimodal narratives with the objective of amassing followers and cultivating relationships with them (Khamis, Ang, & Welling, 2016). However, what if the influencer isn't human? An emerging trend in influencers created by computer generated imagery (CGI), has become a novel alternative to human influencers.

In marketing, parasocial relationships with CGI influencers (henceforth CGII) can have the potential to grow significantly. As social media users attempt to become more airbrushed (i.e., filters), and CGII getting so close to capturing reality, it is becoming increasingly difficult to distinguish between individuals and CGII on social media. The current research seeks to examine the role of consumer trust while exploring the effect of CGII disclosure (yes, no) on consumption, and the moderating role of product category (hedonic, utilitarian).

CGII are created by a tech company that transposes a CGI head onto a real body and background and its profile is then managed by a team of content marketers, data analysts and publicists, yet have the illusion of autonomy (Drenten and Brooks, 2020). The most famous CGII on Instagram, has over 3 million followers and advertises for brands such as Prada, Mini Cooper, and Doritos (Thomas and Fowler, 2020). CGIIs' can be categorized as virtual robots that are highly anthropomorphized (Aggarwal and McGill, 2012). Research studying

differences in hedonic versus utilitarian robots found that participants perceive the utilitarian robots as more useful and user friendly than hedonic robots (Lee, Shin, and Sundar, 2011).

An important aspect of influencer marketing is consumer trust. Credibility theory posits that the success of celebrity endorsements is because consumers place greater trust on celebrities over companies (Erdogan, 1999), as is the case with influencers (Martinez-Lopez, 2020). On this basis, we predict that the effect of disclosing CGII information on purchase intention is explained through an underlying process of influencer trust. Further, we propose that this direct effect is moderated by CGII area of expertise (hedonic, utilitarian).

Study 1

This study explored the mediating role of trust in the predicted effect of CGII disclosure on consumption behavior. 160 participants (77 male, 82 female, $M_{age}=37$) from Cloud Research participated in a single factor (CGII disclosure: no, yes) between-subjects design. Both groups read a description of a female influencer (named *Mila*) who recommends food products and saw the same image of a human woman with her face slightly airbrushed. One group was told that Mila was a young woman from the US, while the other read that she was a CGI influencer created by an American tech-company. Participants completed brand attitudes, trust, and intention to purchase food products recommended by this influencer.

Trust. The results revealed a significant effect of disclosure of CGI on trust, $F(1,159)=44.80, p<.001$. Non-disclosure of CGI had significantly higher trust for products recommended by an influencer ($M=4.80, SD=1.33$) versus a CGII ($M=3.12, SD=1.77$).

Purchase Intentions. The results revealed a significant effect of disclosure of CGI on purchase intention, $F(1,159)=16.30, p<.001$. Non-disclosure of CGI had significantly higher purchase intentions for products recommended by an influencer ($M=4.30, SD=1.52$) versus a CGII ($M=3.25, SD=1.74$).

A mediation model using the PROCESS macro and 5,000 bootstrapped resamples (Model 4; Hayes 2013) indicated that results were consistent with our model. There was a significant mediation effect of trust on the effect of disclosure of CGI on purchase intentions, $b = -1.3954, CI [-1.83, -.98]$. These results indicate that when consumers are aware that an influencer is CGI, they trust it less, thereby decreasing their purchase intentions. On the contrary, consumers seem to have a higher preference for influencers who are human, with more positive downstream consumption consequences.

Study 2

We explore the role that influencer expertise plays on CGII disclosure to purchase intention relationship; therefore, we ran this study using the image of a real CGI influencer. 293 participants (144 male, 142 female, $M_{age}=42$) from Cloud Research participated in a 2(CGII disclosure: yes, no) x 2(expertise category: hedonic, utilitarian) between-subjects design. Both groups read a description of a female influencer who recommends food products (i.e., hedonic) or technology products (i.e., utilitarian). Participants then completed trust, attitudes, and intention to purchase measures.

Purchase intention. The results revealed a significant interaction between influencer expertise and CGII on purchase intention, $F(1,289)=4.41, p<.05$. Participants in the no disclosure condition had significantly higher purchase intentions for utilitarian products recommended by the influencer ($M=3.78, SD=1.63$) versus hedonic products ($M=3.15, SD=1.91$) ($F(1,298)=4.28, p<.05$), but there were no significant differences between purchase intentions when participants were informed the influencer was a CGI ($F(1,289)=.75, p=.39$).

Trust. Participants had higher trust for the influencer when its CGII information was not disclosed ($F(1,289)=49.63, p<.001; M_{no_disclosure}=4.28, SD=1.30, M_{disclosure}=3.01, SD=1.71$).

A Moderation model using the PROCESS macro and 5,000 bootstrapped samples (Model 1; Hayes 2013) indicated that product category (hedonic, utilitarian) significantly moderates the relationship between CGII disclosure (yes, no) to purchase intention such that when the CGII expertise is significant only when it is utilitarian $b = -1.08, 95\% \text{ CI} [-1.65, -.51]$. The mediation of CGII disclosure to purchase intention through trust (model 4) was significant $b = -1.12, 95\% \text{ CI} [-1.45, -.80]$. These results indicate that utilitarian products may perform better when promoted by CGIIs than hedonic products when it is not explicitly disclosed that the influencer is a CGI.

In conclusion, this research begins to empirically test consumers' perceptions of CGIIs and their downstream consumption consequences. We present the moderating role of product category (hedonic, utilitarian) such that CGIIs seem to do well when consumers are not informed of their true nature and for utilitarian compared to hedonic expertise. This work provides important information that can be used to determine whether brands would benefit from using CGIIs in their marketing efforts.

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Navigating the New Normal: Uncovering Costs and Benefits of Technology-Enabled Communication

Chair: Dr. Melanie Brucks, Columbia University, USA

Paper #1: From Stressful to Playful: How Conversational Chatbots Improve Financial Planning Experiences

Meike Zehnle, University of St. Gallen, Switzerland
Christian Hildebrand, University of St. Gallen, Switzerland

Paper #2: How Voice-Based Interaction between Consumers and Intelligent Virtual Agents Influences Recommended Product Decisions

Zhen Yang, Creighton University, USA
Yanliu Huang, Drexel University, USA
Barbara Kahn, University of Pennsylvania, USA
Jianguan He, University of Tennessee, Knoxville, USA

Paper #3: Uncanny Communications: Minor Video-call Glitches Undermine Persuasion and Connection

Jacqueline Rifkin, Cornell University, USA
Melanie Brucks, Columbia University, USA
Jeff Johnson, University of Missouri-Kansas City, USA

Paper #4: I Share, Therefore I Know? Sharing Online Content—Even Without Reading It—Inflates Subjective Knowledge

Adrian F. Ward, University of Texas at Austin, USA
Jianqing (Frank) Zheng, University of Texas at Austin, USA
Susan M. Broniarczyk, University of Texas at Austin, USA

SESSION OVERVIEW

The proliferation of virtual communication is one of the most notable trends in the last few decades. From interacting with chatbots and voice-assisted shoppers when making a financial decision or ordering food, to using video-conferencing software for social or professional interactions, to posting and sharing with one's extended network on social media, technology-enabled communication is now a mainstay in nearly all parts of consumers' lives.

Given the recency of many of these advancements, there are a host of questions that research has yet to examine. Addressing this gap, the papers in this special session explore and identify novel consequences of technology-enabled communication for consumers and firms. Leveraging diverse theoretical perspectives and methodological approaches, the current papers ask: What are the benefits of virtual communication relative to the communication opportunities previously available to us? What are the costs? How do consumers manage such cost-benefit tradeoffs, and are they even aware of them? And lastly, what can virtual communication teach us more broadly about consumer psychology, communication, and how people navigate the marketplace, both off and online?

The first two papers identify benefits of technology-enabled communication, suggesting that technologies such as chatbots and voice assistants can remove friction for consumers' decision-making. Paper 1 finds that implementing conversational chatbot interfaces can reduce the stress of financial planning, relative to traditional, spreadsheet-like financial planning tools—especially for consumers who have low financial well-being. Paper 2 finds that purchase recommendations offered by voice assistants are more persuasive, relative to other text-based modalities, and that this enhanced persuasiveness stems from enhanced perceived competence of the recommendation agent. These papers underscore that virtual communication can ease some of consumers' burdens, reducing the stress

of complicated decisions and providing more (seemingly-)reliable recommendations.

The second two papers identify costs of technology-enabled communication, suggesting that social media and videoconferencing platforms may unexpectedly lead consumers astray. Paper 3 finds that, although minor interruptions during a video call do not affect comprehension and participants believe that these interruptions do not affect their judgments, video call glitches undermine persuasion and connection. Paper 4 finds that sharing knowledge online can increase sharers' feeling of understanding, even when they have not read the information shared. These papers underscore that using communication technologies can impact our experiences even without us realizing, which can have negative ramifications for how we perceive our sense of knowledge and our connections with others.

Together, these four papers shed light on the role of technology-enabled communication in both enhancing and hampering consumers' ability to navigate the marketplace. We believe this session will appeal broadly to scholars interested in word-of-mouth, retail management, human-computer interaction, interpersonal relationships, and persuasion. Moreover, this session fits well with ACR's annual theme of Together, as technology allows us to be 'together' in ways unlike any other time in human history.

From Stressful to Playful: How Conversational Chatbots Improve Financial Planning Experiences

EXTENDED ABSTRACT

Managing one's personal finances is a major source of stress for the majority of consumers (American Psychological Association, 2020; Staeger & Harding, 2021). Healthy financial planning practices, such as setting a budget and tracking income and expenses, are vital to elevate consumers' long-term financial health. Developing a detailed financial plan is essential to maximize consumer financial well-being in the long-run (Netemeyer et al. 2018), positively affects consumers' FICO credit scores (Lynch et al. 2010), is a major source to drive the creation of long-term wealth (Ameriks, Caplin, and Leahy 2003), and affects the prosperity and economic stability of entire nations (Financial Health Network 2018). Despite the psychological and economic importance of financial planning for consumers, recent survey results reveal that more than 40% of Americans do not agree with the statement "My household plans ahead financially" (Financial Health Network 2019) and over 60% of consumers perceive financial planning as a major source of personal stress in their daily lives (American Psychological Association 2019). To make matters worse, recent research demonstrates that an increase in financial planning stress can cause generalized forms of anxiety and long-term mental health issues (Gamst-Klaussen, Steel, and Svartdal 2019; Harkin 2017; Moschis 2007; Shapiro and Burchell 2012). The primal strategy to improve consumers' financial planning behavior by financial institutions and governmental agencies has been focused on enhancing financial education, from providing educational guides to downloadable spreadsheets to setup a household budget (Consumer Financial Protection Bureau 2020; see also www.consumerfinance.gov). Unfortunately, recent research suggests that these educational approaches are largely ineffective (Fernandes, Lynch, and Netemeyer 2014) and consumers often abandon the use

of spreadsheets to engage in a more systematic financial planning (Lusardi and Mitchel 2011; Sardone 2008).

The current work examines a novel intervention using an AI-based conversational chatbot to complete a financial planning task, demonstrating significant reductions in financial planning stress. In three experiments we show that conversational financial planning interfaces reduce financial planning stress compared to traditional, spreadsheet-like financial planning tools and further show that the effect is pronounced for consumers with low levels of general financial well-being. We provide initial evidence on the underlying mechanism, showing that the reduction of financial planning stress is driven by creating a more positive and playful as opposed to negative and arduous financial planning experience.

In Study 1, participants ($n = 240$) were randomly assigned to either a conversational or a non-conversational interface to complete a financial planning task. As in typical budgeting exercises, the task comprised the specification of various income and expense categories (e.g., salary, rent, groceries). The non-conversational interface resembled a spreadsheet-like format typically provided by financial institutions whereas the conversational interface consisted of an interactive chatbot. We find that using a conversational as opposed to a non-conversational financial planning interface significantly reduced consumers' level of financial planning stress ($M_{\text{NonConv}} = 2.72$, $M_{\text{Conv}} = 1.88$; $t(193.76) = 4.27$, $p < .001$), and these effects were robust across demographics and prior experience with chatbot technologies.

Study 2 ($n=266$) further explored to which extent the observed effect varies as a function of consumers' general financial well-being. Replicating the finding of Study 1, participants experienced significantly lower levels of financial planning stress when using a conversational compared to non-conversational financial planning interface ($M_{\text{NonConv}} = 3.11$, $M_{\text{Conv}} = 2.73$; $t(255) = 2.24$, $p < .05$). The effect of interface type on financial planning stress was further reduced at lower levels of financial well-being ($\beta_{\text{Well-being} \times \text{Conv}} = -.27$, $t(253) = 2.22$, $p < .05$). Calculating the Johnson-Neyman point revealed a significant interval outside of [3.91; 7.00], suggesting that consumers below the mid-point of the scale significantly benefit using a conversational as opposed to non-conversational financial planning interface to reduce financial planning stress.

Study 3 ($n=390$) explored the underlying mechanism to explain the observed effects. In short, we found that the reduction in financial planning stress ($F(3, 385) = 3.79$, $p < .05$) was explained by significantly enhancing consumers' experienced level of playfulness from using the interface ($F(3, 385) = 6.97$, $p < .001$). These effects were robust across demographic age groups and consistent across three different avatar implementations (robotic avatar, female avatar, male avatar), and most importantly, enhanced for consumers with lower levels of financial well-being.

Taken together, the current findings provide converging evidence that the type of interface to complete a financial planning task is an unexplored means to reduce consumers' financial planning stress and to create more playful and engaging financial planning experiences for consumers. At the point of submission to this year's ACR conference, we are launching a nation-wide field experiment in cooperation with a major financial planning institution in Switzerland to test the current findings in a large-scale field setting. We expect to present the findings of this field experiment at the conference.

How Voice-Based Interaction between Consumers and Intelligent Virtual Agents Influences Recommended Product Decisions

EXTENDED ABSTRACT

Intelligent virtual assistants (IVA) are computer agents that can perform tasks or services for an individual based on commands or questions. IVA has been integrated into smartphone (e.g., Apple Siri), smart speaker (e.g., Amazon echo), and also adopted in the chatbot system design (e.g., Facebook Messenger; Hu, Lu, and Gong 2021). Recently, there has been an explosion in the use of IVA to aid in shopping tasks (e.g., Amazon Alexa and Domino's DRU assist). Compared with traditional online shopping navigated by point and click (i.e., click-based interaction), shopping with IVA allows consumers to place an order by speaking or texting messages (i.e., voice- or text-based interaction). We propose that when engaging in a voice-based interaction with IVA (i.e., consumers speak and IVA responds in voice), consumers are more likely to purchase recommended products compared to those other modes of interaction.

Prior research suggests that the way people interact with an object influences their feelings about it (e.g., Peca et al. 2016). We argue that interacting with IVA in voice can make the IVA seem more competent. In human-human communication, Turkle (2015) finds that voice communication builds more trust as compared to texting or email communication. In a similar vein, Jensen et al. (2000) shows that voice chat leads to a higher level of cooperative behaviors than text chat. Furthermore, speech reveals a more thoughtful mind, while text conceals mental capacity (Schroeder, Kardas, and Epley 2017). These findings from human communication can also be extended to human-computer interaction. When interacting with a computer agent, oral communication can lead to humanization, while text communication leads to dehumanization (e.g., Schroeder and Schroeder 2018). In voice-based interaction, users speak and IVA responds in voice. Thus, both the IVA's speaking capability (i.e., speaking in human language) and listening capability (i.e., being able to understand what users say in a human-like way) can manifest the intelligence perception of the agent and enhance trust (Hu, Lu, and Gong 2021). Since consumers who speak their commands perceive a higher competence level of the IVA who responds in voice, they will be more inclined to comply with requests from the IVA (e.g., Moon 2000; Whang and Im 2020). As a result, in the online shopping context, consumers will be more likely to choose the products the IVA recommends.

We developed a fictitious online food-ordering website to test our hypotheses. To mimic the interaction modes between users and IVA, we manipulated both the (a) Consumer's Input Communication Method: Speak vs. Type vs. Click and the (b) Website's Response Modality: Voice vs. Interactive text vs. Static instructional text. Some food items on the website are labeled as "recommended", and the website also features two add-on items offered when checking out. To measure the extent to which participants complied with the IVA's requests to purchase recommended products, we considered the purchase of both the products labeled as "recommended" and the add-on items.

Study 1 demonstrates the primary effect. We recruited 430 MTurk workers and randomly assigned them to either the voice-based interaction condition (users speak and the website responds in voice) or one of the three other-modality conditions (users click and the website responds in voice, interactive text, or no text). Participants were told that a restaurant wanted to test its new online food-ordering website, and their task was to order food from the website. Consistent with our hypotheses, when engaging in voice-based in-

teraction, participants purchased more recommended products than other three modality conditions ($M_{\text{speaking-voice}} = 1.22$ vs. $M_{\text{other-modality}} = 0.92$, $p < .01$). There were no differences between the three other-modality conditions on recommended purchases ($p > .47$).

Study 2 employed a 3 (consumer's input method: speak vs. type vs. click) \times 3 (website's response modality: voice vs. interactive text vs. instructional text) between-subject design. Nine hundred forty-four MTurk workers took the same shopping task as in Study 1. We found that participants in the voice shopping condition ($M_{\text{speak-voice}} = 1.27$) purchased more recommended products than the other conditions ($ps < .02$), except the speak-text condition (i.e., users speak and the website responds in interactive text; $M_{\text{speak-text}} = 1.32$; $p = 0.86$). One of the possible explanations is that the interactive text displayed on the website is in pop-up style, which could be perceived as intelligent as the computer voice (Sallnäs 2005).

In Study 3, we developed a mock McDonald's website to generalize our findings to a more realistic setting. Participants were told at the beginning that 25% of them would be rewarded a \$10 gift card, which can be used to redeem whatever they ordered in today's study at a local McDonald's store. In addition, Study 3 tests whether the effect of interaction modality on recommended product purchase is mediated by the perceived competence. Study 3 employed a one-factor between-subject design (consumer's input method: speak vs. click) where in both conditions, the website response modality was voice. Two hundred sixty college students took part in this study. The result shows that consumers in the voice-based shopping condition purchased more recommended products ($M_{\text{speak-voice}} = 1.63$ vs. $M_{\text{click-voice}} = 1.39$, $p = .056$) and also perceived the website as more competent ($M_{\text{speak-voice}} = 5.33$ vs. $M_{\text{click-voice}} = 4.95$, $p = .021$) than those in the click condition. The mediation model of perceived competence on recommended product purchases was also supported (i.e., the 95% bias-corrected bootstrap confidence interval, obtained using 10,000 bootstrap samples, did not include zero for recommended products (.0072, .1445)).

Although AI is penetrating daily life and business, literature in marketing remains sparse (Grewal, Roggeveen, and Nordfält 2017). We focus on an important aspect- how communicating with artificially intelligent virtual assistants using different modalities may affect consumers' decision on recommended product. Thus, our research helps to better understand the role and effect of using IVA in online shopping. It contributes to the human-computer interaction literature and the broader communication literature, and also provides insights to design more effective IVA system.

Uncanny Communications: Minor Video-call Glitches Undermine Persuasion and Connection

EXTENDED ABSTRACT

In the wake of the COVID-19 pandemic, millions of people were mandated to use virtual communication when connecting with anyone outside their household. This external shock normalized videoconferencing, and it is increasingly clear that, even after the pandemic subsides, the future of communication will heavily involve virtual interaction.

The widespread adoption of videoconferencing may not come as a surprise, as audiovisual interaction mimics much of the in-person experience and offers myriad benefits to its users, such as reduced real estate costs, less travel, and the ability to connect quickly (Bages-Amat et al. 2020; Glausuisz 2021). However, the adoption of videoconferencing introduces a novel communication issue not present during in-person interactions: technological "glitches," or "small and fleeting errors in a system that occurs due to unknown causes,"

(Techopedia 2021) in the form of lags and freezing up of video and audio (Murphy 2020).

Do these glitches impact important communication outcomes? Consumers and managers do not seem to think so. In qualitative interviews with business-to-business salespeople, many said that "I think when glitches occur...there's a certain level of grace" and "Glitches aren't killing your credibility... everyone's in the same boat." Similarly, participants who experienced glitches in our studies reported that glitches did not impact their evaluations (2.47, $SD = 1.58$, on a scale from 1 = *not at all* to 7 = *an extreme amount*).

In contrast to these intuitions, we propose that there may be a hidden and outsized cost to these glitches. In fact, it may be precisely because videoconferencing does such an admirable job of mimicking in-person communication that glitches are especially (and unexpectedly) detrimental. Specifically, we propose that minor video-call glitches undermine connection and persuasion by interrupting the expected audiovisual experience of interacting with another human, creating a feeling of strangeness or "uncanniness." Work in psychology, robotics, and human-computer interaction has explored this notion in the context of the so-called "uncanny valley," (Gray and Wegner 2012; Wang, Lilienfeld, and Rochat 2015) which establishes that, as robots' perceived human likeness increases, their likability also increases... to a point. Robots that too closely approximate human countenances are perceived as creepy, eerie, and off-putting.

In sum, we propose that when interacting via videoconferencing, consumers expect a humanlike interaction, replete with the normal audiovisual cues of person-to-person interaction. However, minor technological glitches (such as a brief freeze in the transmission) violate these expectations (e.g., by distorting one's face, misaligning audio and visual cues, or making movement appear "choppy"), creating the sensation of uncanniness. This discomforting sensation will, in turn, negatively affect persuasion and connection with the conversation partner.

Four studies (three pre-registered) support our reasoning. In Study 1 ($N = 298$), participants watched a short video pitch from an ostensible financial advisor and were asked to imagine that they were the prospective client on the other end of the call. For half of participants, we edited in four brief (<1.5 seconds) freezes during natural pauses in speech, so as not to disrupt the information being delivered. As expected, glitches during the presentation reduced participants' interest in working with that financial advisor ($M_{\text{control}} = 4.31$ vs. $M_{\text{glitch}} = 3.86$, $b = -.45$, $p = .012$). Interestingly, although participants were aware of the glitches throughout the call ("glitchiness" ratings significantly differed by condition, $p < .001$), they neither believed the glitches impacted their evaluations, nor did they retain any less information from the call (objective comprehension did not differ by condition, $p = .569$).

In Study 2 ($N = 495$), we tested the proposed mechanism of uncanniness, using an identical procedure to Study 1 with a measure of uncanniness perceptions (three items, to what extent was the experience eerie, creepy, strange?). As predicted, glitches during the video call reduced participants' interest in working with the financial advisors ($M_{\text{control}} = 4.32$ vs. $M_{\text{glitch}} = 3.59$, $b = -.73$, $p < .001$), and this was driven by heightened perceptions of uncanniness ($M_{\text{control}} = 1.73$ vs. $M_{\text{glitch}} = 2.93$, $b = 1.22$, $p < .001$; 95% CI: [-.59, -.33]). Again, glitches did not impact objective comprehension ($p < .9$).

It is possible that we observe a negative effect of glitches because it is harder to process information that is interrupted (albeit minorly) or because glitches signal something about the resources available at the firm (e.g., wifi strength). In Study 3 ($N = 996$), we aimed to rule out these alternative explanations and test our proposed process through moderation. If the negative effect of glitches stems

from a violation in expected human-to-human interaction, then the effect should attenuate when the video call does not show a person. In contrast, if the negative effect of glitch is driven by processing disfluency or quality signaling, then the effects of glitches should persist in videos that do not include a person. Inspired by Zoom's "share screen," feature, we tested these competing hypotheses by varying whether the video call featured a human face (the financial advisor) or not (a presentation featuring stock footage).

Results yielded two significant 2 (glitch: present vs absent) \times 2 (content: human face vs stock footage) interactions on willingness to work with the advisor ($b_{\text{interaction}} = -.76, p < .001$) and uncanniness ($b_{\text{interaction}} = 1.02, p < .001$) supporting our reasoning. When the video call featured a human to interact with, we replicated our prior studies: participants were less interested in working with the financial advisor when the video call contained glitches, and this effect was fully mediated by uncanniness perceptions. When the video call did not feature a human to interact with, however, the effects of glitches on uncanniness and, in turn, interest were completely attenuated (index_{moderated_mediation} = .44, 95% CI [.29, .62]). Importantly, participants were similarly aware of the glitches in the "stock footage" condition, suggesting that our effects are not driven by reduced awareness of glitches, but instead, the feeling of strangeness from a human "glitching out."

Our findings contribute to the extant literatures on human-computer interaction, communication, and persuasion. They also have implications for a variety of individuals, from businesses interacting with customers, medical professionals practicing telehealth, and policymakers considering whether reliable internet access is a utility. Many Americans lack reliable internet access, suggesting that minor video-call glitches may take an unexpected toll on communication, access to work, health, and wellbeing.

I Share, Therefore I Know? Sharing Online Content—Even Without Reading It—Inflates Subjective Knowledge

Billions of people across the globe use social media to acquire and share information. A large body of research examines how consuming online content affects what people know. The present research investigates a complementary, yet previously unstudied question: how might sharing online content affect what people *think* they know?

We posit that sharing may inflate subjective knowledge through a process of internalized social behavior. Public behavior contributes to a socially constructed record of one's identity (Schlenker et al., 1994) and can shape the self-concept by motivating people to see themselves as they believe they are seen by others (Shrauger and Schoeneman, 1979). We argue that sharing implies knowing; thus, internalization of sharing behavior into the self-concept may cause people to believe they know more about a topic simply because they have shared an article about it online. We examined this possibility in six studies ($n = 1,051$).

Study 1 investigated the relationship between sharing, reading, subjective knowledge, and objective knowledge in an observational context. Participants were provided with a set of recent online news articles, and were free to read and/or share these articles with future participants as they saw fit. After participants finished reading and/or sharing, we assessed their subjective knowledge in each article domain (i.e., how much they thought they knew) as well as their objective knowledge of each article (i.e., how much they actually knew). Across a range of regression models with various robustness checks, we found that reading depth predicted both subjective knowledge ($t_s > 3.00, p_s < .01$) and objective knowledge ($t_s > 7.15, p_s < .001$).

More strikingly, we found that sharing predicted subjective knowledge ($t_s > 2.78, p_s < .01$) despite being unrelated to objective knowledge ($t_s < 1.96, p_s > .05$). This relationship between sharing and subjective knowledge held regardless of whether participants fully read what they shared ($F(1, 135) = 9.87, p < .01$) or did not read at all ($F(1, 357) = 5.59, p = .02$). These results provide preliminary support for the idea that sharing—even without reading—may inflate subjective knowledge.

In Study 2, we conducted a stronger test of the proposed causal effect of sharing on subjective knowledge in a two-part 2 (reading: no, yes) \times 2 (sharing: no, yes) experimental design. In part one, all participants reported their baseline subjective knowledge about a variety of topics, including the focal topic of cancer prevention. Fourteen days later, they were randomly assigned to share (or not share) an article about cancer prevention, with or without reading it first. Finally, all participants reported their current subjective knowledge for the same topics. Consistent with the idea that sharing content can *cause* increases in subjective knowledge, the sharing \times pre- vs. post-measure interaction was significant ($F(1, 321) = 5.45, p = .02$); participants who were randomly assigned to share the article exhibited an increase in subjective knowledge of cancer prevention ($p < .001$), whereas those who did not share the article did not ($p = .92$). The effect of sharing on subjective knowledge was significant both for those who read the article ($F(1, 321) = 13.80, p < .001$) and for those who did not ($F(1, 321) = 5.67, p = .02$). Study 2a replicated this effect in a fully between-subjects design.

Studies 3-5 tested a series of theoretically-driven moderators of the effect of sharing on subjective knowledge. Following Tice (1992), we reasoned that if internalization of behavior helps explain sharing-induced increases in subjective knowledge, then reducing the degree to which sharing publicly commits one's self to a particular identity—for example, by sharing under an assumed identity or to a socially distant audience—should mitigate the effect of sharing on subjective knowledge. In these studies, we provided participants with a set of articles and used a cover story to induce them to share specific articles from the set; we then compared subjective knowledge for shared vs. unshared articles under conditions that maintained vs. mitigated public commitment to one's sharing behavior.

In Study 3, participants were randomly assigned to share content under either their own identity or under someone else's identity. As predicted, we found a significant interaction between article type (shared, unshared) and sharing identity (self, other), $F(1, 215) = 7.55, p < .01$. Participants who shared under their own identity reported higher subjective knowledge for shared than for unshared articles ($F(1, 215) = 24.79, p < .001$); participants who shared under someone else's identity, however, did not ($F(1, 215) = 0.16, p = .69$).

In Study 4, participants were randomly assigned to share content either with close friends or with random strangers from the Internet. We found a marginally significant interaction between article type (shared, unshared) and sharing audience (close friends, random strangers), $F(1, 151) = 3.34, p = .07$. Participants in the close friends condition reported significantly higher subjective knowledge for shared vs. unshared articles ($F(1, 151) = 37.60, p < .001$). Participants in the random strangers condition reported a smaller—but still statistically significant—difference between shared and unshared articles ($F(1, 151) = 8.50, p < .01$). Although unexpected, this result may suggest that many types of online audiences are capable of motivating internalization.

Study 5 manipulated perceived freedom of choice over sharing. When people are free to choose how to act, their actions help reveal who they are. When people do not have freedom, however, they can explain their behavior without needing to invoke the self.

Consistent with this idea, we found a significant interaction between article type (shared, unshared) and sharing instructions (free choice, forced choice), $F(1, 149) = 5.02, p = .027$. Participants in the free choice condition reported significantly higher subjective knowledge for shared vs. unshared articles ($F(1, 149) = 5.99, p = .016$), whereas participants who were explicitly instructed to share specific articles did not ($F(1, 149) = 0.60, p = .44$).

Six studies provide evidence that when people share knowledge, they feel more knowledgeable—even if they did not produce, and have not read, the knowledge that they share.

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Ambiguity in Times of Uncertainty: Bridging Uncertainty Research Across Consumer Domains

Chairs: Amin Shiri, Texas A&M University, USA
Donald R. Gaffney, Vanderbilt University, USA

Paper #1: Ambiguity Aversion and the Perceived Nature of Uncertainty

Craig R. Fox, University of California Los Angeles, USA
David Tannenbaum, University of Utah, USA
Michael Goedde-Menke, University of Münster, Germany

Paper #2: The less you know the better: How persuasion knowledge increases preference for products with ambiguous attributes

Amin Shiri, Texas A&M University, USA
Keith Wilcox, Texas A&M University, USA

Paper #3: Inference in Times and Types of Uncertainty: The Case of COVID-19 and Free Will

Donald R. Gaffney, Vanderbilt University, USA
Bryan M. Buechner, Xavier University, USA
Noah VanBergen, University of Cincinnati, USA

Paper #4: Uncertainty about Stability of Romantic Relationship Increases Preference for Renting (vs. Buying)

Yuechen Wu, Oklahoma State University, USA
Jared Watson, New York University, USA
Ali Faraji-Rad, University of Maryland, USA

SESSION OVERVIEW

An undeniable reality: we have to live with uncertainty and ambiguity in various aspects of our lives. Inspired by the ACR 2022 theme of Together, we have assembled four articles that examine the role of uncertainty and ambiguity in various consumption and theoretical domains that share a common goal; understanding how consumers interpret and deal with ambiguity and uncertainty. Together, these four papers offer both novel, and synergistic, findings in areas such as judgment and decision making (papers 1 and 2), persuasion (paper 2), public policy (paper 3), and romantic relationships (paper 4). By illustrating the connection between ambiguity and the inferences made from uncertainty, this session illustrates how consumer behavior may vary from predictions based on standard decision-making models, which in turn has implications for consumers and policymakers.

To set the stage for the papers in this session we need to have a precise definition of uncertainty and ambiguity and the difference between the two. Thus, the first paper tests a novel behavioral interpretation of ambiguity aversion. In four studies they show that ambiguity aversion (reluctance to act on vague probabilities) is exacerbated when uncertainty is seen as knowable (epistemic) in nature and mitigated when it is seen as random (aleatory). Their findings contradict prominent economic models that construe ambiguity aversion as reluctance to bet on compound lotteries.

Ambiguity aversion, however, is not limited to financial decisions (e.g., lotteries), and to that end, the second paper examines how ambiguity about product performance attributes influences consumers' choices. Contrary to prior findings on ambiguity aversion showing that ambiguity harms consumer evaluation of products, the authors of this paper find that activation of persuasion knowledge increases the purchase likelihood of products with ambiguous (e.g., weight loss tea: lose up to 1lb/week) versus unambiguous (e.g., lose 1lb/week) attributes by making consumers infer that an ambiguous attribute is more credible than an unambiguous attribute.

Inferences regarding uncertainty can have major implications beyond consumer purchasing habits. Such inferences can also provide insight into consumption in crisis situations, as illustrated by the third paper in the session. The authors of the third paper examine inference processes between uncertainty variants in a COVID-19 context. They show that consumers' freewill beliefs predict perceptions of COVID-19 threat, which has implications for countermeasure compliance. However, this relationship is contingent upon whether COVID-19 related uncertainty is perceived to be epistemic or aleatory.

The uncertainty caused by a global pandemic took a toll on many relationships, and the final paper of our session examines just that; uncertainty in romantic relationships. Across four studies, they show that consumers who are uncertain (vs. certain) about the stability of their romantic relationship exhibit a greater preference for renting (vs. purchasing) products. Self-concept continuity is shown as the underlying mechanism of these results.

Taken together, the four papers in this session present distinct yet synergistic findings that advance our understanding of consumer judgment in situations where information is ambiguous or uncertain, with implications for marketing strategy, word of mouth, pricing, and policymaking.

Ambiguity Aversion and the Perceived Nature of Uncertainty

EXTENDED ABSTRACT

A fundamental challenge to rational models of decision under uncertainty is Ellsberg's (1961) observation of *ambiguity aversion*: people prefer betting on clear or known probabilities (e.g., drawing a red ball from an urn containing 50 red balls and 50 black balls) to betting on vague or unknown probabilities (e.g., drawing a red ball from an urn containing 100 red and black balls in unknown proportion). Ambiguity aversion has been central to the analysis of a wide range of phenomena, including consumer choice, investment allocation, strategic decisions and asset pricing.

Psychological research on ambiguity aversion has attributed this phenomenon to reluctance acting where the decision maker feels relatively ignorant or uninformed (Heath and Tversky 1991; Fox and Tversky 1995; Fox and Weber 2002). We introduce a significant enhancement to this perspective by proposing that ambiguity aversion is amplified by perceived *epistemicness* (knowability) of relevant uncertainty and it is mitigated by perceived *aleatoriness* (randomness) of relevant uncertainty. Prior studies (e.g. Fox, et al., in prep) show that perceived knowability is associated with attributions of credit (or blame) for correct (or incorrect) prediction, whereas perceived randomness moderates the extent to which the decision maker is seen as merely lucky or unlucky. Thus, we predict that holding one's level of subjective knowledge constant, ambiguity aversion will increase with perceived knowability and decrease with perceived randomness. In four studies we test this hypothesis against prominent economic models that of ambiguity aversion as distaste for compound lotteries (where the unknown probability urn is construed as a two-stage lottery over possible distributions of red and black balls; e.g., Segal 1987; Halevy 2007).

Our first study documents enhanced ambiguity aversion when participants bet on the composition of the unknown probability urn

rather than a single draw from it. Online participants ($N=201$) made all pairwise choices between three Ellsberg-like bets on the participant's choice of color (red or black): (1) a draw from an urn containing 50 red and 50 black balls (pure aleatory uncertainty); (2) a draw from an urn containing 101 red and black balls in unknown proportion (mixed epistemic/aleatory uncertainty); (3) the majority color in an urn containing 101 red and black balls in unknown proportion (pure epistemic uncertainty). As predicted, we replicated the usual finding of ambiguity aversion and also found enhanced ambiguity aversion: most participants (58%) preferred to bet on a single draw from the unknown probability urn than bet on the majority color ($p<.02$). The latter result shows not only aversion to pure epistemic uncertainty but also a preference for a compound (two-stage) lottery over a one-stage lottery.

A second (incentive-compatible) field study demonstrates that people prefer to hedge a purely epistemic bet by mixing it with aleatory uncertainty (especially when they feel ignorant). Commuters in Muenster, Germany ($N=721$) made two betting choices concerning an upcoming soccer match between Augsburg (A) and Cologne (C): (1) gain €50 if A is favored over C by oddsmakers OR (2) gain €50 if A wins the match against C; (3) gain €50 if A is not favored over C OR (4) gain €50 if A loses the match to C. Note that rational choice theory requires that a person chooses (1) over (2) if she chooses (4) over (3). Results conformed perfectly to our prediction: First, most participants violated SEU by either betting on both teams to be favored or both teams to win the match ($p<.01$), and this pattern was more common among participants who rated themselves as less knowledgeable about soccer ($p<.01$). More importantly, most (68%) of participants who violated SEU bet on both teams to win rather than both teams to be favored ($p<.0001$). This latter result shows that less knowledgeable people prefer an "aleatory hedge" to epistemic uncertainty, again violating behavioral economic models of compound lottery aversion.

Our final studies show that people sometimes pay a premium for a compound lottery over a simple lottery—especially when they feel relatively ignorant. In (incentive-compatible) Study 3, 132 German students judged which of two German states is larger, and assessed their probability of being correct. Next, they chose between (A) €100 if their answer is correct (a one-stage lottery) or (B) a 90% chance of receiving €100 if their answer is correct and a 10% chance of receiving €100 if their answer is incorrect (a two-stage lottery). Note that for any $p>.50$ of answering correctly, the one-stage lottery stochastically dominates the two-stage lottery (e.g., if a person thinks she has a .60 chance of answering correctly, the two-stage lottery replaces this .60 chance of winning with a $.60 \cdot .90 + .40 \cdot .10 = .58 < .60$ chance). Thus, no participant should choose the two-stage lottery; in fact, 44% of participants did. More important, we found that choice of the two-stage lottery increases as judged probability of being correct approaches .50, with a significant majority of participants favoring the two-stage lottery for judged probabilities less than .60.

In Study 4 we replicated this effect and showed that it disappears when the second stage of the lottery is not framed as a random hedge. Participants ($N=407$ mTurkers) bet on their answer to a history trivia question. A first group chose between: (A) \$100 if they had answered correctly or (B) a 90% to win \$100 if they had answered correctly and a 10% chance to win \$100 if they had answered incorrectly. A second group chose between: (A) \$100 if they had answered correctly or (B) face a 10% chance of having their answer switched and then receive \$100 if that final answer is correct. Note that although the "10% answer switch" version is objectively identical to the "90-10 lottery" version it makes the aleatory hedge less salient. As predicted we found that while the 90-10 lottery condition perfectly replicated the results of Study 3, participants in the "10% answer switch" condition were far

less likely to choose the two-stage gamble, at all levels of subjective probability.

Taken together these studies show that ambiguity aversion depends critically on the perceived epistemicness (knowability) versus aleatoriness (randomness) of relevant uncertainty, and the data clearly violate prominent behavioral economic models of ambiguity aversion as failure to reduce compound lotteries.

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The less you know the better: How persuasion knowledge increases preference for products with ambiguous attributes

EXTENDED ABSTRACT

Product performance attributes, virtually always quantitative, are undeniably one of the most crucial pieces of information that companies share with their consumers (e.g., "Lose up to 1lb/week," "5hr Energy boost"). Such product performance claims are ubiquitous and essential in a firm's marketing efforts to persuade consumers to purchase the product. Moreover, as the above examples illustrate, firms utilize different approaches to communicate the performance attributes of their products. While some companies opt for an unambiguous language (e.g., 5hr energy boost), others tend to use a more ambiguous language (e.g., lose up to 1lb/week) to communicate product performance attributes. Given the crucial role that product performance information plays in consumers' choice, it is important to know how consumers may react to (un)ambiguous product performance attributes. Surprisingly, however, previous research has not systematically examined how ambiguity about product attributes influences consumer purchasing decisions.

The current research seeks to fill this gap by studying consumers' reactions to ambiguous versus unambiguous product attributes. Specifically, we theorize and provide evidence that when consumers draw upon their persuasion knowledge – personal knowledge about persuasion attempts and their reactions to them (Friestad and Wright 1994) – to inform their judgment about a product, they are more likely to purchase a product with ambiguous performance. The proposed effect occurs because when consumers feel skeptical about product claims, they expect variations in actual performance against what is advertised. Hence, products with ambiguous attributes are deemed more likely to deliver the advertised performance, given that a product with

an ambiguous attribute inherently signals performance variations to consumers. Importantly, we demonstrate that this effect emerges when consumers evaluate products jointly versus in isolation. Further, too much ambiguity about the performance attenuates the effect, and consumers' prior involvement with a product moderates our proposed effect. Evidence from three preregistered experiments (Total $N = 1340$) provides compelling support for our hypotheses.

Study 1 ($N = 222$) directly tested the positive effect of persuasion knowledge on the purchase likelihood of products with ambiguous performance attributes. To achieve this, we simulated a shopping scenario where participants were looking to purchase a new pair of earbuds from an online retailer. For half of the participants, persuasion knowledge was activated prior to starting the study, while the other half did not receive such manipulation (control group). Consistent with our preregistered prediction, a one-way ANOVA revealed a main effect of persuasion knowledge. Compared to subjects in the control condition ($M = 2.48$, $SD = 1.88$), those in the activated persuasion knowledge condition were more likely to purchase the earbuds with ambiguous performance attribute ($M = 3.79$, $SD = 1.45$; $F(1, 220) = 24.94$, $p < .001$).

Study 2 ($N = 666$) simulated a shopping scenario where participants were shopped for a pest repeller from an online store. To examine the role of judgment mode, one-third of participants evaluated the products jointly, one-third evaluated a product with ambiguous performance attribute only, and the remainder evaluated a product with unambiguous performance attribute only. For half of the participants, persuasion knowledge was activated before starting the study, while the other half did not receive such manipulation (control group). Supporting our predictions, when both products were evaluated together (comparative judgment condition), participants in the persuasion knowledge condition reported greater willingness to buy the pest repeller with ambiguous effectiveness ($M = 3.19$, $SD = 2.17$) than participants in the control condition ($M = 2.15$, $SD = 1.66$; $F(2, 660) = 16.98$, $p < .001$). However, there was no difference between the persuasion knowledge and control conditions when the options were seen in isolation both when the product featured ambiguous ($M_{PK} = 5.32$, $SD = 1.37$ vs. $M_{control} = 5.55$, $SD = 1.19$, $F < 1$) and unambiguous performance attribute ($M_{PK} = 5.54$, $SD = 1.28$ vs. $M_{control} = 5.70$, $SD = 1.15$, $F < 1$).

Study 3 ($N = 452$) tested both the positive effect of persuasion knowledge on reducing ambiguity aversion and the mediation effect where we measured subjects' expected product performance against advertised performance. To achieve this, we simulated a shopping scenario similar to that in Study 1, where half of the participants experienced heightened persuasion knowledge, while the other half did not receive such manipulation (control group). Consistent with our preregistered prediction and replicating the earlier results, a one-way ANOVA revealed a main effect of persuasion knowledge. Compared to subjects in the control condition ($M = 1.94$, $SD = 1.65$), those in the activated persuasion knowledge condition were more likely to purchase the earbuds with ambiguous performance attribute ($M = 2.97$, $SD = 2.25$; $F(1, 450) = 30.59$, $p < .001$). Furthermore, a one-way ANOVA showed that participants in the persuasion knowledge activated condition believed that the battery life is more likely to match that of the earbuds with ambiguous battery life ($M = 4.89$, $SD = 2.18$) than those in the control condition ($M = 4.31$, $SD = 2.15$; $F(1, 449) = 8.19$, $p = .004$), which mediated the effect of persuasion knowledge on purchase intent (95% CI = [.06, .37]).

This research makes three main contributions. First, unlike previous research that suggest people, in general, are averse to ambiguous information and that ambiguity harms consumer evaluation (Slovic and Tversky 1974; Sarin and Weber 1993; Einhorn and Hogarth

1985), we found that when consumers' lay beliefs about marketers' tactics (i.e., persuasion knowledge) are activated, consumers are more likely to purchase a product with an ambiguous product performance attribute. Second, we add to the body of knowledge from prior research on persuasion knowledge in an important way by examining this phenomenon in a comparative judgment setting, where multiple products are evaluated simultaneously, and find that the influence of persuasion knowledge on consumers' choices greatly depends on the evaluation mode (comparative vs. isolated). Third, from a substantive point of view, our findings can guide marketers on when to use ambiguous (versus unambiguous) language to communicate product information and when not to.

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Inference in Times and Types of Uncertainty: The Case of COVID-19 and Free Will

EXTENDED ABSTRACT

In 2022, consumers are often confronted with COVID-19 related uncertainty and consequently engage in compensatory strategies to cope with this uncertainty. Although COVID-19 has significant risks, little is known about the role that individual differences play in compliance with COVID-19 countermeasures. One such individual difference we investigate is belief in free will.

Individuals vary in the extent to which they endorse the notion of free will, such that individuals who strongly endorse free will believe outcomes can be controlled by internal factors and are achieved by overcoming any constraints, whereas individuals who weakly endorse free will believe outcomes are externally influenced and cannot be controlled (Baumeister and Brewer 2012). However, the nature of uncertainty surrounding COVID-19 may in turn inform how free will belief shapes consumer responses. On one hand, there is an element of apparent randomness to the pandemic (aleatory uncertainty; Fox and Ülkümen 2011). On the other hand, part of the uncertainty surrounding the Coronavirus is based on insufficient knowledge (epistemic uncertainty; Fox and Ülkümen 2011). We propose that consumers' FWBs will inform how they respond to the source of uncertainty (e.g., COVID-19), but this effect will depend on the type of perceived uncertainty.

The strength of beliefs' influence on behavior under uncertainty depends on the utility of the belief to solve the experienced uncertainty. (Gaffney 2021). For instance, when uncertainty is attributed to knowledge, beliefs often act as a basis for inferring missing information (Kardes, Posavac and Gaffney 2022). However, beliefs such as FWBs hold little utility in resolving uncertainty attributed to random (stochastic) sources. Therefore, we predict that FWBs will influence the endorsement of COVID-19 countermeasures (e.g., solutions to uncertainty), but only when uncertainty is perceived to be epistemic (and not aleatory).

In four studies we establish a relationship between FWBs and uncertainty resolution strategies that are grounded in CDC recommended COVID-19 countermeasures. We then illustrate that this relationship

can be attenuated by framing specific COVID-19 related uncertainty as aleatory.

Study 1 investigated the relationship between FWBs and attributions of COVID-19 consequences. Participants (N=200) were asked to recall their COVID-19 experience and then responded to the statement “Responsibility for COVID-19 related illness is on the individual and their behavior.” on a 7-point measure anchored *strongly disagree* to *strongly agree*. Participants then reported their belief in free will (Paulhus and Carey 2011). FWBs significantly predicted attribution of responsibility: as belief in free will increased attributions towards the individual increased ($F[1, 198]=12.321, B=.242, p=.001$).

Study 1 established the relationship between belief in free will and attribution. However, the role of uncertainty variant went unexplored. Study 2a investigated the role of uncertainty variant and whether FWBs predict endorsement of countermeasures aimed at helping society or the individual. Participants (N=276) were randomly assigned to one of two between-subject conditions and given a writing prompt; participants wrote about the uncertainty they have regarding their information about the virus (epistemic condition), or about their chances of contracting the virus (aleatory condition). Next, participants responded to the statement “To help solve this pandemic, my role is to...” on a 7-point measure anchored *protect myself to help others*. Finally, participants reported their belief in free will (Paulhus and Carey 2011).

A bootstrapping procedure was conducted (Model 1; Hayes, 2018) to highlight the conditional relationship that resolution strategy had between variants of uncertainty. Under epistemic uncertainty, FWB predicted role in the pandemic: as individuals’ FWBs increased (decreased), their motives to protect themselves versus helping others increased (decreased) ($B=.5039, 95\% \text{ CI}: -.9175, -.0903$). FWBs did not predict resolution strategy under aleatory uncertainty ($B=.0414, 95\% \text{ CI}: -.3372, .4201$).

Study 2b was conducted to link resolution strategies to specific COVID-19 countermeasures. Participants (N=100) were asked to evaluate if six COVID-19 countermeasures (CDC, 2020) were oriented towards “controlling the virus” or “outlasting the virus”. For each countermeasure, the responses were averaged ($r_s > .23, p_s < .02$). A t-test indicated that countermeasures such as self-quarantine, social distancing and mask wearing were perceived as strategies aimed at outlasting the virus whereas finding treatment and vaccine development were perceived to be aimed at controlling the virus ($p < .05$).

Study 3 had two primary contributions: (1) a new DV (controlling versus outlasting) validated in the previous study and (2) provides initial evidence that threat may mediate the relationship between FWBs and controlling versus outlasting resolution strategies. Participants (N=275) responded to the statement “In general, I am personally concerned with...” using a 7-point measure anchored *controlling the virus* to *outlasting the virus*. Then, participants reported their belief in free will as well as their beliefs about the threat posed by COVID-19 (e.g., The threat of Covid-19 to the lives of my family and friends is relatively small.).

A mediation analysis (Model 4; Hayes 2018) revealed that FWBs negatively predicted perceived threat ($B=-.3059, p=.036$) and that perceived threats negatively predicted resolution strategy ($B=-.5815, p < .001$), such that those who perceived COVID-19 to be more threatening, endorsed a more controlling resolution strategy. This resulted in a significant indirect effect ($.1779, 95\% \text{ CI}: 0.146, .3502$) with a non-significant direct effect ($p=.729$).

Study 4 replicated this effect and investigated the moderating role of uncertainty variant. Participants (N=196) were randomly assigned to either an aleatory or epistemic uncertainty condition. Both conditions received the same news article discussing COVID-19 but was

either described using words and phrases known to be epistemic or aleatory contingent on participants condition (Ülkümen et al., 2016). The rest of the procedure was identical to study 3. Consistent with study 3, COVID-19 threat mediated the effect of FWB on resolution strategy, but only when the uncertainty surrounding COVID-19 was epistemic (indirect effect = .2290, 95% CI: .0874, .3945) and not aleatory (indirect effect=.0712, 95% CI: -.0224, .1926) (Model 14; indirect effect=.1579, 95% CI .0252, .3361).

Together these studies offer novel insight into the relationship between uncertainty variant and inference processes using a real and threatening uncertain event (COVID-19). Specifically, we demonstrate that FWBs predict varying levels of endorsement of recommended resolutions to an uncertain event (COVID-19) based on how uncertainty is perceived.

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Uncertainty about Stability of Romantic Relationship Increases Preference for Renting (vs. Buying)

EXTENDED ABSTRACT

Past research has examined several factors that can impact consumers’ choice of purchasing versus renting a product (Belk 1988, Lambertson and Rose 2012). However, little research has examined whether consumers’ romantic relationship can impact their renting versus purchasing behaviors. Romantic relationships are a significant part of most adults’ lives and influence not only their well-being (Davis, Shaver and Vernon 2003) but also various aspects of their consumption choices, including goal-pursuit (Chartrand, Dalton, and Fitzsimons 2006), indulgence (Cavanaugh 2014), variety seeking (Etkin 2016), and luxury consumption (Wang and Griskevicius 2014). In this research, we examine how (un)certainly about the stability of one’s romantic relationship influences consumers’ preferences for renting versus purchasing.

Building on prior research demonstrating the significance of romantic relationship in formation and clarity of the self-concept (e.g., Slotter, Gardner and Finkel 2009), as well as the connection be-

tween possession acquisitions and the self (Belk 1988), we propose that consumers who are uncertain (vs. certain) about the stability of their romantic relationships exhibit a greater preference for renting (vs. buying) products. Specifically, consumers who face uncertainty about their relationship stability will experience low self-continuity (Sani 2010): they cannot be sure that their future self will be similar to their current self; as the future self may be influenced by possible future changes in their romantic status and/or partner. Perceived lack of self-concept continuity will then lead to a preference for renting (vs. buying), which is seen as low commitment to self-extension as compared to acquisitions. We argue that this effect occurs even in decisions where the stability of the romantic relationship does not influence the economic utility of the decision. Due to the significance of romantic relationship to consumers' self-concept, we argue that the proposed effect is exclusive to uncertainty about romantic relationships and does not extend to other types of uncertainty such as financial uncertainty or career uncertainty.

Four studies test the proposed effect and the underlying process. In Study 1, 352 students were randomly assigned to one of the 2 (certainty: certain vs. uncertain) x 2 (context: rent vs. purchase) between-subjects conditions. Participants first received 50 cents that they could choose to keep or spend during the study. Participants first engaged in a task where they imagined dating a partner for some time and having a good time together. In the certain (vs. uncertain) condition, they further imagined that they could not (vs. could) see themselves living with the partner in the long term. They were instructed to write about the thoughts and feelings they would experience in this situation. Next, in an ostensibly unrelated study, participants engaged in a painting task. They received a coloring page and a pencil, and were told that they could color the page using the pencil, or choose to rent (the rent condition) or buy (the buy condition) a new crayon kit for 50 cents. The percentage of participants who decided to rent (renting condition) or buy (purchase condition) the crayon kit (instead of coloring with the free pencil), served as our key DV. A binary logistic model revealed a significant interaction between certainty and context ($p = .032$). As predicted, chi-square tests suggested that participants feeling uncertain were more willing to rent (61.9%) than to purchase (34.0%; $p = .018$). Those feeling certain exhibited no difference in renting vs. buying decisions (36.8% vs. 41.7%; $p = .501$).

Study 2 ($N = 305$, Prolific) tested the underlying mechanism of self-concept continuity. Certainty about relationship stability was manipulated the same way as in Study 1. Participants then imagined that they were interested in attending a local festival where all participants were invited to join a kite-flying celebration. Participants imagined that they did not have a kite but they could rent or purchase a kite at the festival. Participants' likelihood of renting or purchasing a kite served as the main DV ($1/9 = I$ will definitely rent/buy a kite). As the process measure, participants answered three questions on self-concept continuity (e.g., My future self would not be very different from my present self; reverse-coded). As predicted, participants in the uncertainty (vs. certainty) condition were more interested in renting the kite ($M_{\text{uncertain}} = 6.38$ vs. $M_{\text{certain}} = 5.58$, $p = .008$). Under uncertainty (vs. certainty) participants reported lower self-concept continuity ($M_{\text{uncertain}} = 5.90$ vs. $M_{\text{certain}} = 6.50$, $p = .002$), which mediated the effect of certainty on renting intention (95% CI = [.01, .27]). Study 3 replicated the effect of certainty on renting intention with a different certainty manipulation, speaking to the robustness of the effect.

Study 4 ($N = 302$, MTurk) measured certainty about relationship stability rather than manipulating it. Study 4 also measured certainty about career and residential stability to test whether the proposed effect was unique to certainty about relationship stability. Participants were randomly assigned to the rent or the purchase condition. They

imagined that they had been to a movie night with some friends, and the new movie that they had been meaning to watch was not available on streaming services. They could either choose an old movie that they had access to, or rent (the rent condition) or buy (the buy condition) the new movie for \$20. Participants' willingness to rent (buy) served as our main DV. We then measured participants' actual certainty about their relationship stability, career stability and residential stability. Replicating prior studies, there was a significant interaction between relationship certainty and context ($p = .001$). Spotlight analyses suggested that participants who were uncertain about their relationship stability were more likely to rent than buy ($p = .001$), while likelihood of renting vs. buying did not differ for participants who were certain about their relationship ($p = .190$). Neither career certainty nor residential certainty impacted consumers renting vs. purchasing behaviors.

Together, our results show that consumers' certainty about their relationship stability can impact their renting (vs. purchasing) behavior, even in decisions where the stability of the romantic relationship does not influence the economic utility of the decision. Further, we identify self-concept continuity as the underlying mechanism.

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Mapping Consumer Mental Processes and Representations Across Diverse Marketplaces

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Paper #1: Pairing in-store and on-line experiences induces price primacy in information search

Nicolette Sullivan, London School of Economics and Political Science, UK
Ling-Ling Zhou, Duke University, USA
Courtney Lee, Duke University, USA
Gavan Fitzsimons, Duke University, USA

Paper #2: Isolating representations from processes: An application for quantifying product imitation without self-report

Zhihao Zhang, University of Virginia, USA
Femke van Horen, Vrije Universiteit Amsterdam, Netherlands
Andrew Kayser, University of California, San Francisco, USA
Ming Hsu, University of California, Berkeley, USA

Paper #3: Congruence in charitable request features elicits greater giving through positively experienced affect: Process evidence from neural data

Alexander Genevsky, Erasmus University, Netherlands
Brian Knutson, Stanford University, USA
Ting-Yi Lin, Erasmus University, Netherlands
Steve Shaw, University of Michigan, USA
Carolyn Yoon, University of Michigan, USA

Paper #4: Neural signals of advertisement liking: Insights into the psychological processes of consumer valuation and their temporal dynamics

Hang-Yee Chan, University of Amsterdam, Netherlands
Maarten A.S. Boksem, Erasmus University, Netherlands
Roeland C. Dietvorst, NN Investment Partners, Netherlands
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SESSION OVERVIEW

With the constant innovations in today's marketplaces, consumers engage in increasingly diverse and complex interactions with products, brands, and firms. How consumers behave in these interactions is ultimately governed by the mental processes and representations in their minds, a longstanding notion that dates back to the early times of the field of consumer research (Lynch & Srull, 1982; Greenwald & Leavitt, 1984; Burke & Srull, 1988; Wright, 1980). With the ever-evolving marketplaces where consumers need to process and represent unprecedented amounts of information, there is a growing need for direct and precise measurement of relevant processes and representations, which remains challenging for traditional behavioral methods.

This session brings together four papers that employ novel methodologies, such as mouse-tracking and functional neuroimaging, to examine mental processes and representations underlying consumer behavior in a range of marketplace scenarios. At a high level, the questions they tackle include:

- What do consumers pay attention to? How do they seek information in different environments? (Paper 1)
- How do consumers represent different products in their mind and how do these representations relate to each other? (Paper 2)

- How do consumers process information and form attitudes and decisions accordingly? (Papers 3 and 4)

More specifically, Paper 1 examines consumer information search in in-store and online shopping settings. Using mouse-tracking, the authors investigate the key mental process—selective attention—that consumers engage for product information search. They find that in-store experience prompts consumers to pay more attention to the experiential qualities, while a hybrid environment may induce more attention toward price.

Paper 2 tackles the question of measuring product similarity, for which existing self-report measures have been bedeviled by concerns of explicit or implicit biases, especially in a legal context. The authors introduce a brain-based approach to measure the similarity between the neural representations of the products of interest by fMRI, by directly probing the mental representations, while minimizing the impact of processes that act upon representations.

The next two papers study processes in information processing and their effect on attitude and decision-making. Paper 3 seeks to reveal the psychological process that underlies the effect of affective congruence on charitable giving. By augmenting a set of behavioral studies with an fMRI experiment, they find that positive affect from valence-congruent requests contributes to enhanced charitable giving. Paper 4 takes advantage of the neural activity patterns during ad watching and automatic meta-analysis tools of the past neuroimaging literature to uncover what mental processes contribute to, and most reliably predict, subsequent liking. They report that mentalizing (predicting what people like them would do) is a precursor of subsequent liking of TV ads.

Collectively, these papers demonstrate the unique value of measuring processes and representations, on top of what traditional methods relying on behavioral data alone can offer. They also illustrate a number of complementary methodological approaches tailored to the research question at hand. Furthermore, they share the common focus on realistic experimental paradigms that seek to simulate real-world consumer experiences, which adds to the translational appeal of the findings to inform managerial and policy decisions.

Pairing in-store and on-line experiences induces price primacy in information search

EXTENDED ABSTRACT

Physical stores often offer a website or app, and consumers can choose to access either or both during their shopping journey. In fact, the majority of consumers report engaging in cross-channel activity before purchase (PricewaterhouseCoopers 2015). This could happen in a number of ways: consumers could first shop online and then visit the store, vice versa, or even view online information through a mobile device while at the store. The order in which consumers engage in each channel could each have a unique influence on how participants search for choice-relevant information. For example, participants value attributes differently in-store versus online (Dzyabura et al. 2019), and in store and online environments elicit dramatically different willingness-to-pay (Bushong et al. 2010). Because changes to information search influence consumer choice (Russo et al. 2006), it is important to investigate how these various cross-channel experience influence this process. In this study, we use mouse tracking

and virtual information boards to test how information search differs between cross-channel journeys.

Here, participants (N=199) shopped for 24 utilitarian products – carpets, backsplashes, and hard flooring in one of five conditions. Participants experienced an online or in-store experience alone, online or in-store first, or both simultaneously. The online task allowed participants to view product information by hovering over attributes with a mouse cursor. This allowed us to assess the order of information acquisition, as well as which attributes were viewed for longest or were revisited. Nine attributes were drawn from the information available on a large nationwide home improvement store website, and included price, average ratings, an image of the product. The in-store experience allowed participants to hold product samples and view the price per unit. All participants were given a notepad to keep track of information about the products. Participants then ranked the products and were told, without deception, that one participant would receive their highest-ranked option installed in their home. Attributes viewed for less than 100 ms (e.g. Brand in Figure 1) were excluded from analyses as it takes at least this long to assess information (Higgins et al. 2014).

Across conditions, product images, price, and reviews dominated attention, receiving an average of 26%, 11%, and 8% of time spent on each, respectively. These three attributes were also most likely to be viewed first across participants (15%, 14%, and 13%) with the next-highest attributes receiving much lower likelihood of first view (product type and material, each 6%). However, there were significant differences in how participants searched for information, as we illustrate below.

Because each product sample displayed its unit price, as is done in stores, we predicted that when able to view samples at the same time as viewing the online information, price would be hovered over less as an artifact of its being easily seen on the samples. Instead, we found that price was viewed for a longer duration in the simultaneous condition compared to when doing the online or in store task first (online first, $d = -0.65$, $t(75) = -2.83$, $p = 0.006$, 95% CI = [-0.06 -0.01]; in store, $d = -0.78$, $t(66) = -3.07$, $p = 0.003$, 95% CI = [-0.13 -0.03]). Importantly, this analysis uses the percentage of trial time spent on price, as this controls for overall longer task time in the simultaneous task compared to the in-store first task ($d = -0.63$, $t(66) = -2.46$, $p = 0.02$, 95% CI = [-17.09 -1.79]). This indicates giving consumers access to information typically only available online while they are able to hold products may induce more focus on price in information search.

Participants who performed the in-store task first or simultaneously had more information while performing the online task than their online-first or online-only counterparts, as they had assessed the haptic qualities of each product. Therefore, we expect that their information search would be faster and less focused on experiential information. Surprisingly, despite having been able to hold the products, in-store first participants viewed information about the product's material (ceramic, nylon, etc.) for a larger percentage of their viewing time than the online-first group ($d = -0.61$, $t(74) = -2.48$, $p = 0.02$, 95% CI = [-0.02 -0.00]), and made more revisits to the this attribute ($d = -0.71$, $t(55) = -2.65$, $p = 0.01$, 95% CI = [-0.34 -0.05]). This was also true for the in-store first compared to the online only condition (percent time, $d = -0.61$, $t(74) = -2.48$, $p = 0.02$, 95% CI = [-0.02 -0.00]; revisits, $d = -0.54$, $t(74) = -2.21$, $p = 0.03$, 95% CI = [-0.39 -0.02]). The simultaneous condition, in which participants could hold the products while viewing attribute information in the online task, also induced more gaze to the material attribute than the online first condition ($d = -0.50$, $t(75) = -2.19$, $p = 0.03$, 95% CI = [-0.27 -0.01]). This indicates that, even when given the opportunity

to touch and hold the products, participants are more engaged in haptic information search when shopping online. This could suggest that holding products increases the felt importance of haptic information.

Together, these results indicate that the order in which each shopping context is experienced alters the order of information acquisition. The in-store experience may bring more attention to the experiential qualities of the product, while pairing the benefits of touch with online information may induce more attention toward price.

Isolating representations from processes: An application for quantifying product imitation without self-report

EXTENDED ABSTRACT

Does the toothpaste Colddate infringe upon the trademark of Colgate? Although it may strike most people as self-evident that Colddate is a copycat (i.e., a product that imitates the features of another, usually more established, brand) of Colgate, it may surprise you that Colddate won the lawsuit (*Colgate-Palmolive Company, Plaintiff, v. J.M.D. All-Star Import And Export, Inc.*, 2007). Apart from this case, similarly controversial rulings that challenge one's intuition are not uncommon. Perhaps not surprisingly, both the consumer research and the trademark law literature have recognized the difficulty of measuring product similarity and consumer confusion with self-report, and its vulnerability to explicit or implicit biases (Balganesh et al., 2014; Bird & Steckel, 2017; Satomura et al., 2014).

A major cause of this challenge lies in the fact that, in traditional self-report or behavioral methods, measures of product similarity are the product of the mental representations of the two products and a series of processes operating on those representations. Because of the lack of direct access to the mental representations, the output is sensitive to factors affecting the intermediate processes, which may include selective attention, feature comparison, memory retrieval, judgment formation, and more (Foxman et al., 1992; Miceli & Pieters, 2010; Morrin & Jacoby, 2000; Satomura et al., 2014; van Horen & Pieters, 2012). For example, seemingly subtle variations in the wording of survey questions can exert substantial influence over similarity judgments (DeRosia, 2019; Simonson, 1994; Simonson & Kivetz, 2012), most likely through altering some of these processes.

Here we test a novel approach by using neuroscientific tools to observe product similarity without self-report, bypassing the intermediate processes and the need for active behavioral output. We use fMRI repetition suppression (fMRI-RS), a technique for measuring the similarity between different neural representations (Barron et al., 2016), to generate a neural index of subjective visual similarity. Importantly, this technique allows us to scan participants (N=26) who were blind to the goal of the study using a passive viewing paradigm, therefore avoiding potential biases from subsequent processes while also improving the ecological validity, as consumers in real-world shopping scenarios rarely engage in active, explicit judgments of similarity.

Critically for our current purposes, substantial evidence indicates that the relative suppression of neural activities between two distinct stimuli when they are represented in rapid succession can be used to assess the degree of overlap in neural representations of these stimuli (Barron et al., 2016). To develop a realistic simulation of actual consumer products and copycats, we considered two common products in the US, the *Reese's* candies and the *OxiClean* detergent ("target products"). For each of them, we created a stimuli set consisting of real and fictitious comparison products that varied in visual similarity. The product set included two putative copycats *Pieces* and *OxyClean*, which strongly resembles *Reese's* and *Oxi-*

Clean. By repeatedly presenting the target products with each comparison product, we constructed an index of visual similarity using neural responses from object-sensitive regions of the visual system identified a priori. As an initial validation, the neural similarity index was strongly associated with the visual similarity ratings collected from the same subjects after the scan (Pearson $r = .87$ and $.77$ for candy and cleaning products, respectively; $p < .01$ for both). These findings demonstrate the feasibility of using this neural index as a direct readout of perceived similarity, bypassing self-report.

To further demonstrate the validity of our neural index, which in turn will allow us to identify potential biases in self-report data, we created an experimental test-bed, using a set of self-report surveys with varying degrees of experimental biases. With the goal of manipulating the rated similarity between the hypothetical copycats and the target products, our surveys were created based on documented criticisms of litigation surveys presented in trademark infringement lawsuits (Beebe, 2006; Simonson, 1994; Simonson & Kivetz, 2012) as well as the recent scientific literature on “questionable research practices” that greatly inflate the likelihood of false positive findings (Simonsohn et al., 2014).

The manipulations produced the intended biasing effects in self-reports, most pronounced with regard to the hypothetical copycats ($N = 283$ from Amazon Mechanical Turk). In the “Plaintiff-Favoring” survey, *Pieces* and *OxyClean* received similarity scores that were substantially higher than any other product, painting an exaggerated picture of how much more similar they were to the reference products relative to other competitors. On the contrary, in the “Defendant-Favoring” survey, their reported similarity scores were more or less comparable to those of the other competitor products. A third, putatively neutral survey provided results that are in between the Plaintiff-Favoring and Defendant-Favoring surveys.

We next compared the relative alignment against the neural index between different surveys in the test-bed. In both categories, the degree of alignment with the neural index of the putatively neutral survey was significantly higher than that of the putatively Plaintiff-Favoring and Defendant-Favoring surveys ($p < .001$ for both Neutral vs. Plaintiff-Favoring and Neutral vs. Defendant-Favoring in both categories), suggesting that the neural similarity index is indeed capable of distinguishing between surveys containing different amounts of bias. This result remained robust in a replication sample ($N = 587$).

These findings demonstrate the utility of brain-based measures of mental representations to contribute to characterizing product similarity, providing an example of how neuroscientific tools may be able to segregate mental representations and processes that are challenging for traditional methods. The tool we developed has the potential to inform legal decisions about copycat brands in a more accurate way. Given the pervasiveness of copycats and the financial damage they incur, this novel approach has important practical implications for the protection of both consumer welfare and brand equity (Ertekin et al., 2018; Satomura et al., 2014; van Horen & Pieters, 2012). It also adds to the literature on the application of neuroscientific tools to understand and validate substantive constructs in consumer behavior and marketing (Chen et al., 2015).

Congruence in charitable request features elicits greater giving through positively experienced affect: Process evidence from neural data

EXTENDED ABSTRACT

Objective:

Neuroscientific methods are particularly valuable in consumer research when they are used to explore processes underlying observed behavior otherwise opaque to traditional methods. In this paper we augment behavioral experiments with an fMRI study to elucidate the psychological processes driving a novel effect of affective valence congruence on charitable giving decisions.

Fundraising organizations face difficult decisions regarding how to best construct solicitations for donations. While aid requests often include multiple salient features, their interactive effect on donation behavior and the psychological mechanisms that underlie their combined influence remain unclear. Here, we first utilize a set of behavioral studies to establish a behavioral effect of affective congruence on giving and then utilize neuroimaging data to address a hypothesis regarding the underlying psychological process.

While it has been established that affective responses to charitable requests influence donor behavior, the interaction between discrete request features has not been fully explored. Previous work investigating the influence of affective features in charitable requests has resulted in divergent conclusions regarding the impact of affective valence on giving. On one hand, appeals evoking negative emotions (e.g., guilt or distress) have been found to promote charitable behavior (Carlson & Miller, 1987; R B Cialdini et al., 1987; Robert B. Cialdini, Darby, & Vincent, 1973; Small & Verrochi, 2009). Alternatively, other work suggests that inducing positive affect (e.g., joy or warmth) can promote charitable behavior (Aknin et al., 2012; Andreoni, 1990; Carlson, Charlin, & Miller, 1988; Genevsky et al., 2013).

In an attempt to better understand and reconcile these divergent findings we utilize behavioral and fMRI experiments to examine how the congruence of valenced request features impact charitable giving decisions. First, in a set of six behavioral studies we demonstrate a robust effect of valence congruence across request features on giving decisions. Next, in order to explore the psychological process underlying the impact of valence congruence we ran a complementary fMRI experiment in which participants brain responses were recorded while they were presented with valence congruent and incongruent requests.

Methods:

In six behavioral studies we first explored the interactive role of positive and negative affective features on charitable giving behavior. In all studies, affect was manipulated with respect to the facial expressions of potential donation recipients and the request messaging. In study 1, we assessed the moderating effect of facial expressions and request framing. In studies 2 and 3, we tested the boundaries of these effects by exploring multiple novel aid scenarios (study 2) and directly manipulating the framing of a single aid scenario (study 3). In study 4, we expanded on the previous binary preference design with a willingness-to-pay assessment of charitable giving. In study 5, we recruited community members to the laboratory and replicated the findings with an incentive-compatible donation task. Finally, in study 6, we measured self-reported affective responses in potential donors.

In the neuroimaging study, participants made incentive compatible giving decisions while being scanned in the MRI magnet. Neural

activity in response to congruent vs. incongruent valenced requests were then contrasted in a region of the brain associated with reward and positive affect. This task and analyses provided a more direct test of the processes underlying the effect of congruence observed in the behavioral and self-report studies

Results:

Across behavioral studies, we find consistent evidence for a significant impact of congruence on giving decisions. Requests that included either positive images and positive text, or negative images and negative text, were donated to more often than requests with incongruent features. In study 1, the preference for positive images was significantly moderated by the text valence of aid scenarios. Specifically, participants gave more when expressed affect and request framing were congruent. Studies 2 and 3 replicated these findings with a series of threat and opportunity scenarios, as well as by reframing a single aid scenario. Studies 4 and 5 further extend these findings, using a willingness to donate measures and an incentive compatible laboratory study.

In Study 6 participants' self-reported affect ratings indicated that the moderating effect of congruence could be accounted for by the level of positive aroused affect elicited in potential donors. However, conclusions regarding the process underlying the behavioral effects were not possible given the limitations of the self-report data. In particular, the inability to control for the impact of other elements of the task, and the participants' own inability to reliably report affective response to specific task elements in isolation, made it difficult to test the process account.

In the neuroimaging study, we are able to test the emergent hypothesis that congruent (vs. incongruent) requests – regardless if they are positive or negative – elicit greater reward related activity in the brain. We find that there is indeed significantly greater activity in the nucleus accumbens, a region commonly associated with reward and positive affect, for congruent requests. Interestingly, even negative-negative valenced requests are associated with greater nucleus accumbens activation, suggesting a basic biological preference for congruence underlying the observed behavioral effects.

Conclusions:

In a set of behavioral and neuroimaging studies we investigated the influence of affective congruence on charitable giving. Across studies, we found a robust positive impact of congruence on giving decisions. Despite some evidence suggesting that positively experienced affect may be the psychological mechanism driving the congruence effect, strong conclusions regarding the underlying processes were not possible due to limitations of the self-report data. An fMRI experiment, in which neural responses were collected as participants were presented with discrete task elements, allowed us to further test this hypothesis. We find that congruent affective features (as compared to incongruent features) are associated with reward related activity in the brain which subsequently positively influence giving decisions. These findings extend previous efforts to understand the factors that influence prosocial behavior by adopting a more holistic perspective regarding the impact of multiple request features. The findings thus have implications for enhancing charitable giving and informing best practices in crafting persuasive messages.

Neural signals of advertisement liking: Insights into the psychological processes of consumer valuation and their temporal dynamics

EXTENDED ABSTRACT

What makes consumers like video ads? Since the first AIDA (attention, interest, desire, action) model of advertising (Strong 1925) was introduced almost a century ago, different psychological accounts of effective advertising have recognized how affect, cognition and memory contribute to ad liking (Barry and Howard 1990; Vakratsas and Ambler 1999). Measuring mental processes during ad viewing, however, poses methodological hurdles.

Neuroimaging techniques using functional magnetic resonance imaging (fMRI) provide a window through which researchers can observe the underlying psychological responses during ad viewing and how they lead to subsequent liking. Whereas early studies in consumer neuroscience (see Plassmann, Ramsøy, and Milosavljevic, 2012 for a review) focused on anatomical findings, i.e., linking observable behavior (e.g., willingness to pay) to activity at certain brain regions (e.g., nucleus accumbens), more recently researchers turn to tools such as Neurosynth (Yarkoni et al. 2011) to infer mental states from whole-brain activity based on automated meta-analysis of the neuroscientific literature. For example, after extracting the whole-brain activation pattern during a task, one can compare it with multiple Neurosynth 'association maps' – whole-brain statistical maps linking the occurrence of certain terms ('memory', 'reward', etc.) in the extant literature to various brain regions reported in these studies – thereby offering clues as to which mental process is more likely invoked during such task.

Inspired by this Neurosynth decoding approach, we present a study where we pooled together three fMRI datasets (Dataset 1: unpublished; Dataset 2: Chan et al. 2019; Dataset 3: Venkatraman et al. 2015) in which participants viewed and rated TV ads while undergoing scanning (participant N = 113; ad N = 85; trial N = 3,720). Instead of analyzing raw brain responses in its anatomical space, we first converted whole-brain activity during ad viewing into various expression scores of terms from the Neurosynth corpus (670 psychologically relevant terms such as 'memory', 'reward', etc.) by calculating the dot products between activation maps and Neurosynth association maps – essentially transforming the neuroimaging data from anatomical voxel-space into Neurosynth feature-space. We then examined which of these Neurosynth term expression scores during ad viewing predicted subsequent self-report liking.

Out of the 670 Neurosynth terms, 133 terms were found to be positively associated with ad liking while 31 were negatively associated (using a threshold of $p < .01$, FDR corrected). To identify the themes of these terms, we performed hierarchical clustering based on the cosine similarities of the terms' association maps. Four positive clusters and three negative clusters were identified. The positive clusters suggested that stronger brain activity implicated in (a) perception (e.g., 'video', 'perception', 'events'); (b) semantic ('comprehension', 'sentence', 'linguistic'); (c) affect ('expressions', 'emotions', 'arousal'); and (d) mentalizing ('mentalizing', 'social', 'intentions') lead to greater ad liking. The negative clusters suggested stronger brain activity implicated in (e) cognitive load ('arithmetic', 'load', 'working'); (f) risk aversion ('decision', 'risky', 'losses'); and (g) inhibition ('inhibit', 'inhibitory') lead to less ad liking.

Having looked at the average neural signals over the entire ad, we then reviewed the cumulative signals along the first 15 seconds of ad viewing in order to identify the point at which Neurosynth term expression scores began to track subsequent liking. (We chose 15 seconds as it was the length of the shortest ads among the three data-

sets.) For all four positive clusters, predictive power emerged within the first 10 seconds of ad viewing. Notably, affect and mentalizing signals became predictive within the first 5 seconds. For negative clusters, only signals related to cognitive load predicted liking within the first 10 seconds, while risk aversion and inhibition were not significantly predictive throughout the first 15 seconds.

Informed by the neuroimaging findings, we lastly conducted a pre-registered behavioral study in order to answer two follow-up questions: (a) Can we replicate the neuroimaging findings with self-report interoceptive reflections of these early-onset mental processes? (b) Apart from individual liking, do self-report reflections also predict population-level outcomes? We recruited an online sample (UK participants on Prolific; $N = 102$) and used a new stimulus set (2019 Super Bowl ads; $N = 20$). Participants viewed only the first 10 seconds of these ads (all 30 seconds long in original form) and reported how much they were engaged in the four psychological processes (perception, semantic, affect and mentalizing, respectively) during ad viewing. These interoceptive reflections correlated with their self-report liking of the ad extracts. More importantly, aggregated self-report reflections of affect and mentalizing responses to these 10-second extracts were also associated with the population-level outcomes of these ads (Ad Meter scores compiled by the USA Today).

Overall, for advertising practice, this study reveals the importance of early-onset mentalizing – reading the intentions and the motivations of others, projecting what ‘people like us’ would do (Frith and Frith 2006) – as a precursor of subsequent liking of TV ads. This echoes recent works showing that neural activity in the brain’s social cognition system tracks information virality (e.g., Scholz et al. 2017), and speaks to the idea that our ‘social brain’ (Frith 2007) constantly engages in social cognition in everyday interactions, the success of which depends on the correct understanding of the wants and needs of others. In this sense, mentalizing might be seen as a sign of meaningful engagement with an audiovisual experience.

More broadly speaking, this study serves as a demonstration of new research practices in consumer neuroscience. First, existing neuroimaging datasets can be pooled together to answer new research questions with greater statistical power and generalizability. Second, we present a systematic shift from anatomically focused neuroimaging analyses to exploring more interpretable brain measures (Neurosynth term expression scores) in order to offer more accessible insights on consumer behavior while at the same time minimizing the risk of reverse inference. We hope the current effort will inspire a more interpretable analysis approach in future consumer neuroscience research.

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Win-win interventions for healthier eating

Chair: Dr. Romain Cadario, Erasmus University, Netherlands

Paper #1: Unlimited Self-Customization as a Win-Win Strategy for Consumer Health and Firm Profit: Evidence from a Field Study

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Paper #2: Healthy in the Wrong Way: Mismatching of Marketers' Food Claim Use and Consumers' Preferences in the United States but not France

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Paper #3: More Value from Less Food? Cross-Cultural Effects of Epicurean Labeling on Portion Control

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Paper #4: Partitioned Plates: Nudging Healthy Eating through Incompleteness Perceptions

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SESSION OVERVIEW

Research on food marketing generally assumes that marketers and policy-makers have opposite objectives, that is, profit against consumer health. Indeed, food producers and retailers earn more from calorie-dense and nutrition-poor ultra-processed foods than from healthier and unprocessed foods (Pinkse et al. 2009), explaining why food business is often perceived as a significant contributor to public health problems (Tempels et al. 2017). Existing research has identified a variety of evidence-based policy interventions to increase healthy consumption (Cadario and Chandon 2020). However, marketers are reluctant to implement these interventions if they think that they may reduce demand and profit (Oh et al. 2022). In addition, consumer research on food has often studied demand and supply independently. In contrast, the four papers in this special session investigate healthy eating interventions that can be a win for both marketers and consumer health.

In the first paper, the authors examine how allowing consumers to customize food to their own preferences, with no additional charge or limit to the number of choices, impacts their choices and firms' profits. Field study results revealed that this strategy increases consumers' healthy consumption as well as managers' profits, providing a win-win strategy.

The second paper compares marketers' use of food claims and consumers' preferences for these claims. The authors found a strong match in France but a mismatch in the United States, especially among mission-driven privately-owned (vs. public) companies, which tend to claim their products are healthy in the way nutritionists, but not consumers, prefer.

In the third paper, the authors introduce epicurean labeling as a practical intervention designed to promote portion control by emphasizing the pleasurable, aesthetic, multisensory properties of food on menus or packages. The authors demonstrate the effectiveness of epicurean labeling in a field study in a French cafeteria but show in two additional studies that its effectiveness is lower in the United States, a food culture at the opposite end of the hedonic-utilitarian spectrum compared to France.

In the fourth paper, the authors show that plates with (vs. without) visual partitions signal that more dissimilar foods *should* be represented on the plate and increase sensitivity to categories *missing* from a plate. This boosts desire to add missing food categories, producing more varied choices, which food marketers can exploit to promote alternative food options.

As our world continues to be impacted by the negative consequences of unhealthy food consumption, it is not sufficient to demonstrate the effectiveness of healthy eating interventions; we must also examine their likelihood of being adopted by food marketers. This special session contributes to the literature on consumer behavior by providing new insights on win-win healthy eating interventions for consumers and marketers. Moreover, the special session papers offer a diversity of marketing contexts (restaurants, producers), methods (lab experiment, field experiment, secondary data analyses) and cultural contexts (United States, France) that should be of interest to a broad audience and uncover fruitful opportunities for future research.

Unlimited Self-Customization as a Win-Win Strategy for Consumer Health and Firm Profit: Evidence from a Field Study

EXTENDED ABSTRACT

In a market overflowing with uniform products and services, consumers are increasingly looking for products and services designed just for them. One widely used marketing strategy, referred to as "self-customization" (Valenzuela, Dhar, and Zettelmeyer 2009), offers such consumption experiences by allowing consumers to customize their own products or services from a given choice board of options. In this research, we examine one type of self-customization that allows consumers to customize their own products with no additional charge or limit to the number of options selected (hereafter referred to as "unlimited self-customization")

The appeal of unlimited self-customization to consumers is apparent, as evidenced by the increase in the number of companies adopting it, particularly in the food and beverage (F&B) industry (e.g., Barrett 2017). Although past research has shown that self-customization with pay-per-add pricing, which charges consumers for the options they select, has mostly positive effects for both consumers (e.g., satisfaction) and firms (e.g., loyalty; Yoo and Park 2016), it is not clear whether these benefits extend to unlimited self-customization. The present research fills this gap in the literature by examining how unlimited self-customization influences consumers' food choices and firms' operation expenses.

When customers can add as many options as possible without additional charge, how do they respond? From an economic perspective, the appeal of unlimited self-customization might lead to unhealthy choices or overconsumption as consumers try to maximize the benefit of what they paid for. However, we suggest that unlimited

self-customization may in fact have positive effects, given that the opportunity to customize one's food (1) increases the perceived responsibility of the self in the decision-making process (Moreau and Herd 2010), (2) induces a sense of autonomy (Deci and Ryan 2000, 2013), and (3) increases attention to the healthiness of food through "unpacking" (Kruger and Evans 2004), all of which predict that consumers should make healthier choices with a self-customization menu. Building on these, we predict that unlimited self-customization will help consumers to make more healthy choices which in turn will positively benefit firms by reducing food ingredient costs.

We tested these predictions by leveraging a real-life menu system change at a pizza restaurant—from a fixed a-la-carte menu to a build-your-own (BYO) menu, then back to the fixed menu (ABA time-series design). We measured healthy consumption in four ways: the total calories and fat calories of pizza, the number of toppings, and the average topping calories per pizza. Healthy consumption was measured by lower total calories and fat calories of a pizza and lower number of toppings and average calories per topping. We also examined whether adopting unlimited self-customization is helpful for managers by analyzing the restaurant's ingredient costs for pizza and profit margins.

Analyzing data on pizza choices and purchases at an individual level in this quasi-experiment revealed that self-customization had a positive impact on both consumers and restaurants. Our results revealed that consumers chose pizza with fewer calories, fat calories, toppings and topping calories when the menu system changed from a fixed menu to a BYO menu. Specifically, we found that consumers ordered healthier pizzas, reducing their calories intake by 101.97 (or 10.07%, $p < .001$) and their fat calories intake by 77.75 (or 22.55%, $p < .001$). These reductions in calories intake were driven by the fact that consumers chose, on average, 1.04 (or 15.40%, $p < .001$) fewer toppings with 6.87 (or 8.90%) fewer calories each ($p < .001$).

Further, these selections translated to lower ingredient costs and higher profit margins for the restaurant. We found that the average costs of a pizza dropped by 16 cents (4.23%, $p < .001$), which increased the restaurant's profit margins per pizza by 44 cents (5.05%, $p < .001$). Finally, when the company returned to its fixed menu, consumers returned to their previous consumption patterns, at which point healthy consumption and the firm's operation expenses showed no significant difference from their original levels (all p -values $> .48$). Across various robustness tests, including tests of effects using different baseline periods, different selections of pizzas, and analysis at the receipt-level instead of the pizza-level, we found consistent results, demonstrating the robustness of our effects.

Together, these findings contribute to the literature on self-customization by providing an affirmative answer to the question of whether the positive effects of self-customization for consumers and firms are maintained when the option to self-customize is unlimited and free of charge. This answer is important given the increasing adoption of unlimited self-customization and worries that it may promote excessive consumption, and, in turn, hurt consumers' health and firms' profits. Moreover, our findings add to the literature on consumer well-being and health by identifying a widely used marketing strategy, self-customization, as an intervention tool for healthy eating. Our results further carry crucial managerial implications for firms by showing that unlimited self-customization can decrease the ingredient costs and increase profit margins, thereby demonstrating a truly win-win marketing strategy for both consumers and firms.

Healthy in the Wrong Way: Mismatching of Marketers' Food Claim Use and Consumers' Preferences in the United States but not France

EXTENDED ABSTRACT

Interest in healthy eating has never been so strong. More than half of consumers say that healthfulness impacts their food shopping more now than it did a decade ago (International Food Information Council 2020). 93% of today's consumers want to eat healthily at least some of the time, and 63% try to eat healthy most or all of the time (Steingoltz et al. 2018). Responding to this trend, food marketers cover packaging with claims that their products are healthy in one way or another. For example, 95% of breakfast cereals marketed to children in the USA make at least one nutrition-related claim on the packaging (Harris et al. 2011). However, only 43% of consumers think that food products are generally healthy, and a mere 46% trust food producers (European Institute of Innovation & Technology 2020). Indeed, the growing disagreement over what it means for food to be healthy suggests that marketers' claims about healthy food do not match consumers' expectations.

In this research, we categorize health claims following the framework in André et al. (2019), with two main dimensions: valence (the presence of positives vs. the absence of negatives) and nutrition-based (vs. nature-based), yielding a total of four claims. The first two types of claim are "nutrition-based": "Enriched" claims imply that the product is healthy because the food has been fortified by adding healthy nutrients, such as vitamins or minerals. "Diet" claims imply that the food is appropriate for a specific diet by removing unhealthy nutrients, such as fat, sugar, or lactose. In contrast, the top two types of claims are "nature-based": "Clean" claims imply the food is healthy because nothing negative has been added (e.g., "no artificial color", "no preservative"), while "whole" claims imply it is healthy because nothing positive, such as the bran from wheat, has been removed (e.g., "wholesome").

Study 1. We start by studying the frequency of these four types of claims in three product categories over the past ten years. We find an increased claim usage for all claims, however, the four types of claims have different levels of usage and different trends over time. These results underscore the importance of distinguishing between the four ways food products claim to be healthy.

Studies 2-3. Next, we focus on breakfast cereals in France and in the United States, using data from marketers (claim frequency from product packaging information using Mintel data at SKU level) and consumers (claim ratings from survey using a Qualtrics panel). Studying breakfast cereals provides unique insights because they are an international food that is consumed in the same way and that is dominated by the same two multinational companies in the two countries studied. This provides a natural quasi experiment allowing to examine the effects of cross-national differences in demand on customer orientation while holding company and product characteristics constant. In addition, we provide a novel and more objective measure of customer orientation as the degree of matching between marketer's actual decisions (claim selection) and consumer preferences. In contrast, much of the literature measures customer orientation subjectively, typically through marketers' self-reports (Narver and Slater 1990, Kohli et al. 1993).

Overall, we find a strong match in France but a mismatch in the United States, where claim frequency is negatively correlated with preferences. The mismatch arises from the underuse of presence-focused and nutrition-based "enriched" claims (e.g., "added calcium") and the overuse of absence-focused and nutrition-based "diet" claims (e.g., "low fat"). Our results rule out that these effects

could be explained by American food marketers being slow to adjust to consumer preferences, since the trends in claim use in the United States are going in the opposite direction.

Study 4. Using a SKU-level index of matching between claim frequency and preferences, we test our main prediction such that the degree of matching between consumers' claim preferences and marketers' claim use is higher for publicly traded companies than privately-owned companies. There are two major reasons for this. First, investors in publicly traded companies tend to put the maximization of shareholder value above other missions, such as public health (Song et al. 2015, Hawn et al. 2018). Second, mission-driven companies are less likely to achieve the size necessary to be listed on the stock market because their investors, customers and employees are concerned about 'mission drift' toward financial objectives when they scale up (Battilana and Dorado 2010, Grimes et al. 2018).

Overall, our results confirm this prediction, such that the mismatch is more pronounced among privately-owned companies than among public companies, which tend to claim that their products are healthy in the way that consumers prefer.

Conclusion. The past 10 years have witnessed a parallel increase in the number of claims made that food products are healthy and a decrease in consumer trust that they really are. Our results suggest that part of the paradox may be caused by disagreement in what 'healthy' means. Drawing on a 2 by 2 categorization of food claims depending on whether they focus on the presence of good (vs. the absence of bad) and are justified by the preservation of nature (vs. nutritional improvements), we show the emergence of new ways food marketers claim that their food is healthy and document that consumers do not value all claims as similarly healthy.

We further show that American and French consumers do not prefer the same claims because they make different inferences about what these claims mean for the functional and symbolic consumer benefits of these brands, not because they value these benefits differently. Finally, we find a match in the type of health claims made by marketers and those valued by consumers in France, but a mismatch in the United States. We show that this mismatch is driven by the behavior of privately-owned American firms, which make many more claims than publicly listed companies, but do not make the type of claims that consumers prefer.

More Value from Less Food? Cross-Cultural Effects of Epicurean Labeling on Portion Control

EXTENDED ABSTRACT

Conceptual Development. Growing food portion sizes have been identified as a key cause of obesity (Nestle 2003), and the effectiveness of interventions such as nutrition labeling on portion control has been rated as "disappointingly modest" (Dubois et al. 2020). "Mindful", sensory-based interventions (e.g., Cornil and Chandon 2016) are, however, a promising alternative: inviting consumers to focus on the sensory characteristics of foods promotes portion control by making consumers realize that sensory pleasure peaks with smaller portion sizes.

We contribute in two ways. First, while sensory-based interventions typically require elaborate scripts and human interactions with a researcher, we introduce and test a novel, practical intervention that can be easily implemented by managers at minimal cost. This intervention, which we call epicurean labeling, consists in emphasizing the aesthetic, multisensory properties of food in their description on restaurant menus and food packaging.

Second, we introduce a theoretically-relevant cross-cultural moderation. While the strongest behavioral evidence regarding the

benefits of sensory-based interventions comes from studies conducted in francophone countries, we compare France and the USA, which are two food cultures at the opposite ends of a hedonic-utilitarian spectrum in their attitudes toward food (Rozin 2005). We expect epicurean labeling to be more effective for portion control among French (vs. American) people. We test the effectiveness of epicurean labeling in the field, in a French cafeteria (Study 1), and test cross-cultural moderation in an online experimental replication (Study 2) and in an archival study of supermarket food products (Study 3).

Study 1. We obtained usable data from 99 paying customers of a French cafeteria, who could order any number of portions from a menu at a fixed price of 15 euros. We manipulated menu labeling between-subjects. The "control menu" had simple descriptions of the food items. The "nutrition labeling menu" added information about calorie and fat. The "epicurean labeling menu" used detailed multi-sensory, aesthetic descriptions (e.g., in addition to "lemon tart", epicurean menus added "crunchy shortcut pastry garnished with slightly sour lemon juice cream"). We measured ordered and consumed portion sizes, converted into calorie equivalents. We also measured pleasure expectations and eating pace thanks to hidden cameras. At the end, the cafeteria customers estimated the perceived monetary value of their entire meal.

Consumed calories were almost identical to ordered calories (leftovers were marginal). Customers in both the epicurean and the nutrition conditions consumed significantly fewer calories than those in the control condition ($p < .04$), and there was no significant difference across the epicurean and the nutrition conditions ($p = .10$). Despite eating less, customers in the epicurean condition found the meal significantly more valuable than those in the other conditions ($p < .03$). In other words, compared to the control menu, epicurean labeling made restaurant customers willing to pay more for less food. Mediation analyses suggested that this occurred because epicurean labeling increased savoring by slowing down eating and increasing pleasure expectations.

Study 2. In this preregistered online experiment (<https://aspre-dicted.org/blind.php?x=kj4982>), we recruited 410 American and 404 French participants matched on socioeconomic and demographic characteristics. This matching is important to rule out the alternative explanation that epicurean labeling is merely "fancy" wording that appeals to higher socioeconomic classes. Participants saw either the control or the epicurean menu of Study 1 (translated into English for the Americans) and then indicated how many portions they would order, and how much they would pay for the chosen food (note that WTP was measured after consumption in Study 1 and before consumption in Study 2).

Regarding portion choice, the menu x country interaction effect was marginally significant ($p = .09$): Epicurean labeling (vs. control) decreased the number of calories ordered by French participants ($p = .055$), but had no effect among US participants ($p = .59$). Regarding perceived value, there was no menu x country interaction ($p = .44$); epicurean labeling increased WTP in both cultures ($p = .01$). Hence, just like in Study 1, Epicurean labeling made French participants willing to pay more for less food, while it made US participants willing to pay more but without the portion control effect.

Study 3. This archival study used SKU-level information on the price, size, and on-package descriptions of foods sold in American ($N = 5,373$) and French ($N = 3,781$) supermarkets. As an operationalization of epicurean labeling, we used a lexicon of 157 sensory adjectives and adverbs (from "airy" to "zesty") collected by linguists Chahuneau et al. (2016), and pretested to be illustrative of epicurean labeling.

The proportion of products with at least one epicurean descriptor was larger in France than in the U.S. ($p=.01$). In France, package sizes were smaller for products with at least one epicurean descriptor than for those without ($p=.01$); without commensurately lower market price ($p=.06$). Note that market price is an imperfect proxy for WTP (we did not expect market prices to be higher for smaller portions, but merely less-than-proportionally lower). It was the opposite in the US: epicurean-labeled (vs. non-epicurean) products had similar package sizes ($p=.33$) but a higher price ($p=.01$). Study 3 thus provides supply-side evidence consistent with our hypothesis that epicurean labeling is associated with portion control in France but not the United States. This interpretation relies on the common assumption that food marketers set package sizes and prices as a function of consumer preferences (Werthenbroch 1998).

Conclusion. Epicurean labeling can promote portion control (a win for health), encourage savoring (a win for pleasure), and increase WTP (a win for business). Epicurean labeling reduces food consumption in a cafeteria as much as nutrition labeling but leads to higher willingness to pay for the meal.

This intervention appears more effective in France than in the United States. This is an important, theoretically-relevant cross-cultural moderator, insofar as France and USA are at the opposite ends of a hedonic-utilitarian spectrum in their attitudes toward food. Our results are consistent with the portion-size explanation of the “French paradox”: heart diseases are less frequent in France despite fattier diets, because of smaller food portions (Rozin et al. 2003). Changes in the food culture—for instance through sensory education, far more common in French than in American schools—may be necessary to fully unfold the benefits of pleasure-based interventions for healthier eating (Block et al. 2011).

Partitioned Plates: Nudging Healthy Eating through Incompleteness Perceptions

EXTENDED ABSTRACT

Many dining settings use partitioned plates for meals (e.g., cafeteria plates, bento boxes, disposable party plates). Do such visual partitions on plates change people’s food choices?

Incidental visual boundary cues are known to inspire more categorical thinking (e.g., demarcated waiting areas: Zhao, Lee, and Soman 2011), and increase the perceived distance between (e.g., borders on maps: Maki 1981; Mishra and Mishra 2010) as well as perceived variety among (e.g., background shades behind products: Wen and Lurie 2019) targets. If visual boundaries have the power to change perceptions of the targets that they separate, it is possible that their mere presence may change expectations and motivations even before would-be targets are present on the scene. Four studies show—in the domain of food consumption—that visual partitions increase expectations of variety within the partitioned sections and enhance sensitivity to missing categories. This, in turn, leads to more varied food choices to fill the partitioned space—an effect that primarily benefits unhealthy eaters by boosting their propensity to include healthy categories.

Study 1. Study 1 ($N=201$) tested the idea that plate partitions suggest that more different food categories *should* be represented on the plate. We used a 2(plate partitions: present vs. none)(receptacle type: photographed plate [3 partitions] vs. cartoon plate [4 partitions] vs. photographed lunchbox [4 partitions]) between-subjects design. The latter factor was included merely for robustness and we did not predict differences between receptacle type.

Participants looked at the assigned image of the plate [lunchbox] and completed four items measuring expected dissimilarity: “I

expect this plate [lunchbox] would be filled with foods that are...” followed by four semantic differentials (on 7-point scales; presented in random order): *similar to each other to different from each other*; *uniform to varied*; *from the same category to from multiple categories*; and *a homogenous blend to a diverse mix* ($\alpha = .88$). They also rated the amount of food they expected on the plate as a potential covariate: *a small amount of food to a large amount of food*.

Participants expected greater dissimilarity among foods on a receptacle with partitions ($M_{\text{partitions}}=5.55$, $SD=1.11$) versus one without ($M_{\text{no_partitions}}=4.66$, $SD = 1.51$); $t(181.62)=-4.78$, $p<.001$, $d=.68$. However, they expected equal amounts of food on receptacles with partitions ($M_{\text{partitions}}=4.51$, $SD=1.52$) and without ($M_{\text{no_partitions}}=4.25$, $SD=1.51$); $t(199)=-1.24$, $p=.216$, $d=.18$).

Plate partitions increased expected food variety, and this effect was *not* attributable to partitions setting anchors (as evidenced by comparable effects for 3-partition and 4-partition receptacles) *nor* to partitions otherwise inflating the sheer amounts imagined (as evidenced by the null effect on expected amount).

Study 2. Building on consumers’ intuition that partitioned plates *should* contain more different foods, Study 2 ($N=211$) tested if plate partitions make people more sensitive to food categories missing from the plate. We used a 2(plate partitions: present [5 partitions] vs. none) x (foods present, 4 replicates) mixed design, whereby plate partitions were manipulated between-subjects, and replicates that varied which foods were present on the plate was manipulated within-subject. For the plate partitions factor, we used schematic plates based on the USDA’s MyPlate design, which lists the five major food groups (i.e., carbohydrates, dairy, protein, fruits, and vegetables) around the edge of the plate. In both conditions, a dairy, a protein, and a carbohydrate item were displayed on the plate, whereas vegetables and fruits were missing. For the foods present factor, participants saw four different plates that varied in terms of what kind of carb, dairy, etc. were present. Participants viewed the assigned images and, for each image, rated three items measuring perceived incompleteness: “To what extent is this meal incomplete?”; “To what extent is this meal lacking?”; and “To what extent is this meal missing certain types of foods?” on 7-point scales.

Participants perceived the plate lacking fruits and vegetables to be more incomplete when it featured partitions ($M_{\text{partitions}}=5.10$, $SE=.15$) versus when it didn’t ($M_{\text{no_partitions}}=4.55$, $SE=1.45$; $F(209)=7.33$, $p=.007$). The effect manifested for every replicate ($ps<.019$).

Study 3. Designed to examine if people act on the reactions revealed in Studies 1 and 2, Study 3 ($N=108$) tested if plate partitions cause people to select more varied foods. We used a one-factor (plate partitions: present [4 partitions] vs. none) between-subjects design.

Participants viewed food pictures grouped into five different food categories (i.e., carbohydrates, dairy, protein, fruits, and vegetables) and were told to imagine choosing food items for a meal. All participants were told to drag-and-drop any four (4) food items (further guarding against anchoring differences across conditions) onto the plate.

Participants placed more different food groups (i.e., greater variety) onto the plate with partitions ($M_{\text{partitions}}=3.52$, $SD=.64$) versus the one without ($M_{\text{no_partitions}}=3.18$, $SD=.83$; $t(102.54)=2.39$, $p=.02$, $d=.46$). Importantly, focusing just on the number of stereotypically healthy categories (i.e., fruits and vegetables, Slavin and Lloyd 2012), they put more healthy foods onto the plate with partitions ($M_{\text{partitions}}=1.48$, $SD=.54$) versus the one without ($M_{\text{no_partitions}}=1.25$, $SD=.64$; $t(106)=2.02$, $p=.046$, $d=.39$).

Study 4. Based on the observation that plate partitions increased food variety chiefly through adding healthy categories in

Study 3, Study 4 (N=200) tested if partitions primarily benefit unhealthy eaters (who don't include healthy items at baseline) compared to healthy eaters (who naturally include healthy items). We used a 2(plate partitions: present [5 sections] vs. none)×2(current consumption level of healthy food: high vs. low) between-subjects design, with the former manipulated as in Study 2, and the latter measured via self-report.

Participants again served more different foods onto the plate with partitions ($M_{\text{partitions}}=4.42$, $SD=.82$) versus the one without ($M_{\text{no-partitions}}=4.07$, $SD=1.01$; $t(191.38)=2.73$, $p=.007$, $d=.39$), as well as more healthy food onto the plate with partitions ($M_{\text{partitions}}=1.82$, $SD=.41$) versus the one without ($M_{\text{no-partitions}}=1.57$, $SD=.59$; $t(179.45)=3.40$, $p=.001$, $d=.48$). However, while the increase in healthy items was significant among self-reported unhealthy eaters ($p=.001$), it was not among healthy eaters ($p=.57$).

Conclusion. These results from four studies point to visual plates partitions as an easy-to-implement, perception-based (rather than cognition- or affect-based) nudge to encourage more balanced diets that incorporate more different food groups, particularly among unhealthy eaters.

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Assembling Technological Practices

Chair: Nathan B. Warren, BI Norwegian Business School

Paper #1: Automation Assemblages in the Internet of Things: Discovering Qualitative Practices at the Boundaries of Quantitative Change

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Paper #2: How Practices Co-evolve: The Case of AI Induced Practice Disruptions

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Kirk Plangger, King's College London, UK
Hope Jensen Schau, University of Arizona, USA

Paper #3: Tech Gone Wild: The Fraught Meanings and Altered Material Competences of Digital Practices in Wilderness Settings

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Linda L. Price, University of Wyoming, USA

Paper #4: Resisting Entropy: How Consumers and Objects Share the 'Work' Involved in Sustaining the Continued Use of Tech-Products

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SESSION OVERVIEW

Digitally-enabled technologies continue to disrupt the everyday practices of individuals, groups, and firms. For example, smartphones have changed how we connect with friends, conduct work, access health services, and mundane home devices, such as refrigerators and vacuum cleaners. These technologies continue to shape and extend our capabilities in many spheres of everyday life. How consumers and firms integrate these new technologies into daily practices is of paramount importance for understanding the future of consumption.

In this special session, four papers investigate how emergent digital assemblages are integrated into daily practices and what challenges these new assemblages create for consumers and firms (Epp, Schau, and Price 2014; Hoffman and Novak 2017). Collectively, we provide theoretical insights into the possibilities and boundaries of automated lives as well as processes that enable the integration of new automated practices or result in their entropy.

The first paper examines how emergent technological assemblages are integrated into automated consumer practices. The authors conduct a quantitative analysis of hundreds of thousands of consumer-programmed connections between autonomous devices, such as programming an Amazon Echo to turn on the coffee maker when the morning alarm rings. They uncover 127 automation assemblages that are qualitatively analyzed to reveal 14 automated practice themes and four automated practice categories. These categories revolve around social expression, social connection, mind extension, and AI-to-AI connection.

The second paper examines the processes of embedding automated technologies into retail practices to uncover when and why those adoptions are more or less successful. Distinguishing between practice champions who intentionally disseminate a practice (e.g., managers) and practice participants (e.g., employees) allows the authors to uncov-

er a dynamic process of practice co-evolution. Practice co-evolution highlights the orchestrated, collaborative, multi-stakeholder process that allows for sustained practice change. Further, they identify practice enablement as a mechanism for imbuing knowledge into practice meanings, competencies, and materials.

The third paper examines how consumers respond when technological assemblages are pushed to the boundaries of their meanings and material capacities. More specifically, the authors examine how consumers use, avoid, limit, and negotiate with technology in wilderness places, where the meanings and competencies of technology are uncertain. Consumers reveal fraught meanings, highlighting themes of technology as an intruder, safety net, tether, and memory supplement. Their analysis of tech's diminished material capabilities reveals consumer strategies of technological avoidance, negotiation, distribution, pre-emption, and postponement.

Noting the natural tendency for technological assemblages to fall apart without 'work,' the final paper examines the amount of work that consumers and agentic digital objects must engage in to sustain continued use of a technology. The authors analyze 101 object biographies completed by 17 consumers. They identify four continued use trajectories: supported, decaying, haggled, and striving, which vary in the amount of work that a technology forces a consumer to engage in.

By examining how consumers and firms adapt or resist integrating human-AI assemblages into everyday practices, we shed light on a potential future where these emergent assemblages are inextricably bound to consumer practices.

Automation Assemblages in the Internet of Things: Discovering Qualitative Practices at the Boundaries of Quantitative Change

EXTENDED ABSTRACT

Imagine a world where everything can be connected to everything else as assemblages of interacting parts. This world, the world of the Internet of Things (IoT), is the one consumers live in today. On the early Web of the mid 1990s, hyperlinks instantly connected consumers to digital information around the world. A decade later, shares and likes on social media digitally connected consumers to each other. However, even in the age of digitized connection in the early part of the 21st century, physical consumption objects remained largely isolated from each other and served narrow roles. A wristwatch lived its solitary life on your wrist, light bulbs were turned off and on by dedicated physical switches, and a stereo speaker spoke or sang but was never spoken to. But now, in just the past few years, an explosion of consumer-facing physical devices like cars, lightbulbs, and smart speakers, in addition to digital services, are increasingly being connected to each through the Internet.

With just about everything connectable, day-to-day activities increasingly involve the automation of these connections. Automation is typically defined as technology which enables activities to be performed with little to no human intervention (Groover 2020). Recently, consumers have begun to automate aspects of their day-to-day lives. For example, why open your garage door and turn on your lights when your car can do it for you as it approaches your driveway? As this and many other examples suggest, it is becoming apparent that a new era of personal automation is emerging from the consumer IoT, with transformative potential for consumption practices. In a world where virtually any object can be Internet-connected to any other object, each

connection potentially underlies a new social practice. Practitioners and scholars alike need to understand not just which digital and physical services and products consumers are actually connecting together, but more importantly to what end (Tibbets 2018).

Recently, consumer behavior scholars have suggested that data-driven approaches can be invaluable to consumer researchers focused on discovery as they can shift research from the descriptive to the theoretically guided (Humphreys and Wang 2018). Inspired by the idea that text analysis can yield insights into what emerges from consumers' interactions with smart objects, we present a novel mixed method approach, guided by assemblage theory, to discover the emergence of automation practices. We use a unique data set from the web service IFTTT consisting of hundreds of thousands of conditional text-based rules of the form "if this, then that," for example, "turn on the coffee maker when my Amazon Echo alarm goes on." These if-then rules are the basis for applets, which can be defined as an automated integration/connection between two Internet-connected services that allow a consumer to do something those services are not able to do on their own (IFTTT 2022). To both quantitatively identify and qualitatively interpret the automation assemblages that emerge as applets are created, we use a data discovery approach that combines three recently developed machine learning methods with an inductive approach to thematic analysis.

We capitalize on the mathematical foundations of assemblage theory and conceptualize key assemblage theory constructs such as repetition with difference and territorialized boundaries in ways that render them amenable to operationalization and quantification. Our motivation for this quantification is that since qualitative change happens at boundaries of quantitative change, it is theoretically advantageous to quantify assemblage boundaries. Overlaying an assemblage theory interpretation on machine learning models for text analysis, clustering, and dimensionality reduction turns these computational tools into vehicles for operationalizing constructs with established meaning.

We combine several recently developed machine learning methods for data discovery to discover which automation assemblages have emerged. These computational methods are not selected ad hoc but are chosen because each operationalizes a relevant aspect of our assemblage theory-based conceptual model. We need three separate categories of computational methods to reify our conceptual model. First, we use a self-supervised machine learning method for text analysis (word2vec) to create word embeddings that operationalize applets as high-dimensional vectors. We use a density-based clustering solution (HDBSCAN) to group similar applets together as automation assemblages. We visualize the possibility space as a nonlinear dimensionality reduction problem (UMAP), known in the machine learning literature as a "manifold learning" problem. Thematic analysis is then used to interpret the higher-order meaning of these assemblages, and that meaning is incorporated in subsequent computational analyses.

Our empirical results of the realized possibility space reveal 127 automation assemblages. Our thematic analysis of the expressive roles (DeLanda 2006) of these computationally determined nested groups of automation assemblages are interpreted as social practices (e.g. Caniford and Shankar, 2013; Thomas and Epp 2019). These assemblages represent four higher-order automation practice categories, and within those 14 automation practice themes. These categories and themes express capabilities of enacted practices, and include: 1) social expression practices expressing self-presentation and self-disclosure, 2) social connectedness practices expressing sharing and social surveillance, 3) extended mind practices expressing personal quantification, object quantification, and transactive memory partners, and 4) relational artificial intelligence (AI) practices expressing ambient awareness, ambient control, long-finger control, and partners.

We are also able to identify dynamic aspects of the socio-historical shift from digital to physical automation practices. Analysis of the full possibility space reveals three distinct future growth patterns involving existing, incremental, and divergent automation practices. More broadly, our results show that relational AI practices, possessing enormous growth potential, also have a steeper growth trajectory than other practices and are evolving toward interactions that exist solely in the physical world. The rapid past growth and future likelihood of even larger numbers of connections emerging between Internet-connected physical objects portends the inevitable automation of our physical world. We anticipate that once robots and AI-enabled smart devices become key components of relational AI practices, the resulting automation of nearly all aspects of human life will mean that consumers will dwell with smart objects, not just interact with them (Weiser 1996). Once consumers and smart objects become inextricably bound in relational AI assemblages, we will not be able to study one without consideration of the other.

How Practices Co-evolve: The Case of AI Induced Practice Disruptions

EXTENDED ABSTRACT

Innovation is the new normal. The pandemic crisis inspired organizations to rapidly accelerate investments in artificial intelligence (AI) to enhance their manufacturing, logistics, and customer management capabilities. PwC's recent research shows that 86% of business leaders surveyed agreed that AI is becoming a strategic imperative, and further, 67% expect to increase their strategic AI investments (McKendrick 2021). These investments into AI are predicted to increase global economic output by \$13 trillion in 2029 (Fuhrman and Mooney 2021). Within the retailing sector, AI applications are becoming critical to augment both the retail customer experiences (e.g., smart mirrors, augmented reality smart phone apps) and the efficiency of retail operations (e.g., self-service checkouts, smart inventory systems) (Guha et al. 2021; Puntoni et al. 2021; Huang and Rust 2018, 2021). Moreover, in response to global COVID-19 lockdowns and restrictions, AI-assisted data processing allowed retailers to quickly pivot to digital channels from physical locations (Hong 2021). However, although there are successful cases of AI implementation (e.g., Braganza et al. 2021; Davenport et al. 2020; Park et al. 2021), many retailers still struggle to keep momentum going and, after an initial AI investment hype, they often face employees' resistance to change (Dua et al. 2020; Nuce 2020; Iansiti and Lakhani 2020). Reflecting the growing importance of AI investments, we investigate the conditions that enable retailers' successful AI embedding and retail employees' sustained usage of the technology in the long run.

While conventional diffusion models provide macro-level insights into the rate of technological adoption typically measured by market sales (Rogers 2003) or the initial introduction of a new object or process (Greer 2009; Phelps 2000), these models lack detailed explanation of how a new technology is used over time. Therefore, given the strategic role of AI and the size of the investments required to implement it effectively, managers and researchers need new models that identify and examine factors important for the successful embedding of this technology. Furthermore, these models must account for the critical role that employees might play in the contributing to the sustained usage of AI technologies to achieve the expected return on investment.

To elucidate these complex processes, we examine how AI is embedded in retail employees' ways of working, or their practices. Building on theories of practice originating from Bourdieu (1977) and Garfinkel and Sachs (1970) that situate mundane activities as important social acts, this article takes retail practices as the units of analysis, criti-

cally interrogating practice change caused by AI investments within formal organizations.

We utilize practice theories to reveal how practice participants (those who perform a practice, like store employees) and practice champions (those who intentionally disseminate a practice like senior executives, local retail managers, and trainers) (Dilling et al. 2013) introduce AI into the retail environment and foster its effective, long-term usage by embedding AI within existing retail practices. Retail practices are assumed not to be uniformly adopted across employee cohorts, but rather have “careers” (Shove et al. 2012), or idiosyncratic trajectories due to differences in understanding, and competences that may compel adaptation and innovation (Akaka et al. 2022). We show that employee responses to the introduction of AI (e.g., employee inertia, misperceived enablement, effort to adroitly use AI) are dependent on employees’ collaborative efforts in changing the existing practice and shaping a new practice.

Using a longitudinal, ethnographic approach that combines 74 stakeholder interviews involving retailers, business consultants, and technology providers with 14 on-site retail observations over a five-year period, we elucidate how the implementation of AI shocks and modifies existing retail practices. By tracing how these practices change, this article identifies the process that leads to the successful embedding and sustained usage of AI in retail, thus offering two substantive contributions. First, at the practice level, recognizing the dynamic nature of practices (e.g., Jarzabkowski and Bednarek 2018; Thomas et al. 2020), we identify practice co-evolution as a collaborative process of transferring, improving, and modifying practices among practice participants. While prior research on practice theoretics shows that practices diffuse and change over time (e.g., Godfrey, Price, and Lusch 2021; Akaka et al. 2021), this literature does not directly examine how the interaction between the different practice participants shapes practice change, nor does it recognize the importance of collaborative efforts between practice champions and participants. Addressing this gap, we reveal an orchestrated, collaborative, multi-stakeholder process that allows for intentional sustained practice change. Our findings reveal that practice co-evolution occurs in three phases consisting of co-envisioning how the proposed practice modification achieves organizational goals, co-adapting the co-envisioned practice to suit local retail conditions or context, and co-(re)aligning the co-adapted practice to ensure successful achievement of organizational goals. Further, our data indicate that practice co-evolution is recursive as co-(re)aligned practices often become newly co-envisioned practices. Therefore, retail practice co-evolution is a necessary collaborative process to ensure that AI investments produce organizational benefits as employees become active partners in modifying their routines.

Second, at the practice participant level, we identify a mechanism that facilitates practice co-evolution we term practice enablement. Practice enablement is the result of intentional knowledge transfers between participants that allow change in the meanings, competences, or materialities (i.e., practice elements) of routines. While the extant practice literature broadly identifies practices as the site of organizational knowing (e.g., Nicolini 2011), this literature remains silent about the mechanisms through which knowledge is embedded in a practice and transferred between practice participants. Our findings show how these knowledge transfers unfold in organizational practices, leading to practice enablement. Our data show that retail employees’ practices are disrupted by the initial AI embedding, as the materialities of their work are modified, thus requiring acquisition of new competences through knowledge transfer which is supported by the reframing of practice meanings. Moreover, retail employees are more willing to accept AI if it is introduced as a method of simplifying their workflow, reducing menial tasks, or enhancing job satisfaction. Findings further demon-

strate that practice enablement fosters employees’ successful sustained usage of AI, which leads to the practice spreading to other employees.

Tech Gone Wild: The Fraught Meanings and Altered Material Competences of Digital Practices in Wilderness Settings

EXTENDED ABSTRACT

What happens when someone needs to make a call but has no service? Or wants to enjoy peace and solitude but feels the pull of their phone drawing them back to work—or feels distracted by music from people nearby? These questions suggest tensions consumers face every day, pulling them between agentic and communal roles that are enabled or constrained by other actors, including personal technology, other consumer’s technology, and socially integrated technologies (Hoffman and Novak 2017). These tensions are exacerbated in wilderness settings, where the meanings of technology are fraught, and their material competences are uncertain.

The paradoxical nature of technology as enabling, empowering, emancipatory, or destructive, isolating and enslaving has been examined in the context of everyday consumption (Mick and Fournier 1998) and through the lens of technological ideologies (Kozinets 2007). Prior research also examines how the internet, the internet of things, and digital technologies alter and create new everyday consumer practices (Epp et al. 2014; Hoffman and Novak 2017), as well as how consumers preserve and purify the sacred experience of nature through negotiated meanings and materials (Arnould, Price, and Tierney 1998; Canniford and Shankar 2013). For example, Canniford and Shankar (2013) uncover purifying practices surfers use to preserve romantic experiences of nature despite profane intrusions of analog material technologies.

Extant research on reassembled technological practices has largely overlooked when digital technologies fail in their intended capabilities (e.g., no battery or service), which may be particularly important in wilderness places. Similarly, the social meanings of digital technologies, and how they conflict with romantic meanings of nature, remain underexamined. We therefore investigate what happens when technologies no longer work as expected, when consumers may or may not want them to work, and how other peoples’ technologies complicate the tensions between technological capabilities and meanings.

We contribute to practice theory by attending to whether and how digital elements, in concert with other non-digital actors, are reintegrated into wilderness practices around fraught meanings and material competences (Shove, Pantzar, and Watson 2012). We focus on the uncertain competences of technological materials, their interaction with the materials of nature, and how they affect consumer practice efficacy, which extends research on how shifting material competencies alter practice configurations (Epp and Price 2010; Epp et al. 2014; Godfrey, Price, and Lusch 2021; Phipps and Ozanne 2017). Further, we contribute to theory examining the conflicting meanings of romantic nature and technologically-integrated society, which has largely focused on minimizing the impact of technology in nature (Canniford and Shankar 2013), by revealing how consumers’ practices work to ensure and extend the capabilities of technology when those capabilities are fraught. In addition, we uncover the heterogenous and nuanced assemblages of technologies consumers integrate to collectively enable their wilderness practices.

Our investigation started by conducting semi-structured interviews with informants recruited as self-identified wilderness consumers, and with informants engaged at the intersection of social media practices and the wilderness. Informants identify a variety of wilderness experiences, most frequently describing foot travel along paths, but also including such varied pursuits as multi-day hunting expedi-

tions, and bathing in semi-developed natural hot springs. The authors continue to collect ethnographic and netnographic field data (Kozinets 2020).

Moving technologies from technology-aligned everyday lives into wilderness settings highlights the disruptions created by shifting meanings and material competencies of digital elements in these environments, providing novel insights into consumer technological practices. Our informants detail how meanings of technology become fraught as technologies enter the wilderness, highlighting themes of technology as an alien intruder, a psychological safety net, a tenuous tether to society, and a memory supplement. For example, Claire (30F) described the freedom she found when removed from cellular connectivity, and how she and her family physically remove phones from their teen-aged children so that children are forced to experience the wilderness, and adults' wilderness experiences are not invaded by the children's technology. However, Claire also carefully monitors and protects her phone's battery, as her phone provides her a sense of comfort and possible connection, even though the phone has lost the immediate capability of connecting her to society. For Claire, the phone is both an alien intruder and symbol of safety and connection.

Informants reveal how both digital technology and wilderness practices are altered and disrupted in the wilderness. Our informants weigh and value each technology before deciding if and how to integrate it into a wilderness consumption practice. While some refuse to bring technology; many others describe elaborate strategies to reconfigure technology and wilderness practices around the altered competencies of their digital objects. Multiple informants described ensuring the functionality of technology by sharing knowledge with group members about which specific locations (e.g. the north side of a particular tree) had enough cellular reception to send emergency text messages. Others highlight strategies designed to limit reliance on fraught digital technologies, including adopting analog technologies, limiting and distributing technologies amongst group members, and pre-emptively using technology to learn about specific wilderness places before embarking on a trip. For example, Pearl (33F) left her digital technology behind when embarking on a multiday backpacking trip. She provided analog safety equipment for her group, including paper maps, and information on poisonous hazards. Nonetheless, despite lacking cellular service, a few phones were distributed across the group, to take pictures that could be enjoyed after the trip and provide a sense of psychological security.

As digital technologies become increasingly ubiquitous, understanding how consumers resist or integrate technological assemblages into emergent practices is important for scholars and practitioners. By focusing on changing meanings and material competencies of digital technology, our research contributes to theorizing how technology reshapes consumer's beliefs and everyday practices (Canniford and Shankar 2013; Epp et al. 2014; Kozinets 2007; Mick and Fournier 1998; Rokka and Woermann 2015; Woermann 2012). Understanding how technological assemblages reshape wilderness practices is important for consumers, service providers, and policy makers interested in using technology to improve consumer welfare (Hoffman and Novak 2017; McGonigal 2011) and in combating the harmful cognitive, emotional, and social aspects of technology (Alter 2017; Castelo and Lehmann 2019; Lin et al. 2016; Ward et al. 2017).

Resisting Entropy: How Consumers and Objects Share the 'Work' Involved in Sustaining the Continued Use of Tech-Products

EXTENDED ABSTRACT

Prior research finds that despite promising to make life easier, many consumers feel their networks of tech-products often impose the opposite (Mick & Fournier, 1998; Thompson, 1994). A variety of explanations for this paradox have been offered. Some explanations foreground that the particular material affordances of a technology create difficulties (e.g., Cotte & Latour, 2009; Robinson & Arnould, 2020). Other explanations foreground the roles of sociocultural meanings and structures that condition consumers' expectations over their tech-products (e.g., Belk, et al., 2021; Del Bucchia et al., 2021; Kozinets, 2008). However, in such studies, the roles of nonhumans in making tech-products frustrating and this phenomena's relevance to continued use theories are underdeveloped.

Our project explores the roles that nonhumans play in fostering tech-product frustration and develops related insights to extend theories of continued use. First, although Robinson and Arnould (2020) emphasize the roles of technological infrastructures and device batteries in making consumers' lives difficult, there can be wider meshworks of nonhumans involved. For instance, a smartphone's uses can become frustrating due to cell tower outages; Wi-Fi router issues; an unpaid phone bill; a protective case with poor air ventilation; to a humid climate causing technical issues through moisture build-up. These nonhumans not only encompass technological objects (Hoffman and Novak, 2018) but also other objects that reside at different scales (Epp and Price, 2010; Franco et al., forthcoming). In this manner, tech-product difficulties can be thought about as emergent effects within consumption assemblages comprised of more or less stable arrangements of humans and nonhumans (Canniford and Bajde, 2015).

Second, continued use theories can be extended through explorations of consumer tech-frustration that go beyond focusing on ease-of-use perceptions (e.g., Canhoto & Arp, 2017; Shih & Venkatesh, 2004; Wood & Moreau, 2006). At best, through its sociocultural take on adoption, Belk et al.'s (2021) 'disenchanted enchantment' model implies that technologies see continued use so long as they satiate consumers' desires for wonderment. Thus, when a technology is normalized, enthusiasm wanes and continued use will cease when it is replaced by the next hyped-up iteration. Our project differs by focusing on the continued uses of tech-products after they lose their luster, irrespective of an upgrade looming in the horizon. In particular, we investigate consumers' everyday experiences of their tech-products as they potentially oscillate between being amenable partners and frustrating obstacles over time.

Guiding our theoretical approach is assemblage thinking (Canniford and Bajde, 2015). Specifically, we draw on philosopher Levi Bryant's (2014) version which features his metaphor of 'entropy' (cf. DeLanda, 2006; Latour, 2005). Bryant's entropy metaphor allows us to center our focus on a quality inherent to many assemblage studies – that the natural tendency of assemblages is to fall apart unless certain forms of 'work' occur which stably hold its objects in a particular arrangement.

The entropy metaphor suggests that both humans and nonhumans must do their share of 'work' in consumption assemblages to sustain a tech-product's continued uses. For instance, cell towers and Wi-Fi routers must exchange data, protective cases must let heat dissipate, and consumers must pay bills and limit their smartphone's exposure to humidity and moisture. Failures to execute these workshares by any of these entities will likely result in a smartphone becoming frustrating to use. In particular, consumers get frustrated when forced to 'shoulder'

extra work to force their tech-products to function as intended (e.g., routinely resetting a Wi-Fi router). As such, this idea of humans and nonhumans (un)successfully working together to resist entropy in consumption assemblages anchors the multi-agency theorization of continued use we develop in this project.

Consistent with prior assemblage thinking we adopt an inductive qualitative research approach that utilizes consumer and family interviews (e.g., Bettany et al. 2014; Epp et al. 2014; Huff & Cotte, 2016). Participants were asked to provide their accounts of the histories of various tech-products embedded into their lives. To structure our interview data, we follow Epp and Price (2010) by developing an ‘object biography’ for each tech-product studied. Each biography traces developments in a tech-product’s share of work across the various consumption assemblages it joins, its relations in these assemblages, and periods in which it has made life more difficult for its consumer(s). Altogether our object biographies capture the ups and downs in the histories of 101 tech-products spread out over 17 individual consumers and 4 families.

Our object biographies enable us to theorize four tech-product continued use ‘trajectories’. Each captures a different pattern in which a consumer variably shoulders or does not shoulder extra work in response to other entities failing/succeeding to do their expected workshares in consumption assemblages. The trajectories we identify are: (1) The *supported trajectory* – a consumer never needs to shoulder extra work throughout their tech-product’s history due to assemblage entities consistently executing their expected workshares; (2) The *decaying trajectory* – a consumer only shoulders extra work during the later years of their tech-product’s history due to assemblage entities incrementally failing to execute their expected workshares; (3) The *haggled trajectory* – a consumer oscillates back and forth multiple times between needing and not needing to shoulder extra work due to other assemblage entities variably failing and succeeding to execute their workshares; and (4) The *striving trajectory* – a consumer immediately shoulders extra work as other assemblage entities fail to execute their workshares not long after their tech-product’s initial uses are established.

We envision our project to contribute to ongoing work in three domains. First, we contribute to sociocultural perspectives on technology consumption by theorizing the roles of non-humans in shaping consumers’ paradoxical experiences of tech-products (e.g., Belk et al., 2021; Kozinets, 2008; Mick and Fournier, 1998; Robinson & Arnould, 2020). Second, we contribute to continued use scholarship by offering a multi-agency take on this topic and its ease-of-use concept (e.g., Canhoto & Arp, 2017; Shih & Venkatesh, 2004; Wood & Moreau, 2006). Last, we introduce Bryant’s (2014) version of assemblage thinking and his entropy metaphor to add to consumer research’s conceptual toolkit that has traditionally drawn from the seminal work of Deleuze and Guattari (1987), Latour (2005), and DeLanda (2006).

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Psychological Layers in the Consumption of Status Goods: Drivers, Forms, and Consequences

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Paper #1: Do stress and social-self threat increase the preference for status goods?

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Paper #2: Contentment and Satisfaction with Life as a Status Signal

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Paper #3: Gaining Less by Giving More: The Disempowering Nature of Luxury Gifts

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SESSION OVERVIEW

Understanding the consumption of luxury goods poses a long-standing question of research interest across disciplines. This is partly due to the puzzling nature of patterns in luxury consumption, which oftentimes deviate from classic economic choice theory. Exemplarily, a disproportionate amount of luxury spending can be observed in income-restrained groups, particularly (Banerjee & Duflo, 2007; Charles et al., 2009). Under certain conditions, luxury goods are even obtained on credit payment, resulting in exacerbated personal costs (Pettit & Sivanathan, 2011).

The predominant explanation of luxury consumption is the satisfaction of needs for social status and rank: luxury goods are consumed not only for their inherent value but as a mean of social signalling (Veblen, 1889). However, despite the appeal of this basic explanation, consumer research might be tempted to oversimplify a complex phenomenon. A recent perspective suggests that luxury consumption might be considerably more multi-faceted than previously assumed, and characterized by tensions between often opposing motives (Dubois et al., 2021). The authors propose a multi-level analysis, from drivers, over forms, to consequences of luxury consumption – each layer with several sub-facets. This special session spotlights three projects, each tackling an analytical level of luxury consumption in an innovative way.

Drivers: The first paper tests whether social-evaluative threat and its underlying psychobiological processes increase consumer's preferences for status-signalling brands and products. A preregistered experiment shows that social-evaluative threat was characterized by a distinct psychological and neurohormonal response. However, the study finds no evidence for an impact on consumer status preferences, controlling or not controlling for several theoretically motivated control variables.

Forms: The second paper examines whether life satisfaction can serve as an alternative status signal. Four experiments demonstrate that contentment and satisfaction with life enhances one's social sta-

tus through communicating higher prosociality. Moreover, the status signalling function of contentment is diminished in a commercial signalling context.

Consequences: The third paper shows a misprediction in luxury gift giving and its impact on relationships – while givers expect a positive impact on the relationship, recipients devalue the relationship because the luxury (vs. non-luxury) gift diminishes their sense of power.

A common theme in all three papers is that they apply friction to the conventional understanding of luxury consumption, and provide new building blocks theory development. Thereby they incite discussion not only by themselves but also in conjunction: “In a chronically stressed society, is it more attractive to signal social status via alternative signals such as contentment?” - “How do the drivers of luxury consumption and giving interrelate?” - “Are non-traditional luxury gifts conceivable?”.

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Do stress and social-self threat increase the preference for status goods?

EXTENDED ABSTRACT

Many accounts in consumer research would suggest that threats to the social-self, as well as their psychological consequences lead to compensatory consumption of conspicuous goods (Chaplin & John, 2007; Charles et al., 2009; Dommer et al., 2013; Gao et al., 2009; Kim & Gal, 2014; Lee & Shrum, 2012; Mandel et al., 2017; Pettit & Sivanathan, 2011; Sivanathan & Pettit, 2010). Such goods are acquired not for their intrinsic value, but as a signal of social status and others (Veblen, 1889). They are thought to protect the self against devaluation by compensating weaknesses via one's possessions (Pettit & Sivanathan, 2011).

On a psychobiological level, threats to the social-self have been linked to activation of the stress response system (‘Social-Self-Preservation Theory’; Dickerson et al., 2004; Dickerson & Kemeny, 2004; Gruenewald et al., 2004; Kirschbaum et al., 1993). This leads to somatic changes such as an increased heart rate and the release of the stress hormone cortisol (Joëls & Baram, 2009). Social-self-preservation theory could contribute to integrating consumer research on, both, stress and self-threat, and thereby lay the framework for more causal research in the research field demanded by some scholars (e.g. Shrum et al., 2021). However, accounts on consumer behaviour under stress make more heterogeneous predictions in com-

parison to the self-threat literature; for example, both, a consumption focus on necessities (Durante & Laran, 2016) or indulgent self-treats ('retail therapy'; Atalay & Meloy, 2011; Rick et al., 2014) have been suggested.

In the current study, we induced stressful self-threat via a well-established social-evaluative threat protocol and assessed status preferences with two previously established tasks of status preference (Nave et al., 2018). Following the predictions of threat literature, we preregistered the following hypothesis:

H: Individuals who are subjected to socio-evaluative threat will have a higher preference for high status products and that this effect will be related to the extent of the physiological stress response.

Methods

Sample

Our sampling strategy was based on a preregistered a priori power analysis for a medium sized effect and at least .80 statistical power (Erdfelder et al., 1996). We recruited and included 158 healthy, male participants in the experiment after an initial eligibility screening.

Social-evaluative threat

To experimentally induce social-evaluative threat, we used the group version of the Trier Social Stress Test (TSST-G; von Dawans et al., 2011). During the 20 min long TSST-G procedure, groups of four participants were asked to carry out a fictional job interview and a mental arithmetic task (deducting from a four-digit number in steps of 16) in front of an evaluative panel while being videotaped. The control group underwent a matched control procedure, in which each group of three to four participants was instructed to tell a story about a good friend.

Manipulation checks

As subjective measure of perceived stress, we asked participants to directly rate how stressed they are before during and after the stress induction. To measure the physiological stress response, we took saliva samples during baseline, during the TSST, as well as before and after the experimental tasks for a total of 6 measurements across the experiment. Saliva samples were analysed for the stress hormone cortisol. Baseline measurements were averaged and all measurements individually baseline-corrected.

Experimental tasks

We adapted two experimental tasks published by Nave et al. (2018) for our research questions. One task assessed participants' preferences between two different brands that differed in status but not quality associations (i.e., the brand preference task). The second task assessed how much participants liked products that were positioned by us to be either status-enhancing or quality-enhancing using advertisements (i.e., product evaluation task). Brands and ads were each selected based on an online pretest (N=197 and N=302).

Results

Were participants in the social-evaluative threat group more stressed?

Our preregistered measure of perceived stress was dynamically influenced by stress (main effect of experimental condition on perceived stress: $F(1, 151) = 25.51, p < .001, \text{partial_eta_sq} = 0.14$; measurement \times experimental condition interaction $F(2.63, 396.70) = 19.20, p < .001, \text{partial_eta_sq} = 0.11$). Similarly, salivary cortisol increased significantly in the stress group after the experimental manipulation compared to the control group, and this trend was sustained until the end of the experiment (main effect of experimental

condition on salivary cortisol: $F(1, 150) = 19.94, p < .001, \text{partial_eta_sq} = 0.12$; measurement \times experimental condition interaction $F(1.93, 288.99) = 30.06, p < .001, \text{partial_eta_sq} = 0.17$).

Did participants under social evaluative threat have an increased preference for high status brands?

Contrary to our predictions, our preregistered regression analysis showed no significant influence of the experimental condition or individual cortisol increase on preference for the higher status brand (all $p > .10$). The result held controlling for the collected trait measures and various robustness checks. Both experimental groups exhibited comparable preference levels. There were also no significant stress-related changes in perceived status associations (main effect of experimental condition: $F(1, 155) = 0.01, p = .941$; interaction experimental condition \times product: $F(4.47, 693.12) = 0.71, p = .598$) or brand quality perception (main effect of experimental condition: $F(1, 155) = 0.00, p = .953$; interaction experimental condition \times product: $F(5.26, 816.06) = 1.94, p = .082$).

Were products positioned to be high in status more liked under social evaluative threat?

Also contrary to our predictions, our preregistered analysis showed no attenuated influence of status positioning by experimental condition nor individual cortisol increase on product liking, controlling or not controlling for individual trait differences (all $p > .15$) and various robustness checks. The same pattern emerged for exploratory analyses using alternative dependent measures likelihood of buying and willingness-to-pay.

Discussion

In our preregistered experiment we found no evidence for an increased preference of status goods under self-threat, contradicting previous accounts in consumer research. However, our results clearly demonstrate that self-threat elicits a stress response on a psychological and physiological level, in alignment with social-self-preservation theory. This suggests that future research on consumption under self-threat should be informed by accounts on consumption under stress.

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Contentment and Satisfaction with Life as a Status Signal

EXTENDED ABSTRACT

Upon access of any social media platform, one is exposed to all sorts of happy moments of others, from brunch selfies with friends to bronzed legs on the beach. Indeed, social media platforms may give the impression that everyone is happy and satisfied with their lives. But why are people so obsessed with sharing their satisfaction with life online? In our research we aim to address this question by examining whether displaying life satisfaction online communicates social status to others. Hereby, we present life satisfaction display on social media as an alternative status signal.

Common characteristics of various status signaling products and activities are that they are scarce and admired resources, and they communicate power, prestige, and control over life to others (Belk, 2020). We propose that satisfaction and contentment with life (i.e., the cognitive component of happiness; Lyubomirsky et al., 2005), share these common characteristics with other status signals. Contentment and satisfaction with life is a) highly desired, if not the "end state toward which all activity is directed", b) might be perceived as a limited resource that is difficult to maximize (Klar & Giladi, 1999; Snyder & Lopez, 2002, p. 66), and c) may communicate control over life as it predicts success in various life outcomes from interpersonal relationships to career (Lyubomirsky et al., 2005). Yet, we do not expect contentment to signal status via communicating power or dominance. We propose contentment as a prestige-based status symbol (H1).

We suggest perceived prosociality as the driving force for this effect. Contentment is about being satisfied with one's resources, rather than asking for more (Rojas & Veenhoven, 2013). Therefore, it might communicate a broader understanding of the world and others rather than a self-centered way of thinking. Moreover, contentment is promoted by most moral teachings (e.g., Abrahamic religions and Buddhism) and predicts prosocial behavior (Aknin et al., 2012).

The evolutionary perspective considers moral behavior as a costly signal that advertises good genes and good parenting skills, thereby helping to attract mates and enhance social status (Miller, 2007). Experimental and field studies also support the notion that prosocial behavior is a means to attain and maintain prestige-based status (Griskevicius et al., 2010; Puska et al., 2018). Therefore, we expect that enhanced perceptions of prosociality due to contentment signaling will lead to higher perceived status (H2).

Finally, we examine the boundary conditions of the suggested status signaling framework. In this respect, we propose that the status signaling function of contentment diminishes in a commercial context due to decreased genuineness. More specifically, we expect that a commercial context (e.g., sponsored Instagram posts) will harm the status signaling effect of contentment, while it benefits the state of striving in prestige signaling (i.e. not being content, striving for better) (H3).

For this project, we have run four pre-registered experiments so far with a between-subjects design. In Study 1a, our goal was to examine whether people would rate a person to be higher in prestige when this person is described as content (vs. neutral) based on their social media posts. The results showed that participants inferred higher prestige from a focal person who makes social media posts indicating satisfaction with life and contentment, as opposed to neutral posts (see Appendix A). The results of Study 1a supported our main hypothesis. However, as contentment is a positive state of mind, it is possible that it yields positive evaluations regardless of anything specific to it. To rule out this alternative explanation, in Study 1b, our goal was to compare contentment with another positive state: calm-

ness. To do this, we presented participants with a focal person who was described as content or calm based on their social media posts. The findings showed that contentment communicates higher prestige than calmness (see Appendix B).

For the following studies, we decided to compare contentment with a stronger manipulation that is somewhat opposite of contentment but at the same time might signal status. For that purpose, we chose the state of striving, and compared being content and satisfied with life with not being content and striving for better. Therefore, in Study 2, we assigned participants to descriptions of a focal person who is either content or a striver based on social media posts. In addition to contentment, we also manipulated the focal person's income to a low or high level. As people tend to overestimate the link between life satisfaction and financial resources when evaluating others, we decided to control for income in this study (Diener & Oishi, 2000). Finally, we also had a control group where income information was not presented, and the focal person was described with neutral statements. The results showed a significant main effect of contentment manipulation on prestige ratings, confirming H1. Mean prestige was significantly higher in the content group than the striver group, while the mean prestige of the control group was in the middle. Interestingly, income did not have a main effect on prestige perceptions. Income and contentment did not have a significant interaction on prestige ratings. You may find the details of the findings in Appendix C.

Finally, in Study 3, we had a 2(content vs. striver) x 2(commercial vs. non-commercial) design to test if a commercial signaling context would diminish the status signaling effect of contentment (H3). Like the previous studies, we presented participants with social media posts communicating either contentment or striving. We manipulated the commercial nature of the signaling context via including (vs. not including) a "paid partnership" sign on the post. In this study, we measured perceived prosociality to examine whether prosociality judgments mediate the effect of contentment on perceived prestige (H2). The results showed that participants inferred higher prosociality from contentment, as opposed to striving, which in turn led to higher prestige perceptions. Moreover, a commercial context harmed the prestige signaling effect of contentment, while it benefited the striver group, confirming our expectations (See Appendix D).

In conclusion, four studies we have run so far support our main idea that contentment and satisfaction with life communicates higher social status to others. Additionally, we find that 1) contentment seems to signal prestige through prosociality, and 2) a commercial context diminishes the status signaling function of contentment while it enhances the status judgments for the state of striving. Therefore, this research contributes to the literature by proposing an alternative status signal. Moreover, we go beyond traditional status thinking, and present an example to status symbols that operates via prosociality, not via power and dominance.

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Gaining Less by Giving More: The Disempowering Nature of Luxury Gifts

EXTENDED ABSTRACT

Gift-giving is a major driver of luxury purchasing, and luxury gifts are often advocated as a means to build and enhance emotional connections, as a safe option, and as the ultimate compliment (Butt 2010; Deloitte 2015). Yet, the impact of such gifts on relationships between givers and recipients is underexplored. The present research posits a misprediction in this popular advice, suggesting that gifting luxury (vs. non-luxury) products may backfire.

Gift-givers aim at buying gifts that convey their understanding of the recipient's preferences and appreciation of the relationship, as doing so successfully can strengthen their bond (Belk and Coon 1993; Galak, Givi, and Williams 2016; Sherry Jr, McGrath, and Levy 1993). However, givers tend to mispredict how much the recipient will appreciate certain attributes of gifts, such as individualization (Steffel and Le Boeuf 2014) and socially responsible features (Cavanaugh, Gino, and Fitzsimons 2015; Galak et al. 2016). In this research, we hypothesize that luxury gift-givers mispredict recipients' feelings and self-perceptions.

Previous research has shown luxury consumption to make consumers feel powerful and superior (Nelissen and Meijers 2011; Rucker and Galinsky 2008). Accordingly, consumers often use luxury products to regain status and confidence when experiencing status threats (Gao, Wheeler, and Shiv 2009; Kim and Gal 2014; Ordabayeva and Chandon 2011; Rucker, Galinsky, and Dubois 2012). Similarly, consumers use luxury products to protect their relationships by deterring romantic rivals (Wang and Griskevicius 2014). However, recent studies have also shown that some consumers (e.g., undeserving) may feel less confident using luxury (Goor et al. 2020) and that the source of ownership may impact consumers' perceptions (Morewedge et al. 2021). This research contributes to this line of work by

examining how receiving a luxury gift can impact consumers' sense of power and relationship satisfaction.

We hypothesize that, in contrast to gift-givers' intentions, receiving luxury (vs. non-luxury) gifts can devalue a relationship. Recipients' lowered sense of power drives this effect: while luxury gifts might symbolize the givers' admiration of the receiver (i.e., they are intended to endow recipients with status), they might also symbolize the givers' asymmetrical control of valuable resources that enabled them to buy the gift (i.e., signal power) (Hays and Bendersky 2015; Magee and Galinsky 2008) – thereby making the receiver feel less powerful. To further investigate this psychological process, we posit that this negative effect is attenuated among gift recipients with high levels of psychological entitlement (Campbell et al. 2004) as they feel deserving of more resources and special treatment.

Four studies establish these ideas. In a pilot study, participants ($N=200$) were asked to recall the actual giving or receiving of a luxury gift. Supporting the hypothesized misperception, luxury gift-givers overestimated the sense of power ($M=4.77$, $SD=.87$) that recipients derived from receiving a luxury gift ($M=4.30$, $SD=1.03$, $t(197)=3.63$, $p<.001$).

In study 1, participants ($N=400$) were asked to imagine that they received (vs. gave) a luxury-brand (vs. non-luxury brand) gift and to rate their (vs. the receiver's) relationship satisfaction. A 2×2 ANOVA revealed no main effect of gift ($F(396)=.52$, $p=.479$) or gifting-position ($F(396)=.05$, $p=.827$), but a significant interaction ($F(396)=15.59$, $p<.001$). Gift-givers expected the receiver to be more satisfied with the luxury ($M=6.09$, $SD=.94$) than the non-luxury gift ($M=5.76$, $SD=1.02$, $t(396)=2.29$, $p=.023$), whereas receivers were actually less satisfied with the luxury ($M=5.66$, $SD=1.21$) than the non-luxury gift ($M=6.14$, $SD=.95$, $t(396)=-3.30$, $p=.001$). Accordingly, luxury gift-givers expected receivers to be more satisfied with the relationship than these indicated ($t(396)=2.95$, $p=.003$), and receivers were more satisfied with the non-luxury gift than givers expected ($t(396)=-2.64$, $p=.009$).

Study 2 examined the process underlying recipients' reduced relationship satisfaction. Participants ($N=400$) imagined that their new neighbor gave them a luxury (vs. non-luxury) salt and pepper shaker as a welcoming gift. They then indicated how satisfied they would feel with that relationship (4 items, $\alpha=.92$) and their sense of power (8 items; $\alpha=.87$; Dubois, Rucker, and Galinsky 2015). Receiving a luxury gift resulted in lower relationship satisfaction ($M=4.40$, $SD=1.22$) than did a non-luxury gift ($M=4.65$, $SD=1.18$; $F(399)=4.17$, $p=.036$). A mediation analysis confirmed that receivers' lower sense of power as a result of the luxury (vs. non-luxury) gift reduced relationship satisfaction ($a \times b=0.16$, $SE=.05$, $CI_{95\%}=[-.265, .049]$).

Study 3 tested our full conceptual model and ruled out status as an alternative explanation. We relied on the same gift context of study 2 and measured participants' ($N=300$) relationship satisfaction ($\alpha=.90$), sense of power ($\alpha=.82$), sense of status (5 items, $\alpha=.91$; Dubois, Rucker, and Galinsky 2015), and psychological entitlement (9 items, $\alpha=.81$; Campbell et al. 2004). The results revealed significant main effects of gift ($F(296)=16.00$, $p<.001$) and entitlement ($F(296)=20.05$, $p<.001$) on relationship satisfaction. Importantly, the gift \times entitlement interaction was marginally significant for relationship satisfaction ($F(296)=3.32$, $p=.070$). The luxury gift had a negative effect on sense of power ($F(298)=22.27$, $p<.001$) and a positive effect on sense of status ($F(298)=13.38$, $p<.001$). However, as expected, the gift \times entitlement interaction was significant for sense of power ($F(296)=4.18$, $p=.042$) but not for sense of status ($F(296)=.38$, $p=.536$). A moderated mediation analysis (PROCESS model 7) revealed significant mediation by power ($a \times b=.03$, $SE=.02$,

$CI_{95\%}=[.002, .069]$) but not status ($a \times b=-.02$, $SE=.03$, $CI_{95\%}=[-.069, .038]$). The indirect effect of psychological entitlement on relationship satisfaction through sense of power was significant in the luxury ($a \times b=.17$, $SE=.05$, $CI_{95\%}=[.072, .258]$) but not in the non-luxury condition ($a \times b=.05$, $SE=.03$, $CI_{95\%}=[-.007, .111]$).

Our work adds to theory and practice by uncovering unpredicted consequences of luxury gift-giving. While prior research has shown the negative effects of lacking status on personal relationships (Anicich et al. 2016; Fast, Halevy, and Galinsky 2012), our work reveals a common setting in which feelings of status and power move in opposite directions and demonstrates the detrimental effects of undermining power through gift exchange.

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Field Experiments: A Practical Tutorial

Chairs: Stephen Anderson, University of Texas at Austin, USA

Rajesh Chandy, London Business School, UK

Organized by: Praveen K. Kopalle, VP-External Relations, ISMS, INFORMS Society for Marketing Science, USA

SESSION OVERVIEW

This tutorial will address the application of field experiments in consumer research. Among other benefits, field experiments offer the potential to study the many consumers who do not participate in lab studies or in online panels, and the many consumption phenomena that cannot be easily captured in controlled settings.

The emphasis of this session will be on the practical aspects of planning and executing field experiments. Stephen Anderson and Rajesh Chandy will initiate the session with a 30-40 minute discussion of a toolkit for conducting field experiments. The discussion will be applied in nature, and will use examples of successful and failed field experiments to illustrate key points. This discussion will be followed by an interactive discussion (facilitated by a group of current and former editors or AEs of leading consumer research journals) of ways to apply the toolkit to participants' (especially doctoral students') research questions.

Below is a brief outline of the session. Note that although we will acknowledge the many possibilities for experimentation in digital contexts, the focus of the session will be on implementing interventions in the physical world. In order to keep the discussion manageable, we will go deeper into the planning and execution aspects of field experiments, and only briefly discuss analysis issues and technical details. We will provide a list of useful reference materials, including papers in marketing (e.g., reviews by Gneezy 2017; Lambrecht and Tucker 2015; Simester 2017) and in related areas (Gerber and Green 2012; Glennerster and Takavarasha 2013; Duflo, Glennerster, and Kremer 2007; Karlan and Appel 2016; Shadish, Cook, and Campbell 2002) for those interested in further insights.

Introduction:

- Why do field experiments?
- Why aren't there more field experiments in marketing?
- Why is now a good time to do field experiments?

What to do before you get started:

- Heavy Hammer: Picking phenomena that are big enough to rise above noise in the real world
- Theory of change, mechanism
- Finding the right field partners
- The importance of field immersion, pilots
- The reality of power calculations
- "You only get one shot": Reducing contextual risk, partner risk, and execution risk
- Diversification

Getting started:

- What to do in the baseline, midline, and endline?
- Randomization approaches
 - Oversubscription
 - Randomized phase in
 - Encouragement designs
- Stratification and clustering
- Anticipating Hawthorne, John Henry effects, spillovers, etc.

What to do once you have started:

- How to check if the randomization "worked" (and what to do if it did not?)
- Running high frequency data checks
- Maximizing compliance, minimizing attrition

What to do when things don't go according to plan

Analysis:

- Intention to treat vs. Average treatment on treated

Ethics in field experiments

Publishing field experiments

- Lab experiments, lab in the field, triangulation
- Lessons from experience

Useful references

The Psychology of Price: Advances in Pricing and Payment Perceptions in Consumer Decision Making

Chair: Mr. Junha Kim

Paper #1: The Fees Paradox

Ms. Maren Hoff, Columbia Business School, USA
Dr. Vicki Morwitz, Columbia University, USA

Paper #2: \$29.99 or \$19.99 - \$29.99? When Does Range Pricing Backfires?

Mr. Junha Kim, The Ohio State University, USA
Dr. Selin Malkoc, The Ohio State University, USA
Ms. Lily Johnson, The Ohio State University, USA

Paper #3: The Upside of Incompetence: When Low Brand Competence Signals Low Prices

Dr. Ryan Hamilton, Emory University, USA
Dr. Morgan Ward, Emory University, USA
Dr. Kathleen Vohs, University of Minnesota, USA
Dr. Karen Anne Wallach, University of Alabama – Huntsville, USA

Paper #4: “Nothing Matters”: A “0%” Option Increases Consumers’ Voluntary Payments

Ms. Shirley Bluvstein Netter, New York University, USA
Dr. Priya Raghuram, New York University, USA

SESSION OVERVIEW

Pricing is one of the most important tools in a marketing manager’s toolbox (Kotler and Armstrong 2010). Unsurprisingly, extant research studied the effectiveness of many pricing strategies (e.g., Gneezy et al., 2012; Santana, Dallas, and Morwitz 2020), examining how they influence consumer’s attitude toward prices and brands, price perceptions, and purchase intentions. Building on this extant literature, papers in this session provide unique insights about the nuances of existing pricing strategies and issues, as well as effectiveness of more contemporary strategies. Theoretically, they shed light onto previously unexplored role of affective mispredictions, new drivers of price perceptions, novel consequences of framing.

The first paper examines the consequences of optional surcharges. The authors propose and demonstrate that consumers prefer optional fees over mandatory fees and over all-inclusive pricing at the decision stage, but actually dislike optional fees more when they have to pay for them. The authors demonstrate that this effect is driven by a misprediction of the pain of payment that comes with optional fees.

The second paper examines the effectiveness of the increasingly popular range pricing: retailers’ tendency to present prices as a range rather than a specific price point. The authors demonstrate that when final price falls on the higher end of the range, consumers perceive it to be unfair and are less willing to make a purchase, compared to seeing the same specific price from the beginning. The effect is mitigated when retailers provide a justification for a high price, when price differences are based on vertical differentiation, and when the two end prices of a range share a left-digit.

The third paper examines the unintended downside of a brand appearing competent on its price perceptions. The authors demonstrate that when consumers believe a brand to be competent, an otherwise desirable quality, they perceive its prices to be higher and shy away from making a purchase. Further, consumers consider themselves to be “savvy” when shopping at low-competence retailers, which accounts for their preference for them over competent ones.

Finally, the fourth paper focuses on the services industry and investigates consumers tipping propensity and amount based on how the option of not leaving a tip is described (‘No Tip’ vs. 0%). The authors demonstrate that replacing the default “No Tip” with 0% nudges consumers to tip. Further they find that in the presence of a “No Tip” option, providing a non- zero option with 0% leads to higher tips. The authors demonstrate that the effect is driven by image concerns.

Taken together, the papers provide theoretical advances in different, yet related areas like tipping decisions (paper 4), pricing preference (paper 1), price perceptions (papers 2 & 3), and brand perception (paper 3), while studying the foundations of perceptual (papers 2 & 3), affective (paper 1), and cognitive (paper 4) processes. All four papers are in advanced stages, having collected data from several studies—both field and lab. We expect this session to attract a wide audience as it covers a wide range of theoretical and substantial domains.

The Fees Paradox

EXTENDED ABSTRACT

Consumers are increasingly subject to fees, often without knowing why they are charged. This fee growth is due partly to an increasingly complex and underregulated marketplace. In addition to annoying consumers, fees transfer wealth from consumers’ wallets to wealthy corporations and individuals (The New York Times 2022; Fergus 2018).

Aware of rising public concerns, many industries have adopted a la carte pricing, where consumers can choose options and associated surcharges (The Wall Street Journal 2021). For example, at many hotels, guests can pay surcharges for early check-in or late check-out, for using the pool, Wi-Fi, and gym, and for breakfast. Other companies instead use all-inclusive pricing or assess mandatory fees (e.g., “resort fees”). We investigate consumers’ preference for the freedom to choose options and associated fees.

While many papers have examined consumer reactions to mandatory surcharges (Abraham and Hamilton 2018; Blake et al. 2021; Greenleaf et al. 2016), few have examined reactions to optional surcharges (e.g., Santana, Dallas, and Morwitz 2020). Typically, both pricing strategies are compared with all-inclusive pricing. To the best of our knowledge, no work has compared optional and mandatory fees, and little work has looked at consumers’ stated preferences for surcharge format (i.e., evaluation mode). One notable exception is White, Sussman, and Beckett (2019), who examined consumer preference for the level of details in fee disclosures. Instead, we examine consumer preference for the type of fee structure (i.e., optional vs. mandatory).

While mandatory fees must be paid, optional fees allow consumers to choose the options they want. Consumers value the freedom of choice and react negatively when choices are restricted (Argouslidis et al. 2018; Markus and Schwartz 2010). Thus, we posit that consumers will state a preference for optional over mandatory fees in evaluation mode. However, that stated preference may not accurately reflect reactions to a fee structure in purchase contexts (i.e., reaction mode).

Consumers often mispredict their preferences and affective states (Meyvis, Ratner, and Levav 2010; Wilson and Gilbert 2003).

In particular, they tend to mispredict the complexity of their emotional experiences (Wilson and Gilbert 2003). In contrast to mandatory fees, optional surcharges are linked with incurred benefits which may evoke pain of payment (Prelec and Loewenstein 1998). We therefore argue that in evaluation mode, consumers will overestimate the benefit of choosing optional fees and underestimate the pain that comes with paying for them when in reaction mode.

In four studies, we tested our hypotheses regarding consumers' preference for optional fees and misprediction of the associated pain of payment.

Studies 1a and 1b examined preferences for pricing structures for hotels in both evaluation (study 1a) and reaction modes (1b). In study 1a, participants (N=100) saw three pricing structures (all-inclusive, mandatory fees, optional fees). The all-inclusive pricing was \$250/night, which included the room and access to all amenities (pool, beach, gym, and high-speed Wi-Fi). The mandatory fee pricing was \$200/night for the room and a mandatory resort fee of \$50/night, which included access to all the same amenities. The optional fee pricing was \$200/night for the room; additional fees applied for amenities used by the guest: \$15/night pool access, \$15/night beach access, \$10/night gym access, \$10/night high-speed Wi-Fi access.

In evaluation mode, participations were indifferent between the optional fee (50%) and all-inclusive (46%) options ($\chi^2(1)=.10$, $p=.758$). Participants were significantly more likely to choose optional over mandatory fees (5%) ($\chi^2(1)=23.64$, $p<.001$). Similarly, while participants' attitude towards optional fees ($M=5.22$) did not differ from all-inclusive ($M = 5.36$; $t(297)=-.53$, $p=.597$), it was higher than for mandatory fees ($M = 3.05$; $t(297)=8.20$, $p<.001$).

In study 1b, which examined reaction mode, participants (N=343) imagined wanting to book the hotel and use the available amenities. They were randomly assigned to one of the three pricing structures. Contrary to study 1a, participants' attitude was significantly lower for optional ($M=3.83$) than for mandatory fees ($M=4.38$; $t(336)=-2.71$, $p=.007$) and all-inclusive pricing ($M=4.94$; $t(336)=-5.47$, $p<.001$). Thus, while consumers prefer optional fees in evaluation mode, they dislike them in reaction mode. We replicated these same findings in studies 2a and 2b using an amusement park context.

Studies 3a and 3b examined consumers' preferences for optional versus mandatory banking services such as overdraft and ATM fees. In study 3a (N=100) in evaluation mode, participants were significantly more likely to choose optional (60%) over mandatory fees (40%) ($\chi^2(1)=4.00$, $p=.046$). Participants also had a more favorable (though not significantly) attitude towards optional ($M=3.99$) than towards mandatory fees ($M=3.54$; $t(200)=1.43$, $p=.156$). In study 3b, participants (N=300) in reaction mode instead had less favorable attitudes towards optional ($M=3.08$) than mandatory fees ($M = 3.90$; $t(298)=-4.53$, $p<.001$).

In study 4, participants were assigned to evaluation followed by reaction or reaction-only mode. Thus, while some first compared the three pricing structures, others directly assessed a randomly assigned pricing structure. Replicating our prior findings, in evaluation+reaction mode, participants preferred optional ($M=4.66$) over mandatory fees ($M=3.17$; $t(559) 6.85$, $p<.001$).

However, this preference reversed in reaction-only mode ($M_{\text{optional}}=2.57$, $M_{\text{mandatory}} = 3.20$; $t(559)=-3.13$, $p=.002$). This preference reversal was driven by mispredictions in pain of payment: In evaluation+reaction mode optional fees elicited less pain of payment ($M=44.10$) than mandatory fees ($M=68.32$; indirect effect: 1.12, $CI_{95\%}=[.744, 1.504]$), while the reverse happened in reaction-only mode ($M_{\text{optional}}=73.74$, $M_{\text{mandatory}}=64.91$; indirect effect: $-.43$, $CI_{95\%}=[-.786, -.076]$). Importantly, optional fees were liked more

in evaluation+reaction mode ($M=4.66$) than in reaction-only mode ($M=2.57$). This difference was driven by pain of payment (indirect effect: -1.41 , $CI_{95\%} [-1.811, -1.015]$), which also reversed with mode (midpoint: 50): $M_{\text{evaluation}} = 44.10$, $M_{\text{reaction}} = 73.74$. This finding suggests that the pain of payment associated with optional fees is one of the rare instances where consumers make inaccurate predictions about which side of the neutral point their emotional experience falls (Wilson and Gilbert 2003).

Our work adds to theory and practice by uncovering the paradox of fees. While consumers like optional fees when evaluating them, they dislike them in payment contexts. This effect is driven by a misprediction of the pain of payment that comes with fees.

\$29.99 or \$19.99 - \$29.99? When Does Range Pricing Backfire?

EXTENDED ABSTRACT

Consumers are exposed to an overwhelming number of options and prices for each purchase they make. An increasingly prevalent pricing practice is giving consumers a price range (e.g., \$19.99–\$29.99) instead of a specific price point (e.g., \$27.99), leaving the final price unknown until consumers configure specific options for a product (e.g., color, size, etc.). In the current research, we examine how the presenting a price as a point or a range can impact perceived price fairness perceptions and purchase intentions. We propose that range pricing can hurt brands when the price consumers end up getting is on the higher end of the range. We argue that this is because the lower end of the range serves as a natural and optimistic reference price, and thus prices deviating from it feel less fair and reasonable, resulting in lower purchase intention. Five experiments provide converging evidence that supports these predictions.

In study 1 (n = 312 UG's) followed a 2 (pricing tactic: point vs. range) x 2 (ultimate price: low vs. high) between-subject design, where participants imagined shopping for a sweatshirt. Participants first saw the product and price – either as a range (\$31.49 – \$47.95) or a price point (\$31.49 or \$47.95). Next, participants choose the size and color of the product and subsequently learned the final price they would pay. They indicated purchase intention. Results showed that when the ultimate price was low, using a point ($M = 3.55$) or range pricing ($M = 3.55$) did not matter ($p = .885$). However, when the ultimate price was high, range pricing ($M = 2.66$) significantly decreased purchase intentions compared to point pricing ($M = 3.35$; $p = .009$).

Study 2 (n = 606 Mturkers) tested whether the effect was an artifact of using the highest point of the range in a 2 (pricing: point vs. range) x 3 (price: low vs. high vs. highest) between-subject design, again using sweatshirts. The procedure was the same as in study 1, except for the additional of \$44.95 as high (but not highest) price. As expected, the purchase intention for the low price was uninfluenced by the pricing tactic used ($M_{\text{point}} = 3.60$; $M_{\text{range}} = 3.83$; $p = .365$), but range pricing decreased intentions for both high and highest ($M_{\text{point}} = 3.28$; $M_{\text{range}} = 2.98$; $p = .094$). Once again, price fairness perception followed the same pattern and mediated the results.

Study 3 (n = 251 UG's) tested whether ranges utilizing the same left digit would mitigate the effect using a 3 (pricing tactic: point vs. range_same left-digit vs. range_different left-digit) x 2 (ultimate price: low vs. high) between-subject design using gloves. As crossing a threshold magnifies the perceived difference between the two prices (Kim et al., forthcoming), we predict that range pricing would be mitigated when its ends shared the same left-digit. In the point pricing and the range_same left digit conditions, the prices were \$20.99 and \$29.99. In the different left-digit condition, the prices

were \$19.99 and \$28.99. As expected, when the price was high, point pricing led to higher purchase intentions ($M = 3.29$) than different left-digit range ($M = 2.51$; $p = .028$), but no higher purchase intention than the same left-digit condition ($M = 3.02$; $p = .462$). When price was low, the purchase intentions between point ($M = 3.12$) and same left-digit range ($M = 3.51$; $p = .262$) did not differ. Consistent with threshold-crossing effect, the low price that had a smaller left digit had the highest purchase intent ($M = 4.10$). Once again, fairness perceptions followed the same pattern and mediated the results.

Study 4 ($n = 274$ UG's) tests the price fairness process by providing a justification for the high price. In a 2 (pricing tactic: point vs. range) \times 2 (justification: absent vs. present) between-subject design, participants configured color and size for a pair of winter gloves. The range was given as \$19.99 – \$28.99, but the final price was always \$28.99. Further, half the participants saw that their chosen (high price) configuration was a “popular item.” We find that in the point condition, the justification for the price did not influence purchase intentions ($M_{\text{absent}} = 3.06$ vs. $M_{\text{present}} = 3.13$, $p = .774$). However, intentions were higher when participants receiving the high end of the price range was justified ($M_{\text{absent}} = 2.77$ vs. $M_{\text{present}} = 3.39$, $p = .019$). Once again, fairness perceptions followed the same pattern and mediated the results.

Study 5 ($n = 461$) tests whether the range pricing would also backfire when consumers receive a high price in a vertically (vs. horizontally) differentiated product category. As higher prices are inherently justified under vertical differentiation, we expected the effect to be eliminated. In a 2 (pricing: point vs. range) \times 2 (price: low vs. high) \times 2 (differentiation: horizontal vs. vertical) between-subject design, undergraduate participants made a choice for a blender. In the horizontal differentiation condition, the differentiating attribute was the color (black vs. white), while performance was the differentiating attribute (700 Watts with 14 oz cup vs. 900 Watts with 16 oz cup) in the vertical differentiation condition. As expected, we replicated our findings in the horizontal differentiation condition: when the price was low, pricing tactic did not matter ($M_{\text{point}} = 4.26$; $M_{\text{range}} = 4.53$; $p = .330$), but with high prices range pricing backfired ($M_{\text{point}} = 4.28$; $M_{\text{range}} = 3.74$; $p = .045$). This effect was eliminated in the vertical differentiation condition, such that pricing tactic did not produce a reliable difference in either price point (all p 's $> .05$).

In sum, this research demonstrates that a range pricing backfires when consumers get a high price because the price is perceived to be less fair, but carefully setting the range so that both ends of a range be within a threshold, providing a justification for the high price, or setting high price for the vertically differentiated product mitigates this effect.

The Upside of Incompetence: When Low Brand Competence Signals Low Prices

EXTENDED ABSTRACT

Consumers tend to prefer competent brands. Prior research confirms that brands that project competence are appealing to consumers for several reasons: one view is that brands serve as relationship partners (Fournier 1998), and more competent brands, which are typically dependable and consistent, make better partners than less competent brands (Aaker 1997; Aaker, Garbinsky and Vohs 2012). A complementary view of brands is that they serve as a reflection of the self (Escalas and Bettman 2005; Kirmani 2009). High competence brands seem to reflect well on consumers, leading to increased perceived competence of people who associate themselves with high competence brands (Fennis and Pruyn 2007).

But exceptions to this general rule exist. Some retailer brands, in particular, seem to be positioned to communicate *low* competence. One iconic example is Crazy Eddie, a consumer electronics chain in and around New York City, known for its gonzo radio and television ads in the 1980s. In the ads, a frenetic, fast-talking character claiming to be the store's eponymous owner, promoted the store's low prices using the tagline, “Our prices are insa-a-a-ne!” An earlier example is Madman Muntz, a used car salesman in the 1950s, who adopted a lunatic persona in his ads, staring wide-eyed into the camera, wearing a crumpled hat, and with one hand hidden in his coat, Napoleon-style. His advertising featured slogans that emphasized his zany disregard for competent pricing: “He buys ‘em high and sells ‘em low!” and “I wanna give ‘em away—but Mrs. Muntz won't let me. She's crazy!”.

Other retailers signal low competence in more subtle ways. Some retailers deliberately keep their stores cluttered and messy (Underhill 2015). Off-price retailers, including TJ Maxx, Marshalls, Burlington, and Ross, rely on a “treasure hunting” appeal to customers: the feeling that with some effort and luck, skilled customers will be able to sort through the racks and bins of products and outsmart the retailer by finding the occasional deeply discounted premium branded item (Kahn 2018)—perhaps one the store has unwittingly under-valued. While this strategy has been widely praised by retailing experts (e.g., Kowitt 2014; Pasquarelli 2016), from the customers' perspective, the cluttered displays and broad, shallow, inconsistent assortments may also signal low competence.

We contend that positioning a retailer brand as low competence in this way may serve as a signal to customers that they have an advantage in finding low prices at that retailer (i.e., that they will be able to take advantage of the retailer on price; Gelber 2008). We find that retailer brands can signal low competence in many different ways, and that these low-competence signals cause consumers to assume the retailer will have lower prices overall at the retailer. We argue that low competence signals an inferior competitive position in the marketplace, eroding a firm's position to demand premium prices. Consumers may expect these firms to have to offer lower prices in compensation for the lower competence they offer.

We test these predictions in a series of 4 studies. In the first study, we measured the perceptions of sample of US-based consumers of the perceived competence of 20 national retailer brands, and, from a separate sample, the perceived price image of those stores. The results revealed a significant relationship ($F(1,2191) = 65.72$; $p < .0001$) between competence ratings and price image ratings, such that stores that were perceived to be the most competent (Neiman Marcus, Urban Outfitters, Banana Republic, Macy's, Best Buy) were also seen as having the highest prices, on average. Those with the lowest competence ratings (TJ Maxx, Ross, Aldi, IKEA, Kohls) also tended to have among the lowest price images.

In the remaining studies, we manipulated brand competence in a variety of ways in order to converge on the brand competence construct. In study 2, participants were presented with four different vignettes, in which retailers were described in ways that indicated either high or low competence: the accuracy of online orders; ease of return policy; helpfulness of employees; and clutter of merchandise displays. In every case, participants anticipated that the stores described as less competent would have lower prices than the stores described as more competent ($F(1,276) = 177.4$; $p < .0001$). This difference was mediated by the perceived competence ratings collected after each vignette (95% CI = [-2.12, -1.58]).

Study 3 took a page from the Crazy Eddie's playbook. Participants were shown five kitchen appliances, along with descriptions and prices. In one condition, the store was called Leo's Appliance

Emporium. In the other condition, the store was called Crazy Leo's Appliance Emporium, and a crazy-face emoji was added to the logo. Participants evaluated the prices at Crazy Leo's to be lower than the prices at Leo's ($F(1,285) = 5.56; p = .019$). This difference was also mediated by perceived competence (95% CI = [-.382, -.0249]).

Study 4 manipulated competence by discounting luxury (vs. non-luxury) items as a signal of low competence. Participants in Study 4 were presented with a list of six items sold by a cruise line, 3 luxury (lobster dinner, champagne, 3-course steakhouse dinner) and 3 non-luxury (beach towel, tote bag, sweatshirt). Participants were told the prices for all six items offered by this cruise line, as well as the average price for competitors. The prices were paired across these two types of items, such that one of the luxury items and one of the non-luxury items had the same price (e.g., the lobster dinner and the beach towel were both \$45). In one condition, the three luxury items were substantially discounted. In the other condition, the three non-luxury items were discounted by the same amount. Participants evaluated the perceived price image of the cruise line and completed Aaker's (1997) 42-item brand personality scale. Results indicated that the cruise line that had discounted the luxury items was seen as having a lower price image ($F(1,202) = 5.31; p < .01$), and that the competence trait mediated the relationship (95% CI = [.01, .17]).

“Nothing Matters”: A “0%” Option Increases Consumers' Voluntary Payments

EXTENDED ABSTRACT

A considerable amount of research in consumer behavior has focused on voluntary market payments in the form of elective and participative pricing, such as pay-what-you-want pricing (e.g., PWYW, Kim, Natter and Spann 2009). However, this literature has largely neglected one of the largest voluntary payment economies: tipping (but see Bluvstein Netter and Raghuram, 2021). The importance of exploring the voluntary payments economy from a consumer behavior perspective is increasing as the service industry continues to undergo a technological transformation. Specifically, the service economy has moved in the last few years towards greater use of electronic payment collection systems (point-of sale [POS] systems, Kugel 2019; Stout 2015). These systems *explicitly* include requests as part of the transaction, typically providing several numerical options of tip amounts (e.g., 10%, 15%, and 20%), nudging the consumer to choose one of the presented options. Today the tip economy is a multi-billion-dollar market driven not only by older contexts where tipping is common (e.g., restaurants, taxis, personal care), but by new sectors including the ride share industry (e.g., Uber/Lyft) which is expected to reach market volume of \$285 billion by 2030 (Huston 2017), the delivery app market which is expected to hit \$161.74 billion by 2023 (Adroit Market Research 2019), and the coffee shop industry which is expected to reach \$244.4 billion by 2027 (Maximize 2021).

Extensive research on response alternatives in cognitive aspects of survey methodology (e.g., Schwarz et al., 1985), and default options in behavioral economics (Andreoni, Rao and Trachtman, 2018, Gneezy et al., 2010, Haggag and Paci, 2014), shows that the manner in which response alternatives are constructed influences consumers' responses. Building on these insights, we apply them to show the effect of the choice of tip options on consumers' voluntary payments in the form of tipping decisions. Our focus is on framing the *opt-out option*.

The literature in psychology, behavioral economics and consumer behavior has referred to the number zero as equivalent to other verbal empty sets (free, none, nothing, absence).

However, recent findings show that the number zero may be perceived differently from other verbal descriptions of it (Zaks-Ohayon, Pinhas, and Tzelgov 2021a, 2021b).

Bridging the literature of the cognitive aspects of survey methodology, which argues that respondents use the information available to them to construct a response when they do not have access to memory-based information, and the literature of pro-social voluntary payments (e.g., pay-what-you-want, and charitable giving), together with the literature on numerical cognition that has implicated the special properties of the number 0, and applying it to the rich domain of tipping choices in the new economy, we show that a) counter-intuitively, including 0% (vs. the dominant opt out option in the marketplace “No Tip”) in a tipping choice set leads to higher tipping; b) this is due to the higher likelihood to tip when it is the only opt-out option present (Studies 1-2, 4); and c) due to higher tip amounts when a “No Tip” option is also present in the set (Studies 3-4). The effects are mediated by image concern motives (Studies 1-2, 4).

A pilot study examines perceptions in a non-POS environment (paper receipt), showing that those who actively leave “0” on a bill receipt are perceived more negatively than those who use non-numerical symbols to opt out from tipping (e.g., crossing the tip line) and provides initial evidence that tipping “0” may lead to a negative image. The rest of the studies use POS environment to examine the effect.

Study 1 compares the numerical 0% tip option with “No tip” and other non-numerical representations of zero and shows the mediating role of image concerns. Study 2 shows that the effect is robust when the mean range of options is lower or higher. Study 3, conducted in the field, manipulates the mean range of tip options and the presence of 0% in addition to “No Tip.” It provides initial evidence that “0%” may not be included as a source of information used to construct a tip judgment. Finally, Study 4 demonstrates the unique effect of 0% compared to any other number, using the next smallest whole number on the mental number line: 1%, and examines the interactive effects of the presence of 0% with or without a “No Tip” option.

These findings contribute to the prior literature on tipping in behavioral economics, and the hospitality and tourism industry. They also contribute to survey methodology and numerical cognition, and further add to the literature on choice architecture and voluntary payments, which has primarily focused on the relatively uncommon instances of pay-what-you-want pricing.

Managerially the results have practical implications for businesses in the growing service industry.

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Algorithms? Robots? Virtual Influencers?: How Algorithms in Different Forms Impact Consumer Decision Making in Service Contexts

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Paper #1: Conversational AI Design: How Initiation Modalities Shape Consumer Experience & Firm Perception

Christian Hildebrand, University of St. Gallen, Switzerland

Donna Hoffman, George Washington University, USA

Tom Novak, George Washington University, USA

Paper #2: I Do Not Want What You Have! The Impact of Mind Perception On Engagement With AI Influencers

Sakshi Korde, Wilfrid Laurier University, Canada

Ammara Mahmood, Wilfrid Laurier University, Canada

Paper #3: When Art Meets Artificial Intelligence: Consumers' Valuation of Creative Products Made By AI

Ilyung Cheong, KAIST, South Korea

Xuying Leo, KAIST, South Korea

Young Eun Huh, KAIST, South Korea

Stefano Puntoni, Erasmus University Rotterdam, Netherlands

Paper #4: The Effect of Production Mode (Human- Vs. Robot-Made) On Consumer Food Calorie Estimation and Choice

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benign envy and lower engagement outcomes (e.g., willingness to follow and share).

The third paper investigates consumers' valuation of creative products made by AI- vs. human. Across six studies, the authors find that the lower valuation of AI- (vs. human-) created products is driven by the perception that AI invests less labor than humans when creating products. The effect mitigates when consumers are informed about the amount of labor invested by AI.

The last paper examines in four studies how robot vs. human producers affects consumers' food calorie estimation and choice. The authors find that robots (vs. human) producers are perceived to be lower in mental capacity and tend to deliver less extreme products. Consequently, unhealthy food is perceived to contain more calories if produced by humans (vs. robots). The producer effect is weaker for healthy food.

Our session addresses the conference theme of *Together* by incorporating papers focusing on various forms of AI in service contexts (voice assistants, virtual influencers, and robot producers). It also contributes to the conference by providing new insights into unexplored effects of algorithms service providers on consumer decision making. We believe the session will appeal to consumer researchers who are interested in consumer algorithm aversions, algorithms-human interactions, and AI service providers.

SESSION OVERVIEW

Advances in artificial intelligence (AI) are revolutionizing the service industry. Machines, robots, and algorithms are taking over service jobs that are typically done by humans (e.g., customer service, retail, manufacturing). While these AI service providers are all based on the technology of AI and machine learning, the eventual form of AI (e.g., voice assistants, robot producers, virtual influencers) could substantially affect consumer decision making in different service contexts.

The proposed session brings together four papers that answer two key questions: (1) how consumers perceive AI service providers of different forms? and (2) how these perceptions of AI service providers affect consumer decision-making? In the first paper, consumers form their perception of AI service providers based on their interaction with the provider, whereas in the other three papers people draw on their lay beliefs of AI (vs. human) to assess AI service providers. These perceptions subsequently impact consumer decision making in various contexts (e.g., voice assistant interactions, food selection, creative product evaluation, and engagement with influencers). Furthermore, AI in the first two papers provides service to customers helping them make decisions (i.e., virtual influencers, voice assistants), whereas AI in the second two papers directly delivers products (i.e., foods and creative products).

The opening paper examines how the task initiation modality impacts consumers' service experience. Through four experiments, the authors find that encouraging consumers to use requests (vs. commands) in their interactions with voice assistants enhances their perceptions of naturalness of the interaction and service enjoyment, boosting consumer sentiment and service ratings.

The second paper explores the process by which consumers engage with AI (vs. human) social media influencers. The authors demonstrate that AI (vs. human) influencers are perceived to be lower in mind perception in social media contexts, leading to lower consumer

Conversational AI Design: How Initiation Modalities Shape Consumer Experience & Firm Perception

EXTENDED ABSTRACT

The use of natural language and voice-based interfaces gradually transforms how consumers interact with firms (Dale 2016; Hirschberg and Manning 2015). The use of voice-based interfaces as a new interaction paradigm between human consumers and intelligent bots (such as Amazon Alexa, Google Home, or Siri) has been declared as the "next operating system in commerce" (Feldman, Goldenberg, and Netzer 2010). With 100 million smart speakers installed in people's home worldwide in 2018 and a soaring market of voice assistant technologies that is expected to reach \$31.82 billion by 2025, voice-based interfaces are transforming how humans search, shop, and express their preferences.

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 the consequences for consumers and firms. Specifically, the majority of prior work on voice-based or "conversational" interfaces primarily examined either factors related to optimizing the design features of interfaces (Ghosh and Pherwani 2015), factors related to security issues of voice-controlled interfaces (Diao et al. 2014), or general user acceptance (Portet et al. 2013).

The current work takes a different route and explores whether and how the task initiation modality (i.e., how consumers are required to talk to a conversational interface) impacts consumers' AI service experiences and downstream consumer choice. Across four studies, we demonstrate that requiring consumers to use requests over commands enhances perceptions of naturalness of the interaction, enhances consumers' service enjoyment, boosts consumer sentiment, recommendation likelihood, and consumer service ratings.

In Study 1, a total of 219 of active voice assistant users ($M_{Age}=30.61$, $SD_{Age}=9.91$, 60% females; pre-screened Amazon Echo or Google Home users) were recruited via Prolific Academic and randomly assigned to either a command or request condition. In both conditions, participants were provided with a set of five common tasks to ask a digital voice assistant. Participants in the command (request) condition used a syntactically shortened (elongated) initiation format (example command: “Alexa, length of marathon.”; example request: “Alexa, can you tell me the length of a marathon.”). All commands lead to identical responses and participants had a real conversation via a custom-made interface using to AWS Polly. Immediately after the task was completed, we assessed the perceived naturalness of the interaction, overall task enjoyment, and participants provided a star rating about their experience and whether would recommend the voice assistant to others. Participants using requests versus commands perceived the interaction significantly more natural ($M_{Request}=4.26$, $M_{NonRequest}=3.83$; $t=2.93$, $p<.001$) and more enjoyable ($M_{Request}=4.84$, $M_{NonRequest}=4.36$; $t=2.07$, $p<.05$). A single mediation confirmed that the effect on task enjoyment was mediated via the naturalness of the interaction (10000 bootstrap resamples; $\beta_{Indirect}=.27$, $CI_{95\%}=[.08;.48]$), indicating full mediation. A subsequent path model demonstrated that this increase in task enjoyment subsequently enhanced consumers’ service ratings ($\beta=.47$, $z=8.16$, $p<.001$) and recommendation likelihood ($\beta=.63$, $z=12.15$, $p<.001$).

In Study 2, we recruited a total of 100 participants for a controlled lab study ($M_{Age}=24.27$, $SD_{Age}=6.28$, 51% females). Participants were randomly assigned to either a request or command condition resembling the paradigm used in Study 1, except for a larger number of tasks (eleven questions in total). The objective of this study was to replicate the findings of Study 1 under controlled conditions and to further assess whether the type of initiation modality also causes objective changes in the human voice. At the outset of the study, we assessed participants’ baseline vocal features using an established task from prior work in bioacoustics (Kempster et al. 2009; example sentence: “The blue spot is on the key again.”). The audio data of both the baseline reading task and the subsequent voice assistant interaction was recorded using an external microphone with a pre-defined sampling rate of 44100 HZ. Processing of all audio data and extraction of vocal features at the participant level was done using the seewave, phontools, and tuneR packages in R (Sueur, Aubin, and Simonis 2008). Replicating the findings of Study 1, the use of requests versus commands led to significantly more natural interaction experiences ($M_{Request}=4.43$, $M_{NonRequest}=3.75$; $t=2.47$, $p<.01$), was marginally more enjoyable ($M_{Request}=4.96$, $M_{NonRequest}=4.18$; $t=1.675$, $p=.09$), and the effect on task enjoyment was significantly mediated by the extent of perceived naturalness (10000 bootstrap resamples; $\beta_{Indirect}=.40$, $CI_{95\%}=[.06;.92]$). Furthermore, the use of commands versus requests also significantly altered participants’ vocal expressions. Specifically, we find that commands led to an increase in sound pressure levels both relative to the baseline task ($t=10.917$, $p<.001$) as well as between conditions in the main task ($t=3.242$, $p<.01$). Similarly, commands also significantly increased participants’ vocal entropy both relative to the baseline ($t=13.819$, $p<.001$) as well as in the main task ($t=4.167$, $p<.001$). These findings demonstrate that the use of commands causes individuals to engage in a less fluent (or more monotone) 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 ($r=-.64$, $p<.001$).

Two subsequent Studies further explored the downstream consequences of these effects and tested critical boundary conditions. Study 3 directly manipulated the naturalness of interaction through altering the prosody of the voice assistant (enhanced pitch and speech-rate)

and demonstrated that a less human-like sound of the voice assistant reduces both perceptions of naturalness and reduces consumers’ likelihood to accept a recommendation during a shopping task. Study 4 further examined situational affordances that could enhance the effectiveness of commands. Specifically, this study revealed that the use of commands over requests is beneficial in settings where consumers are pressed for time.

In summary, the current work demonstrates that the type of initiation modality systematically affects consumers’ experience with AI enabled service technologies. We provide evidence that altering the required input to initiate a conversation with smart objects provokes systematic changes both in terms of consumers’ subjective service experience and objective phonetic changes in the human voice. The current research also makes a methodological contribution by highlighting the unexplored potential of feature extraction in the human voice as a novel lens to study consumer experiences with AI-enabled services.

I do not want what you have! The impact of Mind Perception on Engagement with AI influencers

EXTENDED ABSTRACT

Within the realm of influencer marketing, a new phenomenon of artificial intelligence influencers (AII) has emerged. AII are entities that use natural language processing, image recognition, speech recognition, problem-solving, and machine learning to develop content and interact with followers (Thomas and Fowler, 2020). AII, such as Lil Miquela, has gained unprecedented popularity and endorsed leading brands from Ugg to Prada (Munzenrieder, 2018). Marketers are increasingly signing on to AII as they are cheaper, reliable, and provide greater control (Bradley, 2020).

The popularity of this new version of the internet star begs the question of whether AII is an archetype of the future of social media influencers. However, there is limited understanding regarding the effectiveness of AII compared to Human influencers. This research aims to address this knowledge gap. We contend that AII’s lower mind perception negatively impacts engagement with the AII. We further propose that the experience of envy towards AII mediates the link between mind perception and engagement.

Humans frequently imbue other non-human entities with human-like abilities, including a human-like mind. This mental process is known as mind perception (Waytz et al., 2010). Given that AII openly broadcast being driven by algorithms, users are likely to attribute lower human-like mind traits such as experience and agency to AII (Gray et al. 2007). This lower mind perception of AII than humans may lead to a higher perception of social distance between the consumers and the AI agents. Thus, consumers view AII as dissimilar to themselves (Gray and Wegner, 2012) and possibly an outgroup member (Longoni et al., 2022, SCP2022). We propose that this dissimilarity and perceived distance from AII will likely result in limited social comparisons.

Social comparison is defined as “the process of thinking about the information of one or more other people in relation to the self” (Wood, 1996, p. 520). Social comparison is known to lead to emotional outcomes such as envy (Festinger, 1954), the unpleasant feeling that is evoked “when a person lacks another’s superior quality, achievement or possession, and either desires it or wishes the other lacked it” (Lin, van de Ven and Utz, 2018, p.271). Prior research identifies two types of envy – benign and malicious. Recent research indicates that benign envy towards social media influencers positively impacts purchase intentions (Singh and Ang, 2021) and attitudes (Jin et al. 2019; Marwick, 2015). Therefore, we posit that the lower mind perception

of AII likely results in low envy towards AII, negatively impacting engagement with the AII compared to human SMIs.

We conducted a 2 condition (type of influencer AI vs. Human) online experiment wherein respondents (206 undergraduate students) randomly viewed fictitious Instagram posts from an AII or a human influencer to test this proposition. We measured willingness to follow, share, comment, and like the influencer, benign envy, mind perception, and perceived authenticity of the influencer. In line with our expectation, virtual influencers were perceived to have significantly lower mind perception (agency and experience) as compared to Human influencers (Mean (AI) = 3.28, Mean (Human) = 5.06, $t(206) = (-11.1)$, $p < 0.001$). Consumer envy was measured using seven items (Cronbach's $\alpha = 0.9$). Respondents reported the significantly higher level of envy in human condition (Mean (AI) = 2.09, Mean (Human) = 2.48, $t(206) = (-2.43)$, $p = 0.016$, Cohen's $d = 0.34$). A bootstrap mediation analysis using Process Macro (Hayes and Preacher 2014; 5000 iterations, model 4) showed that mind perception mediated the effect of influencer type on consumer envy. As predicted, the effect of SMI type on consumer envy was significantly mediated by mind perception ($b = -0.37$, $SE = 0.11$, $CI_{95} [-0.61, -0.14]$) such that AI influencers had lower mind perception (agency and experience) and lower mind perception predicted lower consumer envy. Furthermore, we also conducted a serial mediation analysis to assess the impact on engagement outcomes - willingness to like the posts, share, follow, comment, lookup the influencer website, and recommend the influencer. DV was a composite of the above five items. Results indicated a significant serial mediation (Hayes and Preacher 2014; 5000 iterations, model 6) such that AII had lower mind perception, which leads to lower consumer envy and lower engagement outcomes ($b = -0.18$, $SE = 0.06$, $CI_{95} [-0.31, -0.07]$).

Our findings highlight the role of benign envy in driving differences in engagement between human influencers and AII. Future studies aim to formally test the boundaries of this effect across product categories and the downstream impact of mind perception on brand outcomes. These findings will help practitioners and academics develop a better understanding of the factors that make AII ineffective.

When Art Meets Artificial Intelligence: Consumers' Valuation of Creative Products Made By AI

EXTENDED ABSTRACT

Over the years, artificial intelligence (AI) has radically transformed business and consumers' lives. Consumers are provided products recommended by AI, order products using chatbots, and even view creative products, including artworks, that have been produced by AI. Despite the fact that AI is often capable of outperforming humans, recent studies have highlighted that people still prefer human labor over AI labor (Dietvorst, Simmons, and Massey 2014). Questions remain, however, about the psychological mechanisms that underpin this "algorithm aversion." In the current research, we suggest consumers' perception of AI labor—less labor required by AI in making products—as one of the underlying mechanisms of the algorithm aversion. Specifically, we show that consumers perceive AI-created products as requiring less labor than human-created products, resulting in a lower valuation of AI products.

Previous research (Kruger et al. 2004) has suggested that perceived labor input plays an important role in the valuation of products. The findings show that in general, people assign more value to products created with a higher level of labor. Moreover, AI is often associated with "labor saving" (Grzymek and Puntschuh 2019). Thus, we suggest that consumers have the perception that AI invests less labor than humans when creating products, resulting in a lower valuation

of AI-created products. However, creative processes involving AI are computationally taxing and require a high level of energy input. AI algorithms often undergo intensive training with large datasets over several weeks (AImade.art 2020), and some AI algorithms may spend more than 50 hours creating a single artwork (Sargent 2019). If the lower valuation of products created by AI is driven by perceptions that less labor is exerted to produce a product, then informing consumers about the significant amount of labor invested by AI should increase their valuation of the product. We test our hypotheses in the domain of creative products.

Six studies (five of which were preregistered) examined consumers' valuation of creative products made by AI and the role of perceived AI labor in valuation. Study 1A ($N = 95$) used an incentive-compatible design to examine people's willingness-to-pay for a canvas print painting identified as either AI- or human-created. Results showed that participants who were informed that the painting was AI-created were willing to pay less for the printed painting than those who were informed that it was human-created ($p = .035$). In study 1B ($N = 110$), participants listened to an excerpt of music that was identified as either AI- or human-created. We found that participants were willing to pay less to attend a concert featuring AI-created music than human-created music ($p = .001$) and estimated the copyright for the AI-created music to be cheaper than that for the human-created music ($p = .001$).

Studies 2A and 2B tested consumers' valuation of AI-made creative products and the role of perceived labor. In study 2A ($N = 200$), participants judged the value of a figure painting that was identified as either AI- or human-created. Results showed that participants valued the AI-created painting less than the human-created painting ($p = .001$) because they perceived that less labor was exerted by AI (mediation through perceived labor; 95% $CI [-827.71, -428.33]$). In study 2B ($N = 300$), participants judged a poem identified as having been created by a human, AI, or a human using AI. Participants estimated a lower sale value of the poem's copyright with both partial and full AI (vs. only human) involvement in the poem's creation due to a lower level of perceived labor (95% $CI [-21.266, -9.405]$).

Study 3 ($N = 402$) examined the role of perceived AI labor in valuation using a 2 (AI vs. human) \times 2 (no labor information vs. high labor information) between-subjects design. All participants evaluated a painting identified as AI- or human-created, but participants in the high-labor-information condition were informed that it took 50 hours to create the painting. Results showed that when labor information was not given, participants valued the AI-created painting less than the human-created painting ($p = .005$), but when labor information was given, there was no significant difference in the valuation of the two paintings ($p = .78$; two-way interaction $p = .075$).

Product creation requires labor for generating ideas (i.e., cognitive labor) and implementing them (i.e., physical labor). Although both ideation and execution are important in the creation process, previous research has shown that people value labor for execution more than labor for ideation (Burgmer et al. 2019). However, we suggest that people should value cognitive aspects of AI labor more than physical aspects because, unlike human labor, physical labor by AI does not reflect dedication. We conducted Study 4 to examine how people value these different aspects of AI labor with a 2 (AI vs. human) \times 2 (higher cognitive labor vs. higher physical labor) between-subjects design. Participants evaluated a painting that was identified as either AI- or human-created. All participants read that it took 48 days to create the painting, but participants in the higher-cognitive-labor [higher-physical-labor] condition read that it took 45 days [3 days] to generate the idea and 3 days [45 days] to draw it on canvas. The AI-created painting was valued more when participants were told it required greater cognitive labor than physical labor ($p = .067$), whereas there was no

difference between higher cognitive- and physical-labor conditions for the human-created painting ($p = .205$; two-way interaction $p = .029$).

In summary, our findings suggest that algorithm aversion stems from beliefs that less labor goes into the creation of AI-made products. Across six experiments, people perceived an AI-created product to require less effort than a human-created product, which led to a lower valuation of the AI-created product. We further demonstrate that people value cognitive labor more than physical labor when exerted in the creative process by AI, but not by a human. These findings have important implications for how people perceive labor exerted by AI in the creation of products and, ultimately, how they value the final products.

The Effect of Production Mode (Human- Vs. Robot-Made) On Consumer Calorie Estimation And Food Choice

EXTENDED ABSTRACT

Robots have been replacing human labor and changing consumer behavior radically in recent years. In the food industry, robots have cooked meals and served as waiters in different countries (Ballard 2020; Inagaki 2017). Given the emerging trend of robot service and consumers' increased concern about healthy eating (e.g., Provencher and Jacob 2016), it is important to explore how the use of AI in food production impacts consumers' healthiness perception.

We aim to assess how consumers estimate calories and make choices for food items produced by robots vs. humans. Although extensive literature has explored factors affecting food calorie estimation such as the food appearance (Jiang and Lei 2014) and food sharing (Taylor and Noseworthy 2021), little is known about how the production mode of food shapes the way people estimate calories. Robot-made products have the advantage of delivering uniform quality (Liebl and Roy 2013), which should lead to identical products. By contrast, human producers might create more variations without affecting product quality (Huang, Ackerman, and Newman 2017). Furthermore, prior literature on mind perception (e.g., Gray et al. 2007) has demonstrated that humans are perceived to be superior to robots in both dimensions of mind, agency (i.e., the capacity to think) and experience (i.e., the capacity to feel). Therefore, we propose that in the food context, when consumers have a goal of consuming an unhealthy food, human (vs. robots) producers will be perceived to be more capable of sensing and understanding this goal and delivering food of greater extremeness of quality, leading to higher calorie estimation. However, since consumer judgments on perceived healthiness of food are more complicated (e.g., healthy by nature or by science; Andre, Chandon and Haws, 2019), we propose the effect of the production mode will be mitigated for healthy food.

We hypothesize:

Hypothesis 1: The production mode and the food type interact to have an impact on calorie estimation. Specifically, unhealthy food products will be inferred to have more calories when they are cooked by a human than by a robot. The effect will be mitigated for healthy food.

Hypothesis 2: The effect of the production mode on calorie estimation is serially mediated by mind perception and the perceived extremeness of quality.

We have conducted four studies so far to test our propositions. The objective of **Study 1(a)** was to test H1. 372 Mturkers were randomly assigned to a 2 (production mode: robot vs. human) \times 2 (food:

healthy vs. unhealthy) between-subject design. We presented participants with either a picture of Fish & Chips or a steamed vegetable salad and manipulated the production mode by describing the dish as either made by a robot chef or a human chef. Then, participants completed calorie estimation measurement. As predicted, there was a significant interaction of the production mode and the food type on calorie estimation ($F(1, 368) = 4.66, p < .05$). Specifically, for the steamed vegetable salad, whether the food was cooked by a robot or a human had no impact on calorie estimation ($p = .18$), while participants estimated the Fish & Chips cooked by a chef to marginally have more calories than those cooked by a robot chef ($M_{\text{human}} = 4.56$ vs. $M_{\text{robot}} = 4.27$; $F(1, 368) = 2.91, p < .10$). **Study 1(b)** aimed to test H1 using the same food described as either healthy or unhealthy. Specifically, participants were told that they were ordering a Mango Lassi produced by a human or robot chef and it was considered as either healthy or unhealthy. Then, they completed calorie estimation measures. Consistent with Study 1(a), we found that Mango Lassi considered as unhealthy is perceived to have more calories if it's produced by humans (vs. robots) and the effect is not significant if it's framed as healthy.

Study 2 aimed to replicate the proposed effect found in study 1 and explore the underlying process to test H2. The procedure was similar with that of Study 1. After calorie estimation, we measured the proposed mediators (i.e., mind perception and extremeness of quality). As in Study 1, there was a significant interaction of the food type and the production mode on calorie estimation ($F(1, 280) = 7.54, p < .05$). We further found that participants perceived the chocolate cake cooked by a pastry chef contained more calories ($M_{\text{human}} = 4.73$ vs. $M_{\text{robot}} = 4.14$; $F(1, 280) = 16.61, p < .001$) than by a robot pastry chef; whereas the effect was not significant for vegetable soup ($p > .1$). A bootstrapping analysis (5000 resamples; Model 87, Hayes 2018) showed a significant moderating effect of food type on the mediation effect of mind perception and extremeness of quality on calorie estimation (index = .21; 95%CI = [.03, .47]).

In **Study 3**, we directly manipulated consumer health goals. For this 2 (health goal vs. control) \times 2 (healthy vs. unhealthy food) between-subject design, we predict that participants whose health goal is activated are more likely to choose robot-made unhealthy food. Participants ($n = 588$) were shown a picture of either a chocolate cake or a vegetable soup. They were asked to indicate whether Susie, a 20-year old college student with or without a weight-loss goal would have the chocolate cake or the vegetable soup cooked by a robot or a human on a 7-point scale (1 = by a pastry chef, 7 = by a robot chef). As predicted, a significant interaction emerged between health goals and the type of food ($F(1, 584) = 5.04, p = 0.025$). When the health goal is activated (vs. control), the chocolate cake made by a robot is preferred ($M_{\text{health}} = 3.01$ vs. $M_{\text{control}} = 2.53, p = .022$) while the effect of health goal on consumer preference on the food producer is not significant ($p > .1$).

In summary, across four studies, we find that people perceive unhealthy food cooked by humans as having more calories than that cooked by robots while the effect is weaker for healthy food. Consumers should be aware of the bias on calorie estimation caused by the production mode. Our findings also provide implications to public policy decision makers on how to encourage healthy eating as service robots are becoming more popular.

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It's the "Quantity" that Counts: Quantity Cues in Decision-Making

Chair: Ms. Elina Hur, Cornell University, USA

Paper #1: Cutting Your Cake and Having More of It: A Discretization Account of the Effects of Partitioning on Quantity Perceptions

Dr. Pierre Chandon, INSEAD, France
Ms. Maria Langlois, INSEAD, France
Mr. Andde Indaburu, INSEAD, France
Dr. Natalie Rigal, Universite Paris Nanterre, France

Paper #2: Quantity Allocation and Its Influence on Hedonic Decline in Multi-Block Consumption Settings

Mr. Jinwoo Kim, Carnegie Mellon University, USA
Dr. Jeff Galak, CMU, USA

Paper #3: Too Much of a Good Thing: Frequent Checking Decreases Subjective Performance Evaluation

Ms. Shannon Duncan, The Wharton School, University of Pennsylvania, USA
Dr. Marissa Sharif, University of Pennsylvania, USA
Dr. Jordan Etkin, Duke University, USA

Paper #4: When Less is More: Adopting Consummatory Motives to Reduce Overconsumption

Ms. Elina Hur, Cornell University, USA
Dr. Kaitlin Woolley, Cornell University, USA

SESSION OVERVIEW

Consumers rely heavily on information regarding quantity when making decisions. Quantity cues such as portion size influence how much consumers eat (Cornil and Chanodn 2016), the number of options can affect choice satisfaction (Levav, Reinholtz, and Lin 2012), and tracking behavior (e.g., steps walked) can influence goal striving (Etkin 2016). Despite the clear role quantity cues play in judgment and decision making, there remain several open questions for how consumers perceive and are influenced by such cues. This session joins together four papers that explore new and exciting insights on how quantity cues influence consumers' choices, satisfaction, and goals.

The first two papers examine drivers of quantity perception. In Paper 1, the authors use lab and field experiments to examine a novel explanation for why partitioning food (cutting it into smaller units) reduces consumption. For both children and adults, presenting portioned food (e.g., pieces of cake) increased quantity perceptions relative to presenting larger, intact versions of the same food (e.g., whole cake). The authors provide a perceptual explanation for the effects of partitioning on distorted quantity perceptions. Paper 2 investigates how quantity allocation – whether product quantities are arranged in an increasing or decreasing structure – influences hedonic decline. They found that consuming products in a decreasing structure (e.g., viewing 3 photos, then 2 photos, then 1 photo) increases enjoyment compared with viewing products in an increasing structure (e.g., viewing 1 photo, then 2, then 3). The authors find that a decreasing structure mitigates hedonic decline by changing quantity perceptions, as consumption amount appears smaller in a decreasing structure.

The second two papers examine consumers' reliance on quantity cues in their goal pursuit and the potential negative consequences of doing so. Paper 3 examines how the frequency of checking performance metrics influences satisfaction. People assigned to check their performance output more often, such as frequently viewing the number of "likes" an Instagram post received or how much weight they lost, believed they performed worse than those assigned to check their performance less frequently. Paper 4 investigates when and why people

overconsume during goal pursuit. They found that people with instrumental goals (e.g., to eat healthy food or gain skills during an online class) preferred larger quantities (e.g., purchased more smoothies and classes) than those with consummatory goals (e.g., to eat tasty food or have fun during class). The reason: people overly rely on quantity as a cue for progress when pursuing instrumental (vs. consummatory) goals, despite the fact that doing so can actually harm goal pursuit.

Taken together, this session advances our understanding of how quantity cues shape consumers' judgment and choices, exploring this in the context of quantity perceptions and goal pursuit. Using multiple methods, including field studies, experiments, and incentive compatible designs, this session offers insight into how to utilize quantity information for consumer welfare. It will appeal broadly to a variety of researchers, including those interested in food consumption, consumer experience, and goal pursuit.

Cutting Your Cake and Having More of It: A Discretization Account of the Effects of Partitioning on Quantity Perceptions

EXTENDED ABSTRACT

There is strong evidence that partitioning food, or cutting a portion of food into smaller units, while holding the total weight or volume constant, reduces intake (Geier, Rozin, and Doros 2006; Holden and Zlatevska 2015; Hollands et al. 2015; Marchiori, Waroquier, and Klein 2012). Past research has attributed this effect to social norms on consumption, where appropriate consumption is defined by the total number of units consumed rather than the overall size (i.e., weight or volume) consumed (Geier et al. 2006; Liu et al. 2019). While research replicates the strong effects of partitioning, it remains unclear as to how social norms, or other factors, may be driving the phenomenon. Our research explores the underlying mechanisms behind the effects of partitioning and seeks to understand the driving factors; in particular, we explore how **discretization** may be a driver in the illusion. We explore partitioning in 6 studies, where we utilize a variety of stimuli, such as palatable and unpalatable foods, food and non-food stimuli, incentivization and lack thereof, plated presentation and food presented without plates, and experiments in the lab as well as in the field.

Study 1 provides support for the effect of partitioned downsizing in increasing quantity perceptions in children. When viewing a partitioned portion of cake compared to an intact portion of the same cake, which contained 20% more, 66% of children mistakenly believed that the cakes were equivalent in size, while 22% indicated that the partitioned portion contained a greater amount of food – this left only a remaining 12% of children that provided an accurate response, where they indicated that the intact cake contained more ($z = -8.9, p < .001$). Very similar results were obtained when asking children about an intact pizza, which contained 21.7% more, versus a smaller, partitioned pizza ($z = -7.7, p < .001$). There were no effects of systematic differences, such as age, education, BMI, nor sex, on the misperception.

Study 2 explored whether food healthiness and contrast effects moderate the misperception. Adult respondents encountered partitioned vs. intact healthy (i.e., melon) and hedonic foods (i.e., a bar of chocolate), which were either presented on a plate or without a plate. As with children, adults consistently made erroneous judgments, where they perceived the partitioned portions as larger. When making a binary decision, where participants were instructed to select whether the intact or partitioned food contained more, 67% mistakenly indi-

cated that the un-plated partitioned melon contained more, while 62% indicated that the plated partitioned melon contained more ($z = -3.1, p < .001$). For the chocolate bar, 66% of adults believed that the un-plated partitioned chocolate contained more, while 55% believed that the plated partitioned chocolate contained more ($z = -2.2, p < .001$). Neither food healthiness ($\chi^2 = .50, p = .52$) nor the presence/absence of a plate ($\chi^2 = 1.78, p = .18$) moderated the effects.

Study 3 investigated whether the partitioned downsizing phenomenon would hold for both appetizing and unappetizing foods; in this study, we manipulated adult respondents' taste expectations. Foods were framed as either delicious or disgusting, and respondents were asked whether the partitioned or intact foods contained more. The main effects of partitioning consistently replicated for all stimuli, which consisted of a smoothie ($z = -5.4, p < .001$), chocolate bar ($z = -5.6, p < .001$), and bread ($z = -4.1, p < .001$). There was no evidence of moderation by taste expectations (Wald = .56, $p = .46$). Furthermore, we found no evidence of motivated misperception (Dai and Hsee 2013), nor was there an effect of dietary restraint or hunger levels.

In study 4, we utilized incentives to determine if the inclusion of bonuses for accurate responses would lead to greater response accuracy – where half of the respondents had the possibility of winning a £2 bonus. In this study, the dependent variable consisted of size estimations of intact and partitioned portions as a multiple of a depicted reference portion.

Although respondents in the incentivized condition exhibited greater effort ($b = 1.32, p < .01$), denoted by the time spent on the estimation task, they were not more accurate in their estimations when compared to non-incentivized respondents ($b = -.07, p = .20$).

Study 5 utilized a discretization manipulation, where we used 2 chocolate bars from the same brand; however, 1 bar contained 205 grams and depicted 15 pieces (attached), while the other contained 170 grams (or 17% smaller) but with 16 pieces (attached). Respondents saw either the countable pieces of the chocolate bar (with intact vs. partitioned), where the chocolate bar was facing right-side up with the pieces in sight, or they did not see the countable pieces, where the chocolate bar was presented upside-down (for intact vs. partitioned as well). In the countable/discretized condition, 79% of respondents mistakenly indicated that the smaller 170-gram chocolate bar containing 16 pieces was larger ($z = 5.8, p < .001$). However, only 45% of respondents made the same error when the chocolate bars were presented upside-down, therefore making it impossible to see the discretized pieces ($z = .9, p = .18$). These results provide strong evidence that partitioned downsizing works through discretization.

Finally, we conducted a field study with countable versus uncountable chocolate bars and Post-its, and allowed adult respondents to either view and physically hold/touch the stimuli, or solely view the stimuli. The greatest inaccuracies were exhibited by respondents that solely viewed the countable stimuli, where 58% erroneously judged the smaller stimuli, which contained a greater number of pieces, as larger. However, there was no main effect of touch ($p = .13$), nor was the interaction of touch and discretization significant ($p = .72$).

Taken together, our results provide a novel, perceptual explanation for the effects of partitioning on consumption, and offer a novel and simple intervention to unobtrusively reduce supersized portions. Our findings illustrate that the robust effects of partitioning on distorted quantity perception is not a product of social norms – and provides mechanistic evidence for the role of discretization in driving this phenomenon.

Quantity Allocation and Its Influence on Hedonic Decline in Multi-Block Consumption Settings

EXTENDED ABSTRACT

The unfortunate fact of consumption is that once enjoyable stimuli become less enjoyable with repeated consumption, a phenomenon known as hedonic decline. In this work, we document a critical factor that influences this hedonic decline: Quantity Allocation, or how consumption quantities are distributed. Repeated consumption may occur across a series of consumption blocks, such as viewing dog images across several Instagram posts. Quantity allocation indicates how consumption quantities are distributed across such consumption blocks. We focus on two ways of quantity allocation: increasing structures and decreasing structures. Increasing structures refer to circumstances where consumption quantity grows with repetition (e.g., post with 1 photo – post with 2 photos – post with 3 photos), whereas decreasing structures are the opposite where consumption quantity declines with repetition (e.g., post with 3 photos – post with 2 photos – post with 1 photo).

So how do increasing and decreasing structures affect subjective quantity and hedonic decline? In prior studies on subjective quantity and hedonic decline, researchers presented external quantity cues (Redden and Galak, 2013), and such cues acted as reference points against which individuals would compare their consumption experience. However, in the absence of an obvious external reference point, consumers tend to use recently encountered stimuli to form their initial reference point (Boyle, Bishop, and Welsh, 1985). We apply the same logic to multi-block consumption: consumers are likely to refer to an initial block of consumption to form a reference quantity and update their reference quantity based on successive blocks.

Increasing structures begin with a block with a small quantity, followed by blocks that become progressively larger. Conversely, decreasing structures begin with a block with a large quantity, followed by blocks that become progressively smaller. Therefore, consumers are likely to form a relatively a low reference quantity at the beginning of an increasing structure and adjust it upward as they advance to subsequent blocks. As a result, consumption quantities would loom larger under increasing structures as consumers compare their current consumption quantities with low reference quantities (e.g., 1-photo vs. 2-photo). The opposite pattern is likely to be observed under decreasing structures: reference quantity will be high at the first block, but it will drop as consumers progress to subsequent blocks. Consequently, consumption quantities would appear smaller under decreasing structures as consumers compare their current consumption quantities with high reference quantities (e.g., 3-photo vs. 2-photo). In sum, holding the total consumption quantity constant, those under the decreasing structure will feel as if they consume relatively less than those under the increasing structure. According to prior work (Redden and Galak, 2013), this reduced subjective quantity will then mitigate hedonic decline.

We thus predict that holding the total consumption quantity constant, experiencing consumption in a decreasing consumption structure will reduce hedonic decline as compared to experiencing consumption in an increasing consumption structure (H1), and this structure effect is mediated by a lower level of subjective quantity consumed (H2). Finally, providing an external reference amount about consumption quantity will attenuate the structure effect on hedonic decline (H3) as people refer to the external reference instead of to an initial or previous block of multi-block consumption.

We conducted six experiments to test our predictions. In Studies 1A and 1B, to increase the realism of the stimuli, we selected images of cats posted on Instagram and presented those images as the social

platform does. However, a half of the participants viewed the emulated Instagram posts in an increasing structure (post with 2 images – post with 3 images – post with 6 images – post with 10 images), while the other half viewed the posts in a decreasing structure (post with 10 images – post with 6 images – post with 3 images – post with 2 images). In both studies, participants were more willing to view additional posts of the same account when they experienced previous posts in the decreasing structure, suggesting that those in the decreasing structure conditions enjoyed the Instagram posts more, even though all participants viewed the identical images. To provide more direct evidence of the influence of consumption structures on hedonic decline, we directly measured enjoyment in Studies 2, 3A, 3B, and 4. Specifically, Study 2 used a novel stimulus, music. Here, participants chose a favorite song and listened to the chosen song fifteen times across five blocks. However, the repetitions were structured in either a uniform structure (3-3-3-3-3), an increasing structure (1-2-3-4-5), or a decreasing structure (5-4-3-2-1). As predicted (H1), those in the decreasing structure condition exhibited smaller drop in the enjoyment ratings than the other two conditions. In Studies 3A and 3B, photo slideshows were employed as stimuli, and those photographs were presented in either an increasing structure or a decreasing structure. Also, we measured not only enjoyment but also subjective quantities.

Again, those in the decreasing structure conditions experienced less hedonic decline (H1). More importantly, their subjective consumption quantities were lower than those in the increasing structure conditions, and the reduced subjective quantity mediated the structure effect on hedonic decline (H2). Finally, in Study 4 using music, we added conditions where participants were informed of the average consumption quantity per block in advance (external-cue conditions).

This manipulation should attenuate the difference between increasing and decreasing structures because people would have similar, fixed, reference quantities to judge their consumption against, thus reducing the influence of consumption structure on hedonic decline. Consistent with H3, the structure effect dissipated in the external-cue conditions, though it remained significant in the no-cue conditions, which were used in prior studies.

Six experiments show that, holding the total consumption quantity constant, decreasing structures attenuated hedonic decline. This structure effect is driven by changes in beliefs about subjective quantity consumed and is mitigated by providing an external reference about consumption quantity. Further, quantity allocation has significant downstream consequences in the form of decisions to re-consume. These findings speak to how consumers can structure their own experiences and how firms can structure experiences for consumers to minimize hedonic decline and, thus, maximize utility. The present work also provides a basis for understanding other, more complex, quantity allocation in the future.

Too Much of a Good Thing: Frequent Checking Decreases Subjective Performance Evaluation

EXTENDED ABSTRACT

Smartphones and other wearable devices are increasingly used to track a wide variety of performance metrics (Vogels 2020), ranging from caloric intake and exercise to number of books read. These technologies have allowed consumers to check and receive feedback about their behavior more easily and more frequently than ever before – daily, hourly, even minute by minute. This research explores how the frequency with which consumers check to see how well they are doing affects perceptions of their performance overall. We propose that, because people expect to make progress each time they check, checking feedback more (vs. less) often inflates consumers' expectations of how

much they have accomplished, undermining overall satisfaction with their performance. Six experiments support these predictions.

Experiments 1a-1c manipulate the frequency with which people check feedback and test the effect on subjective performance evaluation. In E1a ($N = 397$), participants imagined posting a photograph on Instagram and simulated the experience of checking how many "likes" they had received either every 2 hours for 24 hours (high-frequency condition) or just once after 24 hours (low-frequency condition). In E1b ($N = 502$), participants imagined they were trying to lose weight and simulated the experience of checking their weight either daily for two weeks (high-frequency condition) or weekly for two weeks (low-frequency condition). In E1c ($N = 1005$), we examined real behavior. Participants were asked to find typos in a series of 10 text passages, and we manipulated checking frequency by making it easier (high-frequency condition) or harder (low-frequency condition) to obtain this information. All participants had the option to check their performance after each passage, but in the low frequency condition, participants had to complete three CAPTCHAS to view this feedback, which reduced how often they checked. Across all three studies, checking feedback more frequently decreased subjective performance evaluation. Regardless of whether final outcomes were randomly determined (S1a), held constant (S1b), or allowed to vary based on actual effort (S1c), participants felt less satisfied with what they had accomplished when they checked their performance more (vs. less) often (Instagram likes: $M_{2\text{-hours}} = 6.2$, $SD_{2\text{-hours}} = 2.11$; $M_{24\text{-hours}} = 6.58$, $SD_{24\text{-hours}} = 1.89$; $b = -0.5$, $t(394) = -2.52$, $p = 0.010$; weight loss: $M_{\text{daily}} = 4.68$, $SD_{\text{daily}} = 2.28$; $M_{\text{weekly}} = 5.2$, $SD_{\text{weekly}} = 2.61$; $b = -0.53$, $t(500) = -2.40$, $p = 0.017$; typo finding: $M_{\text{easy}} = 4.09$, $SD_{\text{easy}} = 2.53$; $M_{\text{hard}} = 4.42$, $SD_{\text{hard}} = 2.46$; $t(1001.9) = 2.09$, $p = 0.037$).

Experiments 2 ($N = 243$) and 3 ($N = 1081$) explored the underlying mechanism. If checking more frequently decreases performance satisfaction due to inflated expectations (and thus, greater expectancy disconfirmation), as we suggest, then consumers should report higher progress expectations checking more frequently. To test this, like E1a, E2 participants imagined posting a picture on Instagram, and we measured how many likes they expected to receive every two hours for 24 hours (high-frequency condition), every six hours for 24 hours (middle-frequency condition), or after 24 hours (low-frequency condition). Supporting our theory, participants in the low-frequency condition ($M_{24\text{-hours}} = 2.91$, $SD_{24\text{-hours}} = 0.86$) had significantly lower expectations for their total likes than those in the high-frequency ($M_{2\text{-hours}} = 3.42$, $SD_{2\text{-hours}} = 1.36$; $b = -0.58$, $t(239) = -3.6$, $p < 0.001$) and middle-frequency conditions ($M_{6\text{-hours}} = 3.22$, $SD_{6\text{-hours}} = 1.26$; $b = -0.42$, $t(239) = -2.76$, $p = 0.006$).

E3 measured both expectations and satisfaction. Similar to E2, participants imagined posting a picture on Instagram and reported their expected number of likes every two (high-frequency condition), six (middle-frequency condition), or 24 hours (low-frequency condition). In addition, each time after giving their expectations, participants viewed their current number of likes, and at the end of the 24-hour period we measured overall satisfaction. Consistent with E2, participants in the low-frequency condition ($M_{24\text{-hours}} = 6.76$, $SD_{24\text{-hours}} = 1.84$) were significantly more satisfied with their total likes than those in the high-frequency ($M_{2\text{-hours}} = 5.9$, $SD_{2\text{-hours}} = 2.08$; $b = -0.86$, $t(1078) = -5.73$, $p < 0.001$) and middle-frequency conditions ($M_{6\text{-hours}} = 6.3$, $SD_{6\text{-hours}} = 2.1$; $b = -0.46$, $t(1078) = -3.12$, $p = 0.002$). Further, number of times expectations exceeded outcomes fully mediated checking frequency's effect on satisfaction for all 3 pairwise comparisons (2 v. 24 hours: indirect effect = 0.58, 95% CI: 0.10 to 1.10, $p = 0.02$; 2 v. 6 hours: indirect effect = -0.63, 95% CI: -0.97 to -0.31, $p < .001$; 6 v. 2 hours: indirect effect = 0.39, 95% CI: 0.09 to 0.07, $p = 0.01$).

Experiment 4 ($N = 1241$) further tested the proposed mechanism through moderation. If checking one's feedback more often lowers satisfaction due to greater expectancy disconfirmation, as we suggest, then alleviating such disconfirmation (i.e., by giving people feedback matching their expectations) should moderate the effect. Like E3, participants imagined checking likes on an Instagram post and were randomized to input expectations and view likes every two meets-expectations condition, feedback matched whatever participants had given as their expectation. Supporting our theory, we found a significant moderation effect (frequency \times feedback interaction: $b = -0.97$, $t(1236) = -4.71$, $p < 0.001$), such that receiving feedback matching expectations eliminated the effect of checking frequency on performance satisfaction ($M_{24\text{-hours}} = 6.87$, $SD_{24\text{-hours}} = 1.72$; $M_{2\text{-hours}} = 6.85$, $SD_{2\text{-hours}} = 1.83$).

Across six experiments, checking performance more frequently reduced overall satisfaction with one's performance. This occurred because checking more frequently increased expectations for how much one accomplished - expectations that were not met, resulting in more frequent (and several) expectancy disconfirmation, and making consumers feel worse with objectively similar or even identical outcomes. Our work demonstrates a negative consequence of making performance feedback ever more accessible and easier to check, and suggests companies designing goal tracking technologies should consider the frequency with which they allow consumers to receive feedback to protect their wellbeing.

When Less is More: Adopting Consummatory Motives to Reduce Overconsumption

EXTENDED ABSTRACT

Our society faces an overconsumption problem (Pierce 2015; Schweidel and Moe 2016). People frequently work to earn more than they can consume (Hsee et al. 2013). Outside of work, people often fail to live within their means. For example, they buy more groceries than they end up eating, resulting in food waste and contributing to the environmental crisis (Pierce 2015). As another illustration, while online courses are increasingly popular, only 12% of people who purchase a course end up completing it (Newton 2020). Why do consumers often want more than they need and how can we help them choose smaller quantities?

We propose that overconsumption results from a focus on instrumental motives. In life, people frequently purchase products to pursue goals and achieve external outcomes. Such motives are driven by a desire to accomplish a goal separate from the action itself (Pham 1998; Kruglanski et al. 2018). For example, people buy smoothies to have a healthy breakfast, they take courses to advance their career, and they play sports to improve their fitness. Consummatory motives, on the other hand, involve engaging in a behavior for its own sake, such as intrinsic reward and enjoyment (Pham 1998; Kruglanski et al. 2018). For example, smoothies are tasty to drink, courses can offer meaning and satisfy curiosity, and sports can be fun to play.

Although most behaviors serve both instrumental and consummatory motives (Hsee, Abelson, and Salovey 1991), people tend to focus on instrumental motives when pursuing goals. We suggest that this focus on instrumental motives, relative to consummatory motives, drives overconsumption. That is, although people typically purchase products for instrumental reasons, if they adopt a consummatory motive, they will reduce their overconsumption, preferring small quantities of goods.

Support for this prediction comes from prior research demonstrating that people with instrumental motives constantly assess their progress toward their external outcome, often relying on quantity cues

(i.e., number of steps walked) to measure progress made (Etkin 2016). In contrast, people with consummatory motives focus on the affective experience, and they tend not to assess or monitor their goal progress (Pham 1998, Etkin 2016; Kruglanski et al. 1971).

This difference in goal monitoring causes those driven by instrumental motives to rely more on quantity as an external cue to evaluate progress, which we propose leads to overconsumption. We test these prediction in five pre-registered experiments.

Experiment 1 recruited students for an incentive-compatible lab study ($N=124$). Students selected the number of audiobooks they would like when pursuing an instrumental motive (developing reasoning skills) or a consummatory motive (having fun). Compared to a focus on instrumental motives ($M = 4.71$), shifting people to focus on consummatory motives led people to select a smaller quantity of audiobooks ($M = 3.79$, $t(122) = 2.56$, $p = .012$). Ruling out potential alternative explanations, the two motives did not differ on perceived importance ($p = .716$) nor anticipated time investment ($p = .293$).

Experiment 2 ($N=406$) tested the underlying mechanism that people use quantity as a cue for progress more for instrumental (vs. consummatory) goals. To test this, we manipulated whether quantity is correlated with progress (i.e., number of golf balls requested at a driving range) or not correlated with progress (i.e., number of golf balls requested at a golf course). We further instructed participants to consider instrumental motives (health) versus consummatory motives (fun) of golfing. As predicted, we found a significant interaction between motivation and whether quantity served as a cue for progress on the number of golf balls requested ($p < .001$). When quantity correlated with progress, participants assigned to focus on consummatory (vs. instrumental) motives for golfing selected a smaller quantity ($M_{\text{consummatory}} = 53.52$; $M_{\text{instrumental}} = 75.99$; $p < .001$), which reversed when quantity did not serve as a cue for progress ($p < .001$).

To further test the underlying process, Experiment 3 ($N=398$) manipulated motivation (instrumental vs. consummatory) and product quality (high vs. low) when purchasing smoothies for the week. We reasoned that people would rely on quantity as a cue for progress for high quality goods, which can facilitate goal achievement, but not for low quality goods, which cannot help achieve the goal. In line with this analysis, we found a significant motivation \times quality interaction ($F(1,394) = 6.14$, $p < .001$). People holding consummatory (vs. instrumental) motive selected fewer high-quality smoothies ($M_{\text{consummatory}} = 2.74$; $M_{\text{instrumental}} = 4.05$; $F(1,394) = 22.65$, $p < .001$), which attenuated when smoothie quality was low ($p = .226$).

Lastly, we suggest a benefit of construing goals as consummatory (vs. instrumental) is that doing so allows people to better advance goal pursuit. To test this, in Experiment 4 we first recruited participants to watch a video clip from a satirical news program ($N=100$). Those assigned to seek an instrumental motive to stay informed about the news chose to watch the video at a faster speed with greater words-per-minute than those assigned to seek a consummatory motive to relax ($X^2 = 4.03$, $p = .045$). However, when we gave a separate group of participants ($N=200$) a consummatory or instrumental motive and assigned them to watch the video either at regular speed or sped up, participants in both motivation conditions reported achieving their goal more when watching the regular version ($M = 4.53$) compared with the sped up version ($M = 3.49$; $F(1,195) = 17.25$, $p < .001$). Thus, although people choose a greater quantity of information when holding an instrumental motive, this choice hurt their goal pursuit.

In sum, the motivation driving people's purchases influences their preference for product quantity. Although most people pursue goals for instrumental reasons, many goals people pursue also satisfy consummatory motives. An intervention to shift people from focusing on instrumental motives to consummatory motives for their goals

leads them to prefer lower quantities of goal-related products. This occurs because people are less likely to rely on quantity as an external cue for goal progress when holding a consummatory motive. These findings offer important implications for policy makers and marketers looking to increase consumers' satisfaction with less.

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The World of Consumer Reviews: Analyzing the Production and Consumption of Reviews

Chair: Mr. Daniel Katz, The University of Chicago Booth School of Business, USA

Paper #1: “I like it” vs. “You’ll like it”: The Use of Personal Pronouns in Online Reviews

Wenyan Yin, Drexel University, USA
Yanliu Huang, Drexel University, USA
Jonah Berger, University of Pennsylvania, USA

Paper #2: Valence and Arousal in Consumer Reviews: Effects on Evoked Emotion and Product Evaluations

Daniel Katz, University of Chicago, USA
Abigail Sussman, University of Chicago, USA
Daniel O’Leary, Udem, USA

Paper #3: Incentives Increase Relative Positivity of Review Content and Enjoyment of Review Writing

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Marissa Sharif, University of Pennsylvania, USA

Paper #4: Negative Word of Mouth: The Role of Consumer Characteristics and Failure Type

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SESSION OVERVIEW

Reviews can significantly influence consumer behavior. Research has found 93% of consumers rely on online reviews when making a purchase (Kaemingk, 2020). Reviews can also impact several variables relevant to firms, such as sales (Floyd et al., 2014). The papers in this session contribute to the literature on consumer reviews in three important ways. We identified several features of reviews that can influence consumers’ judgments and behavior. Our findings highlight the need to understand who the reviewer is and the incentives to leave a review. We also discuss the importance of studying review readers and writers separately, as writers’ intentions and readers’ interpretations may diverge.

Paper 1 explored how different pronouns influence the persuasiveness of reviews. The authors tested reviews using first-person pronouns (e.g., “I”) and those using second-person pronouns (e.g., “you”). The effect of this manipulation differed for review writers and readers. Writers believed reviews with second-person pronouns would be more persuasive while readers found reviews with first-person pronouns to be more persuasive. The authors also investigated mediators and moderators of this relationship.

Paper 2 examined how the level of arousal in reviews impacts consumers’ judgments and choices, holding valence constant. When choosing between products with positive reviews, participants were more likely to choose the product with the review highest in arousal. The pattern reversed when choosing between products with negative reviews. The authors also distinguish between the emotions expressed by the writer and those experienced by the reader. The emotion experienced by the reader predicted quality judgments and choice, even after controlling for emotion expressed by the reviewer.

Paper 3 studied how incentives to leave reviews influences the content of reviews. Companies frequently incentivize consumers to write product reviews, yet there is mixed evidence for how incentives affect review positivity, a key predictor of sales. The authors aimed to reconcile this by examining how incentives influence review content using multiple natural language processing tools and human judgments. They found incentives increased review positivity, and this effect was mediated by the enjoyment of reviewing. This is important for marketers trying to improve product ratings.

Paper 4 considered how heterogeneity across reviewers affects the content in their reviews. The authors used a multi-method approach to investigate how individual differences in political ideologies influence negative reviews. They found reviews for poor service experiences were harsher from liberals when the service involved a difference in authority (e.g., a doctor), but harsher from conservatives when the service provider lacked authority (e.g., a waiter). Understanding heterogeneity of this nature can significantly affect the conclusions one draws from reading reviews.

We add to the rapidly growing literature on consumer reviews by examining key components of reviews that influence consumers. Papers 1 and 2 highlight the importance of distinguishing the effect of reviews on writers from their effect on readers. Papers 3 and 4 showed how differences in incentives and personal characteristics influenced the content of consumer reviews. The papers in this session make novel theoretical contributions that also have practical implications for marketers.

“I like it” vs. “You’ll like it”: The Use of Personal Pronouns in Online Reviews

EXTENDED ABSTRACT

In online reviews, it’s not rare to see that reviewers take a first-person perspective to talk about their attitude toward their product (e.g., “I didn’t find this book very interesting.”) or take a second-person perspective to express their opinions (e.g., “You’ll find this book very interesting.”). This research aims to explore how the use of personal pronouns (“I” vs. “you”) in online reviews impacts reviewers and review readers when they assess the persuasiveness of the reviews.

First, from the reviewers’ perspective, when reviewers use the second-person pronoun “you” (vs. the first-person pronoun “I”), they think about the problem from others’ perspectives to a larger extent. Previous literature on perspective-taking suggests that taking the perspective of others facilitates self-other overlap and leads to a greater sense of similarity between oneself and the target (e.g., Davis et al., 1996; Maner et al., 2002; Cialdini et al., 1997). As a result, reviewers would predict others to be more likely to share the same opinions and thus be more likely to be persuaded by the message when “you” (vs. “I”) is used. We thus propose that review writers would perceive using “you” (vs. “I”) as the grammatical subject in their review to be more persuasive (H1(a)) and this effect is mediated by perspective-taking (H1(b)).

Next, from the review reader’s perspective, previous literature on reactance has suggested that people experience psychological reactance when they feel their freedom is constrained (Brehm 1966). As a result, individuals might negatively evaluate the source of the restriction as a way to restore their freedom (Clee and Wicklund 1980). When encountering online reviews using the second-person pronoun “you” (vs. the first-person pronoun “I”), review readers might feel that they were explicitly told how they should evaluate the product after the purchase. Therefore, they would become more reactant to following the recommendation. We thus propose that review readers would perceive “I” (vs. “you”) to be more persuasive (H2(a)), and this effect of pronouns on persuasion is mediated by reactance among review readers (H2(b)).

We further introduced a moderator and tested how the review type affects the effect of personal pronouns on review persuasiveness in this study. Based on the literature on cognition-based and affect-based persuasion (e.g., Rosselli, Skelly, and Mackie 1995), for cognition-based

(vs. affect-based) messages, people pay more attention to the message content itself and less to the peripheral factors (such as personal pronouns). Therefore, we predict that the effect of pronouns on review persuasiveness should be weaker for attribute-based compared with attitude-based reviews as the former is more cognition-based (H3).

We've conducted three studies so far to test our hypotheses.

Study 1 (N=95) aimed to test how reviewers perceive the persuasiveness of the review using different pronouns. Participants were told they bought a water bottle online and had posted a positive review about their purchase. Then, they were shown a review either using "I" or "you" as the grammatical subject and answered questions measuring their perceptions of review persuasiveness. The results of this study support our H1(a) ($M_I=4.70$ vs. $M_{you}=5.38$; $F(1, 93)=11.52$, $p=.001$) that review writers would perceive using "you" (vs. "I") in their review to be more persuasive.

Study 2 (N=100) was to test how pronouns affect the review's persuasiveness from the review reader's perspective (H2(a)). The product category and the procedure were the same as those in study 1 except those participants were told that they were browsing online reviews to help them make a purchase decision. A one-way ANOVA revealed a significant main effect of pronouns on review persuasiveness where participants perceived the "I" reviews to be more persuasive, ($M_I=4.45$ vs. $M_{you}=3.96$; $F(1,98)=5.53$, $p=.021$), which provides support for H2(a).

We then conducted Study 3 (N=347) to replicate the effects and explore the process by which personal pronouns affect review persuasiveness from both the reviewer and the review reader's perspectives using another product category (i.e., wall clocks). In addition, to test H3, in Study 3, participants were told they were either a reviewer who had posted a positive review about a wall clock they purchased or a review reader who was browsing online reviews to help them make the decision. They were then presented with either an attitude-based review or an attribute-based review, and the pronouns used in the review were either "I" or "you". Consistent with Studies 1 and 2, by contrast, we found that reviewers believed attitude-based reviews using "you" (vs. "I") would be more persuasive ($M_I=4.00$ vs. $M_{you}=4.52$; $F(1, 339)=4.55$, $p=.034$), whereas review readers perceive "I" to be more persuasive ($M_I=4.20$ vs. $M_{you}=3.70$; $F(1, 339)=3.95$, $p=.048$). However, the effect of personal pronouns is not significant for both reviewer and review readers conditions when the review is attribute-based. Also, as we predicted, mediated moderation analyses suggested that the interaction effect of pronouns and the review type was fully mediated by perspective taking for reviewers and by reactance for review readers. These results provide support for our hypotheses H1 to H3.

In summary, across three studies, we find that for attitude-based reviews, the audience perceives "I" to be more persuasive whereas reviewers see "you" as more persuasive. For attribute-based reviews, the effect was mitigated. Furthermore, the effect of pronouns on persuasion is mediated by perspective-taking for the reviewer and by reactance for the audience.

The current research contributes to the literature on both the use of pronouns and the writing style in online reviews. Our research also provides helpful insights to practitioners and consumers by highlighting the potential inconsistency between reviewers' and review readers' perceptions of the persuasiveness of reviews using different pronouns.

Valence and Arousal in Consumer Reviews: Effects on Evoked Emotion and Product Evaluations

EXTENDED ABSTRACT

Consumers expressing emotion in product reviews has become a topic of great interest to marketers and researchers. Correspondingly,

researchers increasingly rely on sentiment analysis – which measures positivity and negativity in reviews – as a way of understanding them. However, this method has two important shortcomings. First, a unidimensional scale does not adequately capture the emotions in reviews. Researchers examining emotion in other contexts underscore the need to measure emotions using two dimensions: first, the positivity or negativity of the emotion – i.e., valence – and second, the intensity of the emotion – i.e., arousal (Russell, 1978). We examine valence and arousal as two separable dimensions of emotion in reviews. A second shortcoming is that sentiment analysis typically focuses only on the emotions detected in the review's text. However, an important driver of consumer behavior is the emotion the reader experiences as they read the review. We measure both the emotions expressed by the writer as well as those experienced by the reader. This approach provides a better understanding of the role emotions play in consumer responses to product reviews.

Study 1 (N=621) used a set of real Amazon reviews to examine whether and how emotion expressed in reviews corresponds to quality judgments. This study also measured participant judgments on several additional measures that might similarly correlate with emotion (e.g., helpfulness). All analyses control for these variables.

We chose 24 top selling products on Amazon across six product categories. Participants were randomly assigned to one product and read the top positive and top negative review, as identified by Amazon, in a random order. Participants separately rated both the negative and positive emotion expressed by the reviewer, hereafter referred to as expressed emotion (1 = none or very little negative/positive emotion, 5 = an extreme amount of negative/positive emotion). Participant also rated the emotion they felt while reading the review, hereafter referred to as evoked emotion (1 = none or very little negative/positive emotion, 5 = extremely negative/positive). Finally, participants provided a judgment of the quality of the product (1 = worst quality, 7 = highest quality).

We ran two nested linear mixed-effects regressions, including participant-level random intercepts to account the repeated measures. Model 1 regressed quality judgments on expressed emotion and several control variables, omitting evoked emotion. As expected, both negative ($b = -0.29$, $t = -7.09$, $p < 0.001$) and positive ($b = 0.44$, $t = 13.61$, $p < 0.001$) expressed emotion were significant predictors of product quality. Model 2 was the same as Model 1 but added evoked emotion as another predictor. A likelihood ratio test with these models confirmed a significant improvement in model fit when evoked emotion is included ($\chi^2(2) = 24174$, $p < 0.001$). Thus, Study 1 provided initial evidence that evoked emotion can predict product quality judgments even after controlling for expressed emotion.

Study 2 (N=700) built on Study 1 by experimentally manipulating expressed emotion. We designed and pre-tested sets of reviews that allowed us to hold objective information constant while manipulating expressed emotion on two dimensions. The study used a 2(valence: positive or negative) x 2(arousal: low or moderate) within-subjects design. We elicited evoked emotion and product quality judgments. As expected, valence significantly predicted quality such that products with negative reviews were rated as lower quality ($M = 2.93$, $SD = 1.13$) than products with positive reviews ($M = 5.57$, $SD = 0.87$, $t = 53.76$, $p < 0.001$). Arousal also significantly affected quality judgments. For negative reviews, products that had reviews with moderate arousal were rated as lower quality ($M = 2.77$, $SD = 1.14$) than products with low arousal reviews ($M = 3.09$, $SD = 1.10$; $b = -0.19$, $t = -8.89$, $p < 0.001$). For positive reviews, arousal had the opposite effect on quality judgments ($M_{High} = 5.75$, $SD_{High} = 0.88$ vs. $M_{Low} = 5.4$, $SD_{Low} = 0.82$; $b = 0.21$, $t = 9.71$, $p < 0.001$).

We conducted mediation analyses, separately for positively and negatively valenced reviews, to test whether the effect of expressed

emotion on quality judgments was mediated by differences in evoked emotion. For negative reviews, the indirect effects of negative evoked emotion (Bootstrapped 95% CI = [-0.13, -0.07]) and positive evoked emotion (Bootstrapped 95% CI = [-0.09, -0.02]) were significant. For positive reviews, the indirect effect of negative evoked emotion was not significant, but the indirect effect of positive evoked emotion was (Bootstrapped 95% CI = [0.08, 0.12]). The muted effect for positive reviews is consistent with negativity bias. Study 2 provided evidence that arousal affects quality judgments even when holding valence constant. It also suggests a causal pathway via differences in evoked emotion.

In addition to quality judgments, participants in Study 2 made a forced choice between the product with low or moderate arousal (separately for positively and negatively valenced reviews). To examine differences in product choice, we conducted separate chi-squared tests for each valence condition. Choosing between products with negative reviews, participants were more likely to choose the product with the low arousal review (63%; $\chi^2(1) = 47.55, p < 0.001$). In contrast, when choosing between products with positive reviews, participants were more likely to choose the product with the moderate arousal review (60%; $\chi^2(1) = 29.51, p < 0.001$). This highlights the importance of arousal for product choices. We replicated the results of Study 2 as part of a larger, incentive compatible experiment where some participants received their chosen product.

Our findings make two key contributions to existing research on the role of emotion in reviews. First, we found that evoked emotion had explanatory power in predicting quality judgments, controlling for expressed emotion. This goes beyond prior research and typical sentiment analyses that have focused on expressed emotion. Additionally, we found that the level of arousal in the reviews significantly influenced judgments of quality and product choice, holding valence of the reviews constant. This adds to existing research that measures emotions on a unidimensional scale that only includes valence. Both findings allow marketers and researchers to gain a more nuanced understanding of how product reviews impact consumer behavior.

Incentives Increase Relative Positivity of Review Content and Enjoyment of Review Writing

EXTENDED ABSTRACT

People rely on product reviews when making purchase decisions (Podium 2017). To motivate customers to write reviews, companies frequently use financial and nonfinancial incentives (Burtch et al. 2018; Cabral and Li 2015; Khern-am-nuai et al. 2018). Indeed, in a survey we conducted of 285 participants, one in two people (51.2%) reported having been incentivized by a company to write a product review.

This strategy of incentivizing reviews is effective; incentives help people overcome barriers that prevent them from posting (Moe and Schweidel 2012). That is, incentives can lead to selection effects—modifying *who* writes reviews. Beyond changing who reviews, we ask whether incentives also change review content—what reviewers write.

We theorize that incentives change review content by increasing consumers' intrinsic motivation to write reviews. This prediction is supported by research on affect transfer, which finds that properties of achieving a goal (e.g., enjoyment of losing weight) can transfer over to the means of achieving the goal (e.g., running; Fishbach, Shah and Kruglanski 2004; Kruglanski et al. 2002). This prediction is further supported by work on evaluative conditioning (De Houwer et al. 2001), which demonstrates that a stimulus's valence changes when it is paired with a positively valenced stimulus.

We test this novel prediction, and key moderators, across eight studies. First, a pilot study utilized real product reviews from a home improvement store's website that contained a label indicating whether

the review was incentivized or not. Demonstrating ecological validity for our effect, we found that incentives increased expression of positive (vs. negative) emotions in real reviews ($M_{\text{incentive}} = 7.83\%$; $M_{\text{no incentive}} = 4.27\%$; $p < .001$).

Experiment 1 (N=867) provided a causal test of this effect. Participants watched and reviewed a YouTube video; the review was either incentivized (\$0.25) or not. After, we measured their intrinsic motivation to write reviews (McAuley et al. 1989; $\alpha = .91$) (1982). Incentivized participants reported greater intrinsic motivation ($M_{\text{incentive}} = 4.56$; $M_{\text{no incentive}} = 4.10$; $p < .001$), and expressed greater positive emotion in their review, which we assessed using multiple natural language processing tools (LIWC: Pennebaker et al. 2015; $M_{\text{incentive}} = 7.91\%$; $M_{\text{no incentive}} = 6.56\%$; $p = .020$; EL 2.0: Rocklage et al. 2018; $M_{\text{incentive}} = 2.20$; $M_{\text{no incentive}} = 1.60$; $p = .014$). Supporting our proposed process, intrinsic motivation mediated the effect of incentives on positivity of review content. Demonstrating robustness, we replicated this pattern when students at a cafeteria reviewed their dining experience for \$1.00 or no incentive, with review positivity evaluated by human judges ($p = .004$).

Experiment 2 (N=792) tested our prediction across different incentive structures: guaranteed \$0.20, lottery for \$200, and lottery for Apple AirPods. The three incentive conditions increased review positivity compared with no incentive (Table 1), which was mediated by increased intrinsic motivation to write a review.

Experiment 3 (N=571) addressed an alternative account—that reciprocity, rather than intrinsic motivation, drives the effect of incentives on review positivity. Participants reviewed their McDonald's experience, either for an incentive from McDonald's, an incentive from Burger King (McDonald's competitor), or for no incentive. If reciprocity concerns drive the effect of incentives on review positivity, we should only observe an effect when McDonald's incentivizes the review. Against this account, both incentive conditions increased intrinsic motivation and review positivity compared to no incentive.

Experiments 4-5 tested for key moderators. Our theory builds on research demonstrating that intrinsic motivation in rewarded activities increases when rewards and activities are perceptually fused in people's minds (Fishbach and Woolley 2022; Kruglanski et al. 2018; Woolley and Fishbach 2018). This fusion increases intrinsic motivation by causing positive features of the incentive (i.e., excitement about receiving it) to transfer to the activity. Our theory thus predicts there should be no effect of incentives when (1) incentives are *not* associated with an activity (Experiment 4) or (2) incentives are negative (Experiment 5).

To moderate the incentive-review association, in Experiment 4 (N=581) participants wrote a review of their recent Starbucks experience as a function of condition: (incentive-for-review vs. incentive-for-study vs. no-incentive). We predicted and found that incentives only increase intrinsic motivation, and subsequently, review positivity, when they are strongly associated with writing a review (vs. associated with completing a study; Table 1).

To moderate the effect of positive affect transfer from incentives, in Experiment 5 (N=758) participants were assigned to one of four conditions in a 2 (incentive vs. no incentive) \times 2 (liked vs. disliked company) between-subjects design. Participants wrote a review for a Kellogg's product, which was either incentivized or not. We further manipulated whether Kellogg's was liked or disliked by providing negative information about Kellogg's or not. We predicted that the presence (vs. absence) of an incentive from a disliked company would have no effect on intrinsic motivation or review positivity, as there is no positive affect to transfer to the act of writing a review. In line with this prediction, we found a significant interaction predicting intrinsic motivation ($p = .008$) and review positivity ($p = .002$). When Kellogg's was liked, an incentive (vs. no incentive) increased intrinsic motivation ($M_{\text{incentive}} = 4.79$; $M_{\text{no incentive}} = 4.08$; $p < .001$) and review positivity ($M_{\text{incentive}}$

$M_{\text{centive}} = 10.00\%$; $M_{\text{no incentive}} = 7.86\%$; $p = .007$), which attenuated when Kellogg's was disliked (intrinsic motivation: $M_{\text{incentive}} = 4.14$; $M_{\text{no incentive}} = 4.08$; $p = .713$; review positivity: $M_{\text{incentive}} = 7.73\%$; $M_{\text{no incentive}} = 9.10\%$; $p = .081$).

These results demonstrate that incentivizing reviews can change *what* consumers post, and that this occurs by increasing intrinsic motivation to write reviews. This effect occurred for a range of products and experiences, including reviews of YouTube videos and customers' product experiences from McDonald's, Starbucks, and Kellogg's.

Importantly, these findings also identify when incentives will *not* increase positivity of review content, either when incentives are not associated with the act of reviewing or when receiving the incentive does not result in positive affect. This research thus advances our understanding of motivation from incentives, and offer implications for managers incentivizing consumers to post reviews.

Negative Word of Mouth: The Role of Consumer Characteristics and Failure Type

EXTENDED ABSTRACT

With the rise of technology, it has never been more convenient for consumers to express their dissatisfaction to suppliers and customers on the internet. Negative word-of-mouth has become a typical response to dissatisfaction that can be easily shared with millions of other customers via online review platforms (Ward and Ostrom 2006). While such complaints might negatively influence firms' performance, studying them offers valuable opportunities to identify the shortcomings, understand the underlying issues, and address them (Bell and Luddington 2006; Peter McGraw, Warren, and Kan 2015)

Research on consumer complaints has studied the impact of various variables on complaint likelihood, including political ideology (Jung et al. 2017), self-efficacy, Machiavellianism (Shoham, Gavish, and Segev 2012), impulsivity, and self-monitoring (Sharma et al. 2010). While these findings enable marketers to understand why some consumers are more likely to lodge complaints, they do not offer any guidance for detecting the sources of dissatisfaction and complaints. This work draws on customer satisfaction, consumer conservatism research, and online word of mouth to examine how conservative and liberal consumers voice their dissatisfaction on online review platforms in various service contexts. We hypothesize that conservatives (vs. liberals) are more likely to complain about the interpersonal aspects of service encounters when service providers do not have authority over consumers (e.g., dining setting). However, when service personnel are perceived to have higher authority (in e.g., healthcare context), they would be less likely to complain about such interactions. We provide support for our hypotheses in four multimethod studies.

Study 1 tested the hypothesis that conservatives are more likely to complain about their interpersonal interactions with service personnel in a dining context. We collected 352,099 consumer reviews posted on Google for 893 branches of a restaurant chain in the United States. Using the Latent Dirichlet Allocation (LDA) algorithm, we identified five popular topics in the reviews and their probabilities for each review. A single county-level conservatism index was calculated by averaging and subtracting the percentage of Democratic voters from the percentage of Republican voters in five presidential elections between 2000 and 2016. By conducting multiple-regression analyses, we found that conservatism had a positive effect on the probability of complaining about personal interactions ($b = .11$, $SE = .03$, $p < .001$). The effect of conservatism on the probability of complaining about food quality was not significant ($b = -.01$, $SE = .04$, $p = .888$). These findings lend support to the hypothesis that conservatives are more likely to complain

about the quality of personal interactions (but not the food quality) in a dining context.

Study 2 replicated the findings of Study 1 in a randomized and controlled experiment. Prolific users were randomly assigned to poor food quality and poor personal interaction conditions in a between-subjects design. We measured and regressed complaining likelihood and overall star rating on conservatism, service failure type (coded: 0 = low food quality, 1 = poor personal interaction), and their interaction. For none of the two dependent variables (i.e., complaining likelihood and overall rating) was the main effect of conservatism significant ($b = .12$, $SE = .08$, $p = .140$ and $b = -.02$, $SE = .04$, $p = .558$, respectively), suggesting that conservative and liberal consumers did not react differently when food quality was low. However, the significant interaction between failure type and conservatism on complaining likelihood and overall rating ($b = .30$, $SE = .12$, $p = .012$ and $b = -.11$, $SE = .05$, $p = .030$) revealed that conservative consumers were more likely to complain and to give lower ratings to the restaurant when they were not satisfied with personal interactions.

Study 3 tested the hypothesis that conservative consumers are less likely to complain about the quality of interpersonal interactions in a healthcare setting because healthcare providers are perceived to have authority over individuals. We used the HCAHPS survey results (which contains 19 core questions about critical aspects of patients' hospital experiences) collected and analyzed by the US Center for Medicare and Medicaid Services (CMS) in 2020. We regressed facility-level consumer ratings for each criterion on our conservatism index defined in Study 1 and several other county-level demographic variables and found that conservative patients had rated providers more positively on all criteria (all $ps < .001$). Importantly, conservatism had a positive effect on the overall star rating of the hospitals ($b = .12$, $SE = .03$, $p < .001$) as well as on the quality of communications with doctors ($b = .20$, $SE = .03$, $p < .001$), nurses ($b = .16$, $SE = .03$, $p < .001$), and staff ($b = .18$, $SE = .03$, $p < .001$).

Study 4 sought to test whether the findings of Study 3 would hold for consumers' online word of mouth posted on review platforms. We used the list of healthcare facilities included in the 2020 CMS dataset and collected reviews posted for those facilities on Google. Our topic modeling revealed that three popular topics were "poor medical treatment," "poor personal interactions," and "general positive experience." Consistent with Study 3, we found that conservative consumers were less likely to complain about interpersonal aspects of their visits in their reviews ($b = -.13$, $SE = .02$, $p < .001$). Consistently, the regression analysis revealed that conservative consumers were more likely to express their satisfaction with healthcare facilities ($b = .10$, $SE = .02$, $p < .001$). We also found that conservatism did not affect the probability of complaining about the quality of the medical treatments ($b = -.02$, $SE = .02$, $p = .449$).

Taken together, the findings of this paper suggest that conservative and liberal consumers react differently to various aspects of services, and those reactions differ across industries. The current work adds to the two streams of research on consumer complaining behavior and online word of mouth by identifying how a specific consumer characteristic—political leaning—affects their online complaints about various aspects of services. Marketers can use the findings of this research and consumers' voting behavior to improve their service quality and online reputation by offering customized services.

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Consuming Lethality: Fear, Gunfluencers, and Morality in American Gun Culture

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Paper #1: Fear Made Me Buy It: American Gun Culture, Policymakers, and Market Messaging

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Paper #2: Digital Curation in Contested Markets: How Gunfluencers Enable the Platformization of Second Amendment Ideology

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Paper #3: The (Ir)Responsible American Consumer: Examining Morality and Responsibilization for Armed Self-Defense

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SESSION OVERVIEW

American gun culture, rooted in and sustained by the Second Amendment to the U.S. Constitution, is unlike other gun cultures around the world. While the Second Amendment dates, and some would argue was essential, to the country's establishment as an independent and sovereign nation, the same Amendment is now used as justification for open carrying semi-automatic battle-ready weaponry into local coffee shops. This session examines how some stakeholders in the marketplace leverage various interpretations of the Second Amendment to buoy gun consumption and culture despite (or perhaps in response to) others' efforts to increase licensing and accreditation for gun ownership.

Across three papers, the authors in this session consider relationships between various uses of the Second Amendment by stakeholders to understand and explain how gun culture manifests and impacts American society in addition to the obvious destruction that is left behind through the loss of lives. The first paper considers the motivation for gun consumption by examining roles of fear that exists in gun culture associated with safety and protection. Paper 2 examines how influencers, termed 'gunfluencers', employ social media to curate content related to this contested market. The third paper examines responsibilization through the presumed shift of responsibility from government to individuals for safety and protection.

This session expands our current understandings of American gun culture by presenting various and interrelated dimensions of gun culture. In particular, there is the examination of a primary underlying cause, fear, that spurs gun consumption (paper 1), assessment of how social media roles and processes are employed to evade advertising bans related to guns while propagating consumer angst related to perceived limitations (paper 2), and consideration of the conditions under which consumers may adopt responsibility for self-protection. Together, this session will provide a rich and vigorous forum for discussing a pressing issue for which consumer research may provide insights and opportunities for societal well-being.

Fear Made Me Buy It: American Gun Culture, Policymakers, and Market Messaging

EXTENDED ABSTRACT

Guns in the United States outnumber people (Karp 2018). Early gun consumption in the U.S. began as tools of necessity but evolved into equipment for sport hunting and shooting, as well as desired commodities for collecting (Yamane 2017). Throughout the 20th century, guns became more closely associated with notions of protection and safety (Kleck and Gertz 1998). The desire for safety implies a response to fear, which is unspecific and variously described. Such fear is related to firearm purchases, yet it is necessary to understand how and what types of fear drive protection-focused gun culture in the United States.

American gun culture is not monolithic and can be broadly viewed through its subcultures such as collectors, hunters, or protectors. Culture shapes norms for behaviors, influences which behaviors are practiced, determines how they are enacted, informs who is to participate, and what behaviors and activities mean. Across gun subcultures, it is likely that the impetus for gun purchases differs (e.g., gift vs. stockpile) as do the types of purchases (e.g., collectible vs. ghost guns). Though the various gun cultures may overlap, our focus is on gun culture related to protection.

Fear is a response to threat (Donovan and Henley, 1997; La-Tour and Rotfeld 1997), and it promotes a wide range of consumption behaviors associated with protection and avoidance. Thus, fear indirectly impoverishes society through opportunity costs associated with avoidance of community, alteration of daily living habits, and the psychological effects of living in a state of anxiety (Frank and Klieman 1977). More specifically, Americans avoid neighborhoods, businesses, strangers, civic meetings, events, and opportunities in their communities designed for enjoyment or edification that serve to sustain or improve our communities. Thus, society at large suffers when fear manifests and erodes the quality of life by decreasing individuals' willingness to contribute to and engage in behaviors that facilitate the prosperity of communities while also increasing the willingness to consume products that facilitate avoidance and protection (Frank and Klieman 1977).

Fear can lead to the desire to engage in consumption behaviors that facilitate affiliation or connection with others as a way of coping (e.g., Schachter 1959). Much of the research on fear tend to be more psychological in nature as it examines cognitive or behavioral response to perceived threats. Media accounts provide a layperson's explanation of a relationship between fear and protection-focused gun culture (c.f., Beer 2017). Our research examines the roles of fear in a gun culture focused on protection to theorize the mechanism through which fear influences gun culture and consumption behaviors. Thus, the research question guiding this inquiry is what socio-cultural factors influence experiences of fear that lead to gun consumption.

Our intention is to understand the role of fear in American gun culture related to protection. The data for this study is comprised of archived media reports and advertisements as well as perceived policy changes as evident through elected presidents (Humphreys, 2010). We first collected market messaging (e.g., advertisements, news articles) over the past 40 years and codified the change in market messaging. We identify how messages that primarily focused on guns as tools for sporting and family fun have been supplanted by those focusing on staving off threat through preparedness manifesting as gun ownership.

Next, we identified key stakeholders (e.g., National Rifle Association, anti-gun activists, gun manufacturers) and their influence on gun culture through perceived policy. We analyze changes across market messages and perceived policy to assess how those changes influence protection-oriented gun culture.

Though there is much discussion on how laws shape gun culture, the foundational law that allows for gun ownership is the Second Amendment in the United States Constitution. This Amendment has not been modified since its inclusion in the Constitution, yet its use to sustain protective-oriented gun culture is constant.

The preliminary findings from our study contribute an expanded understanding of fear, explains the relationship between fear relative to gun consumption, and identify how fear is employed by market actors to support a protection-oriented gun culture. The last 40 years have brought drastic changes. Historically, firearms were advertised as a means of entertainment and an instrumental value in the lives of owners (e.g., Henning and Witkowski 2013). Over the years, firearms advertising messaging has evolved to reflect society's interests, political shocks, and fear.

Advertisements meant to influence individuals to purchase firearms have historically followed traditional marketing messaging. Traditional messaging includes workmanship and product quality, sporting and fun, self-expression and group affiliation, and protection and safety (e.g., Henning and Witkowski 2013). More recently, gun advertising tends to reflect subcultural interests rooted fundamentally in fear and protection. This research contributes an initial understanding of key sociocultural dimensions of fear that affect our society's safety and well-being, political landscape, and consumption.

Digital Curation in Contested Markets: How Gunfluencers Enable the Platformization of Second Amendment Ideology

EXTENDED ABSTRACT

A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed.

- Second Amendment, Constitution of the United States of America

America's contemporary "gun culture" is a unique and contested blend of gun ownership, consumption practices, market forces, ideology, politics and policies (Boine et al. 2020). It is grounded in the country's constitutional protection of firearms ownership and characterized by the "notion that the people's right to bear arms is the greatest protection of their individual rights and a firm safeguard of democracy" (Hofstadter 1970, n.p.).

Recent years have been marked by a shift from the traditional gun culture of hunting and recreational shooting to "Gun Culture 2.0"—America's contemporary, defensive gun culture (Yamane, Yamane, and Ivory 2020). The National Rifle Association, as de facto leaders of the gun lobby, created and proliferated an ideology, characterized by individual freedom, limited government, and crime control (Lacombe 2021). We refer to this as "Second Amendment ideology" (2A ideology). In the past decade, guns became increasingly contested: defensive gun usage, training, and consumer subcultures proliferated (Barnhart et al. 2018) and gun control groups launched countervailing campaigns toward the gun lobby (Huff et al. 2017) while market actors operating outside the core firearms industry implemented restrictive firearms-related policies. For example, mainstream media (e.g., television, newspapers) and digital media (e.g., Google, YouTube) have voluntarily implemented bans on firearms advertising. This fosters an

unusual context for unconventional market actors to perform marketing activities.

Despite restrictions, gun-related content is widespread on social media (Jordan, Kalin, and Dabrowski 2020). Such content is driven by influencer culture, which spurred "the proliferation of sexy, young, gun-brandishing Instagram influencers," colloquially dubbed 'gunfluencers' (Light 2021, n.p.). In consumer culture, influencers represent important vehicles in platformization, defined as "the penetration of economic, governmental, and infrastructural extensions of digital platforms into the web and app ecosystems, fundamentally affecting the operations of the cultural industries" (Duffy, Poell, and Nieborg 2019; Nieborg and Poell 2018, p. 4276). Put simply: platformization captures the platform-readiness of people, products, and policies (Helmond 2015). To that end, we ask: how do influencers platform ideological consumption?

Our study adopts a dual qualitative textual and visual analysis (Sloan and Quan-Hasse 2017) of social media content from gunfluencers on Instagram. All gunfluencers (13 women; 11 men) are based in the U.S. and have at least 100,000 followers on Instagram. Preliminary findings illustrate how gunfluencers engage in digital curation in a contested market, which is conceived of as an iterative process through which gunfluencers borrow social media influencer tactics to promote not just firearms—but to platform a unique ideology of U.S. gun culture, or 2A ideology. Gunfluencers draw on four curatorial mechanisms: victimizing, glamorizing, demystifying, and tribalizing. We describe each curatorial mechanism and its role in platforming 2A ideology.

First, gunfluencers use the curatorial mechanism of *victimizing* to position guns and gun consumers as a mistreated and oppressed group in a way that motivates and sustains support for 2A ideology. This mechanism conveys how potential gun consumers should feel. Gunfluencers use victimizing to frame gun ownership as an oppressed lifestyle. For instance, @leaspeed6 posts an image of four assault rifles on Instagram and notes similar content of hers was already removed from Instagram twice. In the caption, she ponders, "will [Instagram] take down the photo?" Other gunfluencers post screenshots of news stories about lawmakers "banning the sale of ammunition magazines" and "using coded language to attack your 2A rights." Victimizing enables platforming of 2A ideology by perpetuating the fear and risk of guns being outlawed.

Second, gunfluencers use the curatorial mechanism of *glamorizing* to position guns as a commodity of conspicuous consumption and to valorize the lifestyle of gun ownership as ideally patriotic. This conveys how gun consumers should look as they embody 2A ideology. Gun ownership is not just about guns; it is about idealizing lavishness, abundance, allure, and extremes associated with a capitalistic, entrepreneurial spirit. For instance, @drdemolitionmatt, consistently posts images of his vault collection of hundreds of firearms alongside other images of materialistic abundance (e.g., mansion home, car collection). Others, such as @misslaurenvictoria, post content that infuses firearms into aestheticized images drawing upon America's cultural history (e.g., Thanksgiving). Glamorizing enables platforming of 2A ideology by reproducing the capitalist American dream.

Third, gunfluencers use the curatorial mechanism of *demystifying* to make the gun consumer lifestyle seem accessible and provide insider knowledge of gun culture. This conveys how gun consumers should act in order to express their commitment to 2A ideology. Gunfluencers outline language to use (e.g. "defend the Second, plead the fifth"), how-to tutorials (e.g., load a gun, shoot a gun), and products to purchase—many of which are not directly related to gun ownership but rather reflective of the gun culture-approved lifestyle products (e.g., Black Rifle Coffee, 1stPhorm). Demystifying enables platforming of

Second Amendment ideology by acting as a call to everyday people to reinvent themselves—authentically—through gun culture.

Fourth, gunfluencers use the curatorial mechanism of *tribalizing* to establish and reinforce communal aspects of gun ownership and create a collective bond. This conveys with whom gun consumers should associate. Tribalizing shifts attention not to the individual but to the collective—the family, the community, and the generational passing down of gun culture. For instance, two prominent gunfluencers in our data, @JerryMiculek and @Lena_Miculek, are father and daughter. Gunfluencers collaborate with each other, which reinforces the kinship and community. Tribalizing enables platforming of 2A ideology by reinforcing a family first mentality and militia-esque tight knit group.

Contributing to research on the digital platformization of consumer culture (Airoldi 2021), our research explains how gunfluencers curate 2A ideology. Gunfluencers operate as ‘hired guns’ for brands, circumventing regulatory restrictions on online gun advertising while simultaneously platforming the contested gun market. This platformization performed through gunfluencers is less about selling guns as products and more about selling guns as a consumer lifestyle.

The (Ir)Responsible American Consumer: Examining Morality and Responsibilization for Armed Self-Defense

EXTENDED ABSTRACT

In recent decades, the American gun lobby and firearms industry have worked to responsabilize consumers for armed protection against crime. Consumers’ responses to these efforts are varied; many have embraced the idea that they are responsible for their own armed self-defense, while others reject responsabilization efforts, maintaining that armed protection against crime is the responsibility of the state (Barnhart et al. 2018; Steidley 2019). We examine morality in the process of consumer responsabilization to account for differences in how American consumers respond to responsabilization for armed self-defense.

Consumer responsabilization is the shifting of responsibility for solving a societal problem from the state to individual consumers in a process that creates a responsible consumer subject (Giesler and Veresiu 2014). Recent consumer research has revealed how this shift can be initiated by a range of market actors, including organizations and political leaders, using a range of programs, policies, and discursive framing (Aboelenien, Arsel, and Cho 2020; Bajde and Rojas-Gaviria 2021; Coskuner-Balli 2020; Eckhardt and Dobscha 2019). Responsibilization is a neoliberal governance process that integrates market logic – free choice, rationality, individual responsibility – with social life through a four-stage “PACT” process that emulsifies consumer understanding and morality (Giesler and Veresiu 2014; Shamir 2008): the solution is first *Personalized* in a way that frames the consumer as a moral agent (and consumers who do not accept responsibility as immoral); responsible actions are *Authorized* and elaborated by legitimate experts; through the development of markets, consumers are *Capabilized* to take on the responsibility; and finally consumers are *Transformed* as they adopt the focal responsible practices (Giesler and Veresiu 2014, 841).

Critically, responsabilization demands a moralistic foundation; the individual consumer must regard the taking-on of responsibility for the solution as moral, and the rejection or avoidance of responsibility as immoral. In prior consumer work on responsabilization, the societal problems addressed are generally accepted as problems, and individuals’ actions to alleviate the problems – such as efforts to mitigate food insecurity (Eckhardt and Dobscha 2019) – are generally regarded as moral. However, the context of armed self-defense is complicated by conflicting moralities; consumers can regard the enthusiastic acceptance of this responsibility as moral, immoral, or amoral.

The American gun lobby and firearms industry have promoted consumer responsabilization for armed self-defense (Carlson 2019; Steidley 2019), building on the constitutional right “to keep and bear arms,” which includes individuals’ use of handguns for self-protection at home (see Ruben and Miller 2017). Using targeted messaging to consumers and law-makers, these responsabilizing agents have established gun ownership as an identity that centers patriotism and self-sufficiency for law-abiding Americans; have developed a complementary and underlying ideology, built around liberty, crime control, and limited government; and have facilitated the net expansion of gun rights across the country (Carlson 2015; Lacombe 2021). They have promoted guns as material emblems of American values, as tools for power and intimidation, and as a means to achieve individual freedom (Browder 2019; Busse 2021; Huff, Barnhart, and Burkhardt 2021). Guns have attained notoriety at the intersection of national politics, particularly in relation to racism, policing, and violence (Carlson 2020; Metzl 2019), and have evolved into the lodestone for a traditional and emergent “gun cultures” (Boine, Caffrey, and Siegel 2022; Yamane, Ivory, and Yamane 2019).

Prior responsabilization research accounts for differing consumer opinions on appropriate policy to mitigate social problems (DeSoucey and Waggoner 2022; Eckhardt and Dobscha 2019), and consumer resistance to responsabilization (Gonzalez-Arcos et al. 2021). Less is known about the role of morality in consumer responses to responsabilization, thus, we ask, in what ways do varying assessments of morality influence consumers’ response to responsabilization?

To answer this question, we gathered textual data from a closed, professionally-moderated online discussion group, comprised of 150 Americans who varied in terms of demographics, geography, political orientation, and experience with firearms. We also conducted in-depth interviews with 13 consumers. Questions and prompts focused on consumer rights and responsibilities in the context of firearms. The data set consists of 11,830 online posts and 361 pages of transcripts.

Analysis was guided by our understanding of theory and literature.

We find that consumers identify and respond to the morality implicated at each stage of the PACT process (Giesler and Veresiu 2014), and argue that these moralized responses shape whether and how they respond to responsabilization for armed self-defense. First, in response to *personalization* work, wherein the gun lobby and industry have established that moral consumers should take on the responsibility for their own armed protection, we find general agreement that using a gun to defend one’s self or family is morally permissible. However, we find significant variation in the philosophical parameters of this action; it is deemed more or less moral depending on location; type of firearm; the gun owner’s practices; and proximity to and relationship with local law enforcement (Spaceship Media 2020; Steidley 2019).

In response to *authorization* work, participants varied in their perceptions of the gun lobby and industry as legitimate experts in the “science” of armed self-defense. These entities were regarded as ultimately motivated to sell more guns rather than to protect individual rights, and therefore lacked stable status as moral actors. In response to *capabilization*, participants had significantly divergent opinions about the morality of marketing practices and availability of products and services. For example, some regarded the widespread availability of assault-style rifles as wholly appropriate, while others believed they should only be available to law enforcement and military.

Finally, in response to *transformation*, participants varied in their adoption of responsibility for armed self-defense. Responses ranged from indiscriminate adoption of the practices – routines and materials – needed to prepare for and undertake armed self-defense to wholesale rejection of the “responsible” behaviors. Importantly, adoption of be-

havior (ie, a positive response to transformation) did not necessarily entail positive responses to previous stages, and vice-versa.

Our study adds to extant research on responsabilization by theorizing the specific role and functions of morality at each stage of the PACT process, and revealing the moral complexities of attempting to solve intractable, “wicked” social problems (Huff and Barnhart 2022) through responsabilization.

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Antecedents of and Remedies to the Spread of False Information

Chairs: Gizem Ceylan, Yale School of Management, USA
Yu Ding, Stanford University, USA

Paper #1: Habitual, Not Lazy or Biased: Sharing False News Depends on Social Media Users' Habits

Gizem Ceylan, Yale School of Management, USA
Ian Anderson, University of Southern California, USA
Wendy Wood, University of Southern California, USA

Paper #2: How Intolerance of Uncertainty Shapes Sharing of Misinformation

Amin Shiri, Texas A&M University, USA
Keith Wilcox, Texas A&M University, USA
Xiang Wang, University of Florida, USA

Paper #3: Source Memory Is More Accurate for Opinions Than for Facts

Daniel J. Mirny, UCLA Anderson School of Management, USA
Stephen A. Spiller, UCLA Anderson School of Management, USA

Paper #4: Factchecking Matters: A Novel Crowdsourcing Approach for Improving the Information Ecosystem

Yu Ding, Stanford University, USA
Gita V. Johar, Columbia University, USA

SESSION OVERVIEW

There is worldwide concern over misinformation and the possibility that it can influence political, economic, and social well-being. From 2006 to 2017, false news reached more people on Twitter and spread faster than the true ones (Vosoughi, Roy, and Aral 2018). For instance, a median of 64% of residents across eleven emerging economies reported frequently seeing “obviously false or untrue” content on social media (Pew Research 2019). Intensifying the issue, during the COVID-19 pandemic, 80% of the U.S. adults reported having seen misinformation concerning the coronavirus outbreak (Watson 2021).

While misinformation diffuses faster, when asked, consumers always say that it is important for them to share accurate content only (Pennycook et al. 2019). What leads consumers to share of misinformation and how can we help with that? This session attempts to identify potential antecedents of and remedies to the spread of misinformation. The first two papers explore how consumer characteristics (e.g., habits and intolerance of uncertainty) impact their sharing behaviors. The last two papers further explore the potential remedies that can improve the information quality from the perspectives of individual sharers (i.e., how source memory is affected by claim objectivity) and the fact-checking agents (i.e., how to crowdsource unbiased responses from lay consumers).

The first paper explores the effect of platform habits on information sharing. The authors find that habitual sharers on social media are less sensitive to headline veracity so they share both true and false headlines, whereas less habitual sharers are sensitive to headline veracity before sharing. They also develop an intervention that can establish real news sharing habits.

The second paper seeks to identify the psychological profile of individuals who are likely to fall for misinformation. The authors show that, contrary to conventional wisdom, the more intolerant of uncertainty people are (i.e., a strong distaste for uncertainty), the more likely they are to (1) believe misinformation is accurate, and (2) share misinformation online.

The third paper investigates the effect of claim objectivity on source memory. The authors find that consumers can more accurately remember the source of an opinion than the source of a fact, because the source-claim association is stronger for opinions than facts at the initial stage of memory encoding, suggesting different targeting strategies to correct misbelief in opinions and facts.

The fourth paper proposes a novel method to leverage crowdsourcing to fact-check. The authors suggest that asking readers to compare the similarity of the arguments of two articles (vs. asking readers to directly rate the veracity of the articles) can overcome motivated reasoning among people with different prior beliefs thus can collect unbiased responses from the crowd which provides with more accurate fact-checking results.

Taken together, all four papers in this session document novel and timely insights about how to combat misinformation. All papers are at advanced stages of development with multiple studies completed. We expect this session to generate strong interest among researchers studying misinformation, persuasion, social influence, memory, crowdsourcing, as well as social media more broadly.

Habitual, Not Lazy or Biased: Sharing False News Depends on Social Media Users' Habits

EXTENDED ABSTRACT

False news is a worldwide concern with economic, political, social, and even health consequences (e.g., COVID-19 vaccines). What drives the online spread of false news? Research has identified determinants in the news itself (Vosoughi et al. 2018), consumer's identity groups (Del Vicario et al. 2016), and individual differences (Pennycook and Rand 2019). A central theme of these important investigations is that, if individuals were motivated and able to consider the accuracy of information before they shared it, they would make the right decision and spread less false information.

Yet, a failure to consider accuracy may not be the only reason people share false news. Sharing such information might also be a product of *habits* that form online through repeated sharing. As users repeatedly share, they develop habits to respond automatically to cues on a social media site. Once habits form, sharing is triggered automatically with minimal deliberation (Anderson and Wood 2021) and regardless of the outcome – whether the information is misleading or politically offensive.

In the present research, we test whether the spread of fake news is influenced by sharing habits on social media. First, we anticipate that users with strong habits will share both false and true headlines more than those with weak habits. Second, we anticipate that, because habit performance is cued by contexts and is relatively insensitive to the outcomes of a response (Wood & R nger, 2016), spreading false information is part of a larger pattern of acting with little regard to the consequences. As a result, habitual sharers should not only spread misinformation but also information inconsistent with their own politics.

Study 1 tests the effect of habit strength on sharing true and false headlines. It also tests whether considering information accuracy before sharing reduces sharing of false news (adapted from Pennycook et al. 2020). In a *Question Order* (*between*: share first vs. rate accuracy first) x *Headline Veracity* (*within*: true vs. false) design, participants ($N=839$) were randomly assigned one of the two

conditions: In the share first, they chose whether or not to share 8 true and 8 false headlines and then rated each headlines' accuracy. When rating accuracy first, question order was reversed. We expected that rating accuracy first might influence habitual sharers to be more thoughtful about their sharing choices and consequently to share more true headlines. Participants then rated their news sharing habit strength, and demographics.

A mixed-effect logistics regression model revealed a main effect of headline veracity ($b=0.91$, $SE=0.23$, $z=3.89$, $p < .001$), with participants sharing more true than false headlines. The main effect of habit strength ($b=0.75$, $SE=0.05$, $z=13.85$, $p < .001$) supported our first hypothesis, in that participants with stronger habits shared more headlines (33%) than those with weaker habits (8%). Furthermore, supporting the second hypothesis, a significant interaction between headline veracity and sharing habit ($b=-0.24$, $SE=0.04$, $z=-5.62$, $p < .001$) revealed that stronger habit participants were less discerning about the headline veracity than weak habit ones. Also, the significant interaction between headline veracity and question order ($b=0.41$, $SE=0.10$, $z=4.13$, $p < .001$) revealed that rating accuracy first reduced participants' sharing of false headlines ($M_{\text{sharing first}}=21\%$; $M_{\text{accuracy first}}=16\%$) but not their sharing of real headlines ($M_{\text{sharing first}}=33\%$; $M_{\text{accuracy first}}=31\%$). In addition, the main effect of question order revealed that first rating the accuracy of all headlines reduced subsequent sharing ($b=-0.49$, $SE=0.12$, $z=-4.19$, $p < .001$). Given that question order did not interact with habit strength ($p > .50$), considering accuracy before sharing did not reduce the greater tendency among strong (vs. weak) habit participants to share misinformation.

Study 2 tests the effects of habit on sharing politically concordant and discordant headlines (all accurate). It also assesses whether sharing is altered when participants consider the politics of information prior to sharing. In a *Question Order (between: share first vs. rate politics first) x Headline's Political Concordance (within: concordant vs. discordant)*, participants ($N=836$) were randomly assigned one of the two conditions: In the share first, they chose whether or not to share 8 slightly liberal and 8 slightly conservative headlines and then rated each headline's political orientation. When rating politics first, question order was reversed. In this study, all headlines were accurate. Rating politics first might influence habitual sharers to be more thoughtful about their sharing choices and consequently to share more concordant headlines. Participants then rated their news sharing habit strength, political orientation, and demographics.

We coded each headline in relation to participants' reported political orientation. If a participant was conservative and the headline was liberal (conservative), we coded this as discordant (concordant). The reverse was true for liberal participants. A mixed-effect logistics regression model revealed a main effect of headline concordance ($b=1.63$, $SE=0.08$, $z=20.84$, $p < .001$), with participants sharing more concordant than discordant headlines. The main effect of habit strength ($b=0.60$, $SE=0.08$, $z=7.13$, $p < .001$) again supported our first hypothesis, with habits increasing overall sharing. Furthermore, in support of our second hypothesis, a significant interaction between headline concordance and sharing habit ($b=-0.18$, $SE=0.06$, $z=-3.01$, $p=.002$) revealed that more habitual participants were less discerning about the concordance of the headlines they shared than less habitual ones. In this study, we also found a three-way interaction among headline concordance, sharing habits, and question order ($b=0.16$, $SE=0.08$, $z=1.99$, $p=.047$). Simple slope analysis revealed that weak habit participants shared more concordant ($M_{\text{share-first}}=25\%$, $M_{\text{politics-first}}=23\%$) than discordant headlines ($M_{\text{share-first}}=5\%$, $M_{\text{politics-first}}=4\%$) in both order conditions. Although a similar pattern emerged with strong habit participants in the share first condition ($M_{\text{concordant}}=47\%$,

$M_{\text{discordant}}=23\%$), rating politics first reduced this effect ($M_{\text{concordant}}=44\%$, $M_{\text{discordant}}=16\%$).

In an ongoing experiment, we are testing whether online sharing can be structured so that users form habits to share primarily true information. By implementing this method, social media sites could promote sharing of true over false information.

In summary, the habits users form on social media sites are greatly responsible for the spread of false news and other unwanted information. Given that about a quarter of social media users in our studies was responsible for half of the false information shared, understanding the psychology behind repeated sharing is central to controlling the spread of false news.

How Intolerance of Uncertainty Shapes Sharing of Misinformation

EXTENDED ABSTRACT

The contagious nature of misinformation is destructive, affecting anything from a nation's presidential election to endangering people's lives. Individuals need to determine what information is true and untrue to control the spread of disinformation (e.g., Pennycook, Cannon, and Rand 2018). However, accomplishing this is not a simple task. Given the difficulty of determining the truth, individuals may have varying levels of doubt regarding the accuracy of a given piece of information. But how is the spread of disinformation influenced by uncertainty about the accuracy of information?

To answer this question, the current study aims to determine the psychological profile of people prone to misinformation. More specifically, we look at how intolerance of uncertainty (IU), a dispositional fear of the unknown (Carleton 2012), influences information sharing when one is unsure about its veracity. It is reasonable to expect that people who are intolerant (vs. tolerant) of uncertainty are less likely to engage with online information (e.g., retweeting, sharing on Facebook, etc.) if its accuracy is uncertain, because these individuals find uncertain situations aversive (e.g., Dugas, Buhr, and Ladouceur 2004). However, we hypothesize that, as compared to those who have a high tolerance for uncertainty, people who have a low tolerance for uncertainty (i.e., a great dislike for uncertainty) are more likely to share information when they are unsure about its veracity.

We reason that people with high IU, tend to employ vigilant coping strategies (intensified processing of information) when attending to information about which they lack sufficient knowledge (Krohne 1989, 1993). Vigilance, in turn, tends to narrow the focus of attention of individuals (Peterson 2010). Furthermore, narrowed attention is associated with lower skepticism about the presented information (van Elk 2015). Hence, we argue that when individuals are uncertain about veracity of a news, those who are high on IU are more likely to be less skeptical of the news veracity and consequently, they will be more likely to pass on that information to others (e.g., sharing on their Facebook).

We tested our theorizing in a series of pre-registered studies ($N \sim 5500$; 3 studies reported here). Study 1 tested the relationship between IU, perceived accuracy of fake news, and sharing likelihood. Participants first completed a 12-item Intolerance of Uncertainty scale (Carleton et al. 2007). Then, after a filler study, participants saw five news headlines that have been fact-checked and labeled as fake news by Snopes.com and indicated how likely they were to share the news headlines they saw (1 = not at all likely, 7 = very likely) and how certain they felt that the news headlines were accurate (1 = very uncertain, 7 = very certain). Consistent with our expectation, IU was positively associated with perceived accuracy of

the news headlines ($b = .38, p < .001$) as well as likelihood of sharing the news headlines ($b = .21, p = .017$), suggesting that the more intolerant of uncertainty people are, the more likely they are to believe in fake news and share the news on social media. Furthermore, perceived accuracy mediated the relationship between intolerance of uncertainty and sharing likelihood (95% CI = [.04, .25]).

Study 2 tested our theorizing in an incentive-compatible setting. Specifically, after completing the IU scale, participants were told that next they would see five news headlines and would receive a \$0.30 bonus for each news headline that they correctly identified as fake or true (all news headlines were fake). Consistent with the findings in Study 1, we found a positive association between intolerance of uncertainty and the total number of news headlines participants identified as true ($b = .21, p = .001$).

Study 3 established the causal relationship between IU and perceived accuracy of news. The study used a 2 (tolerant vs. intolerant of uncertainty) between-subjects design. We manipulated IU by providing false feedback about participants' level of intolerance of uncertainty. Specifically, we asked participants to complete a questionnaire and told them "based on your response, you seem to be very [tolerant/intolerant] of uncertainty." Then, all participants saw the same five news headlines as in study 1 and indicated how certain they felt that the news headlines were accurate. As expected, participants who were told that they were intolerant (vs. tolerant) of uncertainty felt more certain that the news headlines were accurate ($p = .043$). Participants' belief in the feedback about IU did not differ between the two conditions and the results hold after controlling for belief in the feedback.

This research uncovers an ironic effect; individuals with high IU are more likely to fall for fake news. We also found that these individuals are more likely to feel certain about the accuracy of the information they encounter, which explains their tendency to share misinformation with others. The present research contributes to the literature on misinformation by identifying a unique psychological profile (intolerance of uncertainty) of individuals who share misinformation. More importantly, our findings could provide insight into designing nudges that could effectively reduce the spread of misinformation.

Source Memory Is More Accurate for Opinions Than for Facts

EXTENDED ABSTRACT

Claim objectivity, whether a claim is a fact or an opinion, has important consequences for interpersonal conflict, collaboration, political polarization, and misinformation. As a notable example, in a 2020 defamation lawsuit brought against Tucker Carlson, Fox News' attorney argued that the comments made on Carlson's show "cannot reasonably be interpreted as facts" and as such cannot be considered as factually inaccurate (McDougal v. Fox News Network LLC 2020). Distinctions in claim objectivity have also had substantive effects on the spread of misinformation on Facebook (Penney 2020). These incidents highlight the increasing importance of understanding how claim objectivity affects the ways in which people process, remember, and engage with content.

Source memory, the ability to link a recalled claim to its original source, is an essential aspect of accurate recall, attitude formation, and subsequent decision making. For instance, whether people believe news headlines to be real or fake, and criminal suspects to be guilty or innocent, depends on their memory for the source (and subsequent credibility) of presented information (Fragale and Heath 2004).

We hypothesize that source memory is affected by claim objectivity. Our rationale for the associated cognitive process is based on two points. (1) Correctly recalling the original source of a given claim relies on the strength of the link formed between the source and the claim during the initial encoding of information (Greene et al. 2021; Mitchell and MacPherson 2017; Pham and Johar 1997). (2) Subjective claims provide more information about a source than do objective claims (Heiphetz et al. 2014). We predict that during initial encoding, because opinions are more informative about a source than are facts, the link binding claims to sources is stronger for opinions than for facts. Subsequently, we anticipate that participants will be more likely to correctly identify the original source of a claim when the claim is an opinion rather than a fact.

In ten pre-registered experiments, we examine the effect of claim objectivity on source memory. Each experiment was conducted on Amazon MTurk with sample sizes large enough to provide at least 80% power to detect a within-subject difference of 0.15 standard deviations in our target measure of source memory. The overall experimental design used in each experiment was drawn from the source memory literature (e.g., Kassam et al. 2009). Across experiments, claims were pre-tested to ensure that facts differed from opinions in perceived objectivity and did not differ in emotionality, valence, or arousal. Each experiment was composed of three stages.

The first stage was an encoding stage. A set of sources, individuals with names and photographs, were shown sequentially to participants. Each source was accompanied by four claims: two facts and two opinions. Participants were asked to rate each source for likeability, knowledgeable, or usefulness; the specific prompt varied across experiments.

The second stage was a filler stage with measures of basic demographics.

The third stage tested source memory. Participants were presented with claims they had seen in the first stage (half facts, half opinions) and asked to identify the original source from a multiple-choice list with the photographs and names of previously-seen sources as well as those of filler sources not previously seen.

For each experiment, the key dependent variable was the within-subject difference between the percentage of opinions correctly attributed to their original sources and the percentage of facts correctly attributed to their original sources. In each experiment, we regressed the key dependent variable on an intercept (the key estimate) and a complete set of contrast coded variables (to account for baseline differences between sets of claims and sources).

In experiment 1 (N=399) we observe that source memory is more accurate for opinions than for facts ($b=12.47, t(321)=10.54, p<0.001$). In experiments 2a (N=501) and 2b (N=504) we replicate this effect in the context of user reviews from AirBnB ($b=2.63, t(412)=2.23, p=0.026$) and Goodreads ($b=3.79, t(440)=3.43, p<0.001$). In experiment 2c (N=501) we find that the effect extends to the domain of medical information about a fictional disease ($b=3.51, t(464)=3.40, p<0.001$). Moreover, in experiment 3 (N=606) we find that the effect is not moderated by source expertise, and is present not only for layperson sources ($b=5.33, t(560)=3.68, p<0.001$) but also for expert sources ($b=3.79, t(560)=2.69, p=0.007$), even in the domain of medical information about a fictional disease.

In experiments 4 (N=403) and 5 (N=1,213), we identify process evidence by making facts more informative about a source (experiment 4) and opinions less informative about a source (experiment 5), finding that source memory accuracy is affected by how informative claims are about their sources. Experiment 4 introduced a new type of claim, facts about the source. Replicating the findings of experiments 1-3, source memory was more accurate for opinions than for

facts about the world ($b=2.93$, $t(305)=2.54$, $p=0.012$). Moreover, consistent with the proposed process, source memory was more accurate for facts about the source than for facts about the world ($b=3.99$, $t(305)=3.49$, $p<0.001$). Experiment 5 introduced a new type of source, claim re-tellers. When sources were presented as authors of claims, our results replicated those of prior experiments, source memory was more accurate for opinions than for facts ($b=3.26$, $t(1076)=3.45$, $p<0.001$). However, when sources were presented as re-tellers of claims, source memory was not more accurate for opinions than for facts ($b=1.00$, $t(1076)=1.05$, $p=0.293$).

In three supplemental experiments, substantial changes to the experimental design resulted in attenuations of the main effect. We found no effects of objectivity on source memory when using complex stimuli ($N=499$, $b=-0.67$, $t(321)=-0.96$, $p=0.337$), when testing source memory using a cued rather than a full recall task ($N=501$, $b=0.03$, $t(401)=0.03$, $p=0.978$), and when sources were periodical publications rather than individual authors ($N=601$, $b=-0.89$, $t(551)=-0.85$, $p=0.393$).

Across experiments, we also measured claim recognition memory. We find no consistent effect of claim objectivity on recognition memory, suggesting that the effect of claim objectivity is unique to the processes underlying source memory.

Our results indicate that claim objectivity affects consumers' ability to accurately remember the source of information, with implications for consumers' beliefs, judgments, and decisions.

Factchecking Matters: A Novel Crowdsourcing Approach for Improving the Information Ecosystem

EXTENDED ABSTRACT

Given the explosion of news transmitted to, and shared by, consumers across different media, the veracity of information is of critical importance. However, the scale of existing fact-checking organizations is limited, hence resulting in a scant proportion of news articles being fact-checked. We address the challenge of scaling up fact-checking operations in the domain of science-related news articles and headlines by proposing a novel crowdsourcing solution.

A key challenge with asking lay consumers to rate veracity of scientific news articles is that they are likely to be biased by their prior beliefs (Kahan 2012; Kunda 1990; Van Bavel and Pereira 2018), thus the conclusions drawn from readers' belief measures are highly driven by readers' ideology and largely affected by which readers are sampled (Mercier and Sperber 2011). Using articles that have been rated for veracity by scientists as a starting point, we overcome this bias by proposing the use of crowdsourced similarity ratings which asks readers to compare how the opinions and viewpoints of two articles are different from or similar to each other. Because similarity-judgments are cognitive-based and constructed rather than memory-based and retrieved (Pollitt 2012; Tversky 1977), they are more distant from raters' self-identity thus less likely to be biased by raters' ideology and more likely to reach high consensus among different reader populations, regardless of their prior beliefs or motivations. We validate the proposed method across 5 experiments with 5,562 raters.

Study 1 examines whether affiliation with different political parties influenced participants' judgments about news articles on climate change. A total of 294 adults (152 women, $M_{age} = 37.3$; 101 Republicans, 193 Democrats) were randomly assigned to one of the two conditions (judgment-type: veracity vs. similarity). All participants read four articles (2 with high veracity and 2 with low veracity as rated by scientists); those in the veracity-judgments condition were asked to rate the veracity of each article using three questions (e.g.,

"How much do you think Article X is true?" -3 = definitely false, 3 = definitely true); and those in the similarity-judgments condition were asked to rate each pair of articles (six pairs in total) using three questions (e.g., "How much do you think the arguments of Article X and Article Y agree with each other?" -3 = strongly disagree, 3 = strongly agree). We then submitted the **veracity scores as the dependent variable**, participants' party affiliation as a between-subject independent variable, and the article veracity as a within-subject independent variable into a mixed ANOVA. The results revealed a significant interaction between party affiliation and article veracity also was obtained ($F(1, 464) = 71.53$, $p < .001$, $\eta^2 = .134$), that Republicans rated low-veracity articles more true than Democrats ($p < .001$, $s >= .027$) and rated high-veracity articles less true than Democrats ($p < .007$, $s >= .012$). However, when we submitted the **similarity scores as the dependent variable**, there was no interaction between party affiliation and veracity similarity ($F(1, 684) = 0.94$, $p = .33$, $\eta^2 = .001$), suggesting that rater's party affiliation does not influence their similarity-judgments. We further examined the impact of cognitive ability (measured by 4 new CRT questions, Thomson and Oppenheimer 2016) on each type of judgment and found that veracity-judgments are not influenced by cognitive ability while high cognitive raters could better differentiate two articles with opposite arguments.

Study 2 replicated Study 1 using a continuous measure of political ideology (i.e., "Please indicate your political orientation" -3 = strongly conservative/strongly Republican, 3 = strongly liberal/strongly Democrat") with a new set of news articles and found the same pattern. Study 3 replicated Study 1 with another set of news articles and further found that debunking a false article did not improve participants' veracity-judgments on other articles.

Study 4 validates the use of the unbiased similarity-judgments can predict veracity scores of unrated articles. We randomly selected 50 news articles about climate change that were pre-rated by scientists. As in Study 1, we recruit participants to read 4 out of 50 and then either rated the veracity or similarity. In total, we collected similarity-judgments from 1,473 participants and veracity-judgments from 1,043 participants. We conducted various statistical models (e.g., out-of-sample test, bootstrapping simulation, linear regression, and logistical regression) to test the predictability of using scores from veracity- and similarity-judgments. Scores from veracity-judgments were obtained by averaging the veracity-judgments across participants for each article; Scores from similarity-judgments were obtained by multiplying the similarity (between a target article and another base article) with the base article's veracity, which is essentially a weighted average approach where we use rated articles' veracity as the base and use the similarity (between the unrated target article and the rated article) as the weight to construct the predicted veracity score for an unrated article. We found that prediction based on similarity-judgments are more stable and efficient than prediction based on veracity-judgments. For instance, when each article receives 10 ratings, prediction from similarity-judgments has an accuracy rate of 90.6% for binary predictions across all raters and it is stable across Democrat (90.3%), Republican (88.1%), or Independent raters (91.0%). However, prediction from veracity-judgments has a lower accuracy rate of 82.3% across all raters and it varies largely from Democrat (90.5%), Republican (49.6%), and Independent raters (81.4%). Further analyses also suggest that our proposed similarity-judgments based model could be improved by recruiting high-CRT score, high-confidence, high-internal-consistency (measured by our proposed Transitivity Index) raters.

Study 5 expands the scope of our method by testing the proposed similarity-judgment approach to 1) rate news under a different topic – Covid-19 vaccination, and 2) rate news headlines/claims

rather than news articles. We recruited 2,219 participants to rate 60 news headlines and found similar patterns to support the use of similarity judgments in crowdsourcing fact-checking.

In sum, our research addressed the critical question of how the current muddy information ecosystem can be improved. We focused on scaling up fact-checking efforts by crowdsourcing lay people to rate the similarity of unrated articles to expert-rated articles.

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More or Less? How Consumers Make Predictions and Inferences About Unobservable Attributes Based on Numeric Cues

Chair: Michelle Kim, University of California, San Diego, USA

Paper #1: Less Is More (Natural): The Effect of the Number of Ingredients on Preferences and Naturalness Perceptions

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Paper #2: Opposing Effects of Company Size Metrics on Product Quality Evaluations

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Peggy J. Liu, University of Pittsburgh, USA

Paper #3: Choice Set Size Neglect in Predicting Others' Preferences

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Alice Moon, University of Pennsylvania, USA
Eric VanEpps, University of Utah, USA

Paper #4: Overinflated Expectations from Maximizing with Unreliable Information

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SESSION OVERVIEW

Consumers often make evaluations based on available but imperfect numeric cues in the marketplace, such as the number of ingredients in a product, the number of employees in a company, the company's revenue, and the available choice set size. It is important to understand evaluations inferred from numeric information because they are often critical to consumers' decision-making and choice satisfaction. This session examines how consumers make inferences about unobservable attributes based on observable numeric cues and the downstream consequences for consumption.

In the first paper, the authors show that consumers infer that products with fewer (vs. more) ingredients are more natural. Consequently, consumers prefer a product when it is framed as having fewer ingredients (because it seems more natural) in field and lab experiments.

In the second paper, the authors show that consumers use company size metrics to infer product quality, demonstrating when and why consumers prefer products from larger versus smaller companies. Because consumers hold two lay theories, one regarding company employees' intrinsic motivation and the other regarding a company's financial resources, consumers prefer products from a larger (vs. smaller) company for high-tech products and products from a smaller (vs. larger) company for low-tech products.

The third and fourth papers expand the focus from the numeric information inherent to a product or company to situational numeric information. The authors in the third paper examine whether choice set size influences consumers' own liking and their inferences about others' liking. Specifically, consumers indicate greater liking for their own selection when the choice set size is greater (vs. smaller), but they neglect the choice set size when predicting others' liking for their chosen selections.

In the final paper, the authors show that when information is unreliable, consumers develop more positive expectations for their chosen product as the choice set size increases. Therefore, if information is unreliable, a larger (vs. smaller) choice set size lowers satisfaction because heightened expectations of outcomes from the larger set lead to greater expectancy disconfirmation.

Collectively, these four advanced-stage papers provide an understanding of whether, when, and why observable numeric information from the marketplace influences consumers' inferences about unobservable attributes. Consumers rely on different types of numeric information not only from the product or company (e.g., the number of ingredients, the number of employees, amount of revenue) but also from the situation (e.g., assortment sizes) in the marketplace. A common theme arising across these four papers is that less is often better. For example, fewer ingredients are viewed as more natural, and employees at smaller companies are viewed as having more intrinsic motivation. Furthermore, a smaller choice set may lead to more satisfied customers, although larger choice sets lead consumers to infer that they liked their product selection more. We believe this session will draw a broad audience of ACR researchers interested in numeric inferences, lay theories, preferences and choice, and judgment and decision-making.

Less Is More (Natural): The Effect of the Number of Ingredients on Preferences and Naturalness Perceptions

EXTENDED ABSTRACT

A recent trend in industry finds brands highlighting the number of ingredients in products. For example, Haagen-Dazs Five advertises that there are only five ingredients, although the original Haagen-Dazs also only has five ingredients. On the other hand, some products, such as TRC's 75 mineral drinks, highlight that they offer many ingredients. It is unclear which strategy is more effective.

In this paper, we hypothesize that consumers prefer a product framed as having fewer (vs. more) ingredients. According to Rozin et al. (2012), American and European consumers believe that products are more natural if they are less processed. If it is the case that consumers infer that products with more ingredients involve more processing, they may perceive products with more ingredients as less natural, thus leading to lower preferences (Scott et al. 2020). Across seven pre-registered lab and field studies, this research explores the psychology of how consumers infer naturalness based on the number of ingredients in a product and reveals the importance of naturalness perceptions on consumer decision-making.

Studies 1A (Reach = 17,040, pre-registered, Facebook) and 1B (Reach = 810,99, pre-registered, Facebook) provide initial evidence that consumers tend to prefer the same product if it is framed as having relatively few ingredients. In study 1A, we conducted a test comparing the effectiveness of two advertisements on Facebook. The control version had a picture of granola and a list of specific ingredients. The "few" framing version simply added the message: "Just seven ingredients!". We launched the two advertisements on Facebook's AB testing platform and compared the unique link clicks out of the total reach for each ad. We found that the advertisement framed as having fewer ingredients was more effective than the control advertisement (1.44% vs. 1.03%, $X^2(1) = 7.87, p < .01$).

In Study 1B, we ran an additional Facebook study with another company. To control for the amount of information across conditions, we manipulated “few” vs. “many” ingredients framing. The headline read, “Our brownies have [only a few / so many] ingredients,” followed by an identical list of ingredients in both ads. We found that the “few” (vs. “many”) framing was more effective (3.48% vs. 3.07%, $X^2(1) = 10.96, p < .001$).

Studies 2A-2C demonstrate that consumers view products with fewer ingredients as more natural across a range of products. In study 2A ($N = 273$, pre-registered online pool), participants saw two items — one with fewer ingredients/flavors/origins and the other with more ingredients/flavors/origins — in each category: juice [orange/mango], yogurt [blueberry/raspberry/blackberry/strawberry], and coffee [Costa Rica/El Salvador]. One ingredient/flavor/origin was randomly selected. Participants were asked to indicate which item was more natural on a seven point-scale (1=definitely option A [fewer ingredients]; 4 = neutral; 7= definitely option B [more ingredients]) in a within-subjects design. The midpoint (4) option allowed participants to indicate that both options were equally natural. As predicted, orange-mango juice, mixed berries yogurt, and blended coffee were perceived as less natural than mango or orange juice, one berry yogurt, and single-origin coffee ($M_{\text{juice}} = 3.39, M_{\text{yogurt}} = 3.32, M_{\text{coffee}} = 3.25, ps < .001$, test value = 4).

Study 2B ($N=400$, pre-registered, online pool) explores whether this effect persists even when the shorter list of ingredients includes an unnatural ingredient and the longer list does not. In this study, participants saw two chocolates with a different list of ingredients. On top of three base ingredients, the shorter list additionally included vanilla flavoring, whereas the longer list included three more ingredients randomly drawn from a natural ingredient pool (e.g., salt, butter, egg whites, egg yolks). Then, they rated the relative naturalness of the chocolates on a bipolar scale. As predicted, even when the shorter list included an unnatural ingredient (vanilla flavoring), the chocolate with the shorter (vs. longer) list was perceived as more natural ($p < .001$). Participants also rated the naturalness of each ingredient in both chocolate bars, and rated the average naturalness as higher for the longer list than the shorter list ($M_{\text{fewer}} = 4.10$ vs. $M_{\text{more}} = 4.81, p < .001$), highlighting the robustness of our effect.

Study 2C ($N=200$, pre-registered, online pool) demonstrates the linear relationship between the number of ingredients and perceived naturalness of a product. In this study, participants were asked to evaluate 8 bottles of vitamin gummies on naturalness on a unipolar 7-point scale [1 = not at all; 7 = very much] in a randomized order. Each bottle had a single flavor or 2 to 8 assorted flavors. As predicted, there was a negative linear relationship between the number of ingredients and perceived naturalness ($b = -0.09$, clustered $SE = .014, p < .001$).

Study 3 ($N=300$, pre-registered, online pool) shows that naturalness perceptions mediate the effect of framing on preferences shown in Study 1A and 1B. Participants saw one of the two product advertisements for ice cream, both of which listed the same five product ingredients. The control version had “Vanilla ice cream” as a headline, and the few framing version had ““Just Five” vanilla ice cream – only five ingredients,” highlighting how few ingredients were used in the product. As predicted, participants indicated a higher likelihood of purchasing the item described as having relatively fewer ingredients ($M_{\text{few}} = 5.45$ vs. $M_{\text{control}} = 4.75, p < .001$), and a higher rating of naturalness for the few framing condition than the control condition ($M_{\text{few}} = 5.8$ vs. $M_{\text{control}} = 4.07, p < .001$). Naturalness perceptions mediated the effect on purchase likelihood (indirect effect = .25, $SE = .07, 95\%CI = [.13, .39]$)

Study 4 ($N=300$, pre-registered, online pool) finds that this preference is strongest among consumers who are more concerned about naturalness. In a consequential choice study (two participants were randomly chosen to receive the product they chose), participants were asked to choose between two chocolate cookies from Etsy – one with fewer (i.e., 5) ingredients and the other with more (i.e., 7) ingredients. They also indicated their personal concern for naturalness on five items (Siegrist et al., 2008). As predicted, a logit regression showed that those with a stronger concern for naturalness were more likely to choose the cookie with fewer ingredients ($b = .31, SE = .08, p < .001$).

Overall, this research demonstrates that the number of ingredients influences consumers’ naturalness perceptions and preferences and sheds light on lay beliefs about naturalness.

Opposing Effects of Company Size Metrics on Product Quality Evaluations

EXTENDED ABSTRACT

Product quality evaluations are a primary determinant of consumers’ purchase decisions (Spiller and Belogolova 2017; Zeithaml 1988). Despite the importance of these evaluations, consumers often struggle to accurately evaluate product quality. They instead frequently rely on imperfect cues available to them (Aaker 1991; Gneezy et al. 2014; Hoch and Deighton 1989; Janiszewski and Van Osselaer 2000). One salient cue in the marketplace is metrics of company size (companies’ revenue; number of employees), both of which are frequently publicized (Paharia et al. 2014; Thompson and Arsel 2004; Yang and Aggarwal 2019). Indeed, in data we scraped from websites of a randomly selected set of 100 companies from the Fortune 500 list, 86% of company websites mentioned the number of company employees and 76% mentioned company revenue. These metrics of company size are also frequently spotlighted in companies’ social media posts, the popular press, and other public communications. How do these often salient metrics of company size affect consumers’ evaluations of the products these companies produce?

To date, there is no clear consensus. Some research indicates that consumers evaluate products and services as higher quality when they are produced by larger companies (Boscarino 1988; Chaudhuri and Holbrook 2001; Paharia et al. 2014). By contrast, other investigations have found precisely the opposite—that consumers evaluate products and services as *lower* quality when they are produced by larger companies (Morgan 1993; Trinca et al. 2021).

We offer a novel theoretical framework that helps reconcile conflicting findings documented in prior literature, and that charts not only when—but also why—consumers make different product quality evaluations as a function of company size. We find that consumers hold two lay theories arising from company size metrics—an employee intrinsic motivation lay theory that larger (vs. smaller) companies have less intrinsically motivated employees—and a financial resources lay theory that larger (vs. smaller) companies have greater capacity to fund R&D. We further find that product type (low vs. high-tech) determines the extent to which consumers consider each lay theory, which in turn determines whether consumers infer that a product is higher quality when it is produced by a smaller (vs. larger) company.

Seven studies (six pre-registered) test our theorizing (Tables 1a-1b). Study 1 tested our prediction in an ecologically valid design with secondary data. We find that for Fortune 500 companies, there is an interaction between company size (larger vs. smaller) and perceived industry type (low vs. high-tech) on Net Promoter Scores (NPS, which is a proxy for quality; Busby et al. 2015; Triemstra et

al. 2021) ($B = 1.90, p < .001$). A floodlight analysis (Spiller et al. 2013) revealed two Johnson-Neyman (JN) points: a larger company size predicts significantly lower NPS for companies in low-tech industries ($JN \leq 1.94$), but significantly greater NPS for companies in high-tech industries ($JN \geq 3.57$).

Study 2 provided a causal test of our theorizing, replicating this interaction in a controlled experiment holding objective company size constant. We manipulated company size frame (framing a focal company as larger or smaller relative to other companies; Yang and Aggarwal 2019) and product type (low vs. high-tech) for four different product replicates. We again found an interaction ($F(1,597) = 41.11, p < .001$; Figure 1), such that a larger (vs. smaller) company size decreased quality evaluations for low-tech products ($p < .001$), but increased quality evaluations for high-tech products ($p < .001$).

We next examined the proposed underlying role of the two lay theories. First, Study 3 leveraged moderated mediation. We found that a low-tech (vs. high-tech) product increases consideration of the intrinsic motivation lay theory ($B_{\text{index}} = .26, CI_{95\%} = [.11, .43]$), whereas a high-tech (vs. low-tech) product increases consideration of the financial resources lay theory ($B_{\text{index}} = .28, CI_{95\%} = [.13, .44]$), which mediated the company size \times product type interaction on quality evaluations.

Studies 4a-4b provide converging evidence for this process by leveraging additional tests of moderation. Study 4a found that a low-tech product from a larger (vs. smaller) company is evaluated as lower quality. This effect attenuates when consumers encounter information that challenges the diagnosticity of the employee intrinsic motivation lay theory (i.e., that a small [large] company has less [more] intrinsically motivated employees). Study 4b found that a high-tech product from a larger (vs. smaller) company is evaluated as higher quality. This effect attenuates when consumers encounter information that challenges the diagnosticity of the financial resources lay theory (i.e., that a small [large] company spends more [less] on R&D).

Studies 5-6 examined this phenomenon's downstream consequences on consumers' real product choices. These studies demonstrate further robustness and ecological validity: Mirroring real tweets on Twitter and company "About Us" webpages in which companies highlight their own revenue and number of employees, Studies 5-6 utilize these approaches to communicate this same information.

Study 5 revealed that significantly more participants chose a wallet created by a smaller company in the low-tech (68.5%) versus high-tech condition (38.5%; $\chi^2(1, N = 164) = 14.63, p < .001$). Similarly, Study 6 found that more participants chose a coffee maker created by a smaller company in the low-tech condition (67.4%) than in the high-tech condition (34.3%; $\chi^2(1, N = 191) = 20.83, p < .001$). These studies were of consequence to consumers, as we selected one participant to receive the outcome of their choice. Further, Study 6 revealed this effect is differentially mediated in parallel by differential consideration on the two proposed lay theories. Specifically, greater consideration of the intrinsic motivation lay theory in the low-tech (vs. high-tech) condition mediated the effect of product type on choice ($B_{\text{indirect}} = .54, CI_{95\%} = [-1.17, -.07]$). At the same time, greater consideration of the financial resources lay theory in the high-tech (vs. low-tech) condition mediated the effect of product type on choice ($B_{\text{indirect}} = -.82, CI_{95\%} = [-1.43, -.41]$).

Overall, we contribute a novel framework documenting when and why consumers prefer products from larger versus smaller companies. This framework uncovers previously undocumented core lay theories that consumers hold about company size, documents the dynamics through which these lay theories underpin consumers'

consequential inferences about products' quality, and thus provides actionable insights for managers seeking to increase choice share of their products.

Choice Set Size Neglect in Predicting Others' Preferences

EXTENDED ABSTRACT

Marketers and consumers alike often need to predict others' preferences based on limited information. Recent work has identified a range of systematic mispredictions. For example, consumers overestimate the intensity of others' experiences (Jung, Moon, and Nelson 2020), they overestimate others' choice share of common (over rare) options (Reit and Critcher 2020), and they overestimate how much others dislike options that seem dissimilar from the chosen option (Barasz, Kim, and John 2016).

The current research focuses on a novel factor that might complicate the prediction of others' preferences: the number of options in the choice set (choice set size). Across four pre-registered experiments ($N = 6,607$), we investigate whether choice set size influences predictions of others' liking for the chosen option. We find that even though consumers report liking their selection more when there are more available options (e.g., 6 vs. 2 options), they fail to predict this effect for others.

Study 1 ($N = 1,982$) used a 2 (self or other) \times 2 (options: 6 or 2) between-subjects design. Participants imagined a decision about a side dish. There were either six or two options. Participants either imagined themselves making the decision and rated their liking for the chosen option (1 = Not at all, 7 = Very much) or imagined another person's choice and predicted that person's liking for the chosen option (using the same scale). We found a significant interaction between self-other condition and choice set size, $b = -.23, SE = .09, p = .011$, such that choice set size only influenced participants' own liking for the chosen option. Specifically, participants choosing a dish for themselves liked the chosen option significantly more when there were six options ($M = 6.20, SD = .93$) than when there were two options ($M = 5.91, SD = 1.12$), $b = .29, SE = .06, p < .001$. This difference was attenuated among participants predicting others' liking ($M_{\text{six options}} = 5.72, SD = 1.04$; $M_{\text{two options}} = 5.66, SD = 1.02$), $b = .06, SE = .06, p = .378$.

Studies 2 ($N = 1,481$) and 3 ($N = 1,573$) tested the robustness of this effect using different scenarios (choosing a movie to watch, choosing a bonus payment, choosing a hotel, voting for a candidate). We replicated the interaction effect in Study 2, $b = -.15, SE = .07, p = .032$, and in Study 3, $b = -.31, SE = .08, p < .001$. Further, we explored whether the differences in liking inference extend to downstream predictions of future choices. In Study 3, participants indicated how likely they (or the other person) would be to choose the same option again in a second choice. For instance, in the voting scenario, they imagined that the chosen candidate advanced from the primary election and was running against a different candidate in the general election. Participants indicated their likelihood of voting for the same candidate again (*self* condition) or predicted the other person's likelihood of voting for the same candidate again (*other* condition). We found the same interaction effect, $b = -.27, SE = .11, p = .014$. For instance, participants were significantly more likely to vote for the same candidate again when the initial choice set in the primary election had six candidates than when it had only two candidates, but this difference was attenuated among participants predicting others' voting intentions.

We propose that our effect arises because when observing others' choices, consumers focus on the chosen option and do not attend sufficiently to the number of forgone options. People's choices typi-

cally result from a combination of liking their chosen option and disliking the forgone options. Choosing from a larger choice set, therefore, increases the likelihood of winding up with a preferred choice option. However, when inferring others' liking, people may neglect choice set size and purely infer that others like their chosen option quite a bit. This proposal is consistent with research by Miller and Nelson (2002) that people tend to see others' choices (e.g., choosing French fries over onion rings) as approach-motivated (e.g., liking French fries) rather than avoidance-motivated (e.g., disliking onion rings). If this explanation were to hold, then reframing the decision process as "rejecting unwanted options" should increase the influence of choice set size in predicting others' preferences by increasing the likelihood that people attend to the greater number of forgone options in a larger choice set.

We tested this prediction in Study 4 ($N = 1,571$). Study 4 used a 2 (options: 6 or 2) \times 2 (frame: choose or reject) between-subjects design. Participants read two scenarios in randomized order. One scenario described another person's choice of side dish and the other described another person's choice of movie from a set of either two or six options. Half of the participants saw the decision framed as choosing the wanted option. The other half of the participants saw the decision framed as rejecting the unwanted option(s). Specifically, they saw a menu with unwanted side dish(es) crossed off and a movie app interface where the person clicked the unlike button(s) for the forgone movie(s). Consistent with our prediction, we found a significant interaction between *choice set size* and *decision frame*, $p = .040$. When the evaluation target chose the wanted option, the number of options available did not influence predicted liking, $b = .01$, $SE = .05$, $p = .784$. However, when the evaluation target rejected the unwanted option(s), participants thought the other person would like the final choice significantly more if there were six options (i.e., rejecting five options) than if there were two options (i.e., rejecting one option), $b = .18$, $SE = .06$, $p = .003$.

These results suggest that consumers tend to neglect the number of available options when inferring others' liking of the chosen option, even though this same factor is critical to their own liking. This effect might occur due to an inclination to only focus on the chosen option and neglect the process through which others arrive at their choice.

Overinflated Expectations from Maximizing with Unreliable Information

EXTENDED ABSTRACT

People like to choose from larger (vs. smaller) assortments as they feel they could have better chances of getting the best. They sometimes achieve objectively better outcomes, but paradoxically, tend to be less happy with their choices. While various psychological explanations have been proposed for this (Iyengar, Wells, & Schwartz 2006; Sparks, Ehrlinger, & Eibach 2012), the current research demonstrates that disappointment can be an inevitable statistical consequence of choosing what is seemingly the best. We demonstrate that the disappointment from a larger assortment is statistically inevitable when the information available for decision-making is imperfect. The option that looks the best on a dimension may not be the best if the quantitative measure contains random error. Mathematically, the likelihood that the seemingly best option is *not* the actual best option increases as sample (or assortment) size increases (Harrison & March 1984). Three studies show that people are more disappointed when they choose from a larger (vs. smaller) assortment if the information that they use for decision-making is somewhat unreliable.

In Study 1, 231 students participated in a 2(Assortment size: small vs. large) \times 2(Reference joke: best vs. average) between-subjects experiment. Participants were given a set of either 5 or 20 jokes with ratings shown (obtained from a separate pretest). We added unreliability/noise to ratings by adding a randomly generated error from $N(0,15)$. After making their choices, participants read a reference joke (the best or the average from the same pretest set). We next showed participants the joke they selected. Participants then reported how satisfied they were with the joke they selected before (1=not at all, 7=very satisfied); their degree of expectancy disconfirmation (To what extent did the joke you selected meet your expectations? 1=not at all, 7=very much); and, lastly, their ratings of the joke they chose (slider, 0–100).

A 2 \times 2 ANCOVA on expectancy disconfirmation with ratings of their self-selected joke as a covariate revealed only a main effect of assortment size such that participants choosing from the larger (vs. smaller) assortment size experienced more negative expectancy disconfirmation. Similarly, participants choosing from a larger (vs. smaller) assortment size were less satisfied. A Process Model 4 (Hayes 2018) showed a significant Assortment Size \rightarrow Expectancy Disconfirmation \rightarrow Satisfaction indirect effect ($a_3b_3 = -.22$, 95% CI: [-.429, -.061]).

In Study 2, we demonstrate that the negative effect of larger assortment size on satisfaction is attenuated when the information is highly reliable. We recruited 1,000 Amazon Mechanical Turk workers to participate in this 2 Assortment Size (smaller, larger) \times 2 Information Reliability (unreliable, reliable) between-subjects experiment. Participants were tasked with making a choice of where to invest \$100 for the highest return. They were randomly shown either 6 stocks or only 2 of them (randomly selected from the same 6; i.e., one of 15 possible pairs). They saw graphs depicting the stock performance over the past ten periods and had to pick one to invest for the next ten periods. Participants in the unreliable condition received unreliable/noisy information about the stock performance because the graphs were generated by a process of combining true performance (i.e., slope) plus random error. Participants in the reliable condition received the same information but without the random error, resulting in graphs with the true linear trends. Participants picked a stock and were then informed how their choice performed. They then answered their satisfaction and degree of expectancy disconfirmation like those in Study 1.

A 2 \times 2 ANOVA on expectation showed that individuals choosing from the larger (vs. smaller) assortment had significantly higher expectations, and that individuals who saw reliable (vs. unreliable) information had marginally higher expectations. The interaction was non-significant. A 2 \times 2 ANOVA on expectancy disconfirmation revealed main effects of Assortment Size and Information Reliability, with a significant interaction. We replicated our results in the unreliable condition – individuals who chose from a larger (vs. smaller) assortment experienced more negative expectancy disconfirmation. As expected, the effect was attenuated and non-significant in the reliable condition. Similarly, individuals who chose from a larger (vs. smaller) assortment were less satisfied in the unreliable condition. As expected, the effect was attenuated and non-significant in the reliable condition.

In Study 3, we attempt to replicate the negative effect of assortment size using an incentive-compatible design. We recruited 450 US Prolific participants to participate in this two-condition between-subjects pre-registered (see <https://aspredicted.org/blind.php?x=q5vz6j>) experiment for a small payment and a chance to win a bonus. Participants were told that they would receive information about several horses and would have to select the horse they would

think would win a subsequent race. They first selected 3 or 7 horses to view historical performances (with added error/noise). They then chose a horse they thought would be among the top three finishers in the next race. Participants indicated their level of confidence before receiving the outcome of the race. They then reported their satisfaction and expectancy disconfirmation.

Participants showed higher confidence if they had selected from 7 horses. They also expected the selected horse to do better and were less satisfied with the performance of a horse that they had selected from 7 (vs. 3) options. A Process Model 6 revealed a significant Assortment Size → Confidence → Expectancy Disconfirmation → Satisfaction indirect effect ($a_1b_2 = -.096$, 95% CI: [-.172, -.047]).

Across three different paradigms, we demonstrated the negative effect of maximizing: selecting from a larger (vs. smaller) assortment size brought less satisfaction with one's choice. The effect occurs for three main reasons. First, the information provided is imperfect. Indeed, we show that providing perfectly reliable information eliminates the negative effect of larger assortment size. Second, a larger assortment size amplifies consumers' expectations of their choices. Third, consumers do not necessarily make better choices from a larger (vs. smaller) assortment.

Overall, our research has important theoretical and practical implications. We empirically documented the negative effect of larger assortment size and show the underlying mechanism through expectancy disconfirmation and information (un)reliability. Providing a larger assortment size could backfire, particularly for industries where information is highly variable or uncertain (e.g., investment consulting services).

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Photos Speak Louder: What Consumers Convey about Themselves and Brands by Using Visuals

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Paper #1: Share the Fame, Take the Blame: How Social Media Feedback Influences Brand Perceptions

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Gabriela Funk, University of Lucerne, Switzerland
Reto Hofstetter, University of Lucerne, Switzerland
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Paper #2: Color analytics for data-driven brand management

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Paper #3: Words Meet Photos: When and Why Visual Content Increases Review Helpfulness

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Paper #4: Striking Visual Salience in Social Media Brand Posts: Implications for Consumer Sharing

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SESSION OVERVIEW

Photos are ubiquitous in consumer-generated and shared content. They convey rich information about the consumption experiences, consumers' attitudes, and feelings about brands. Papers in this session take a multi-method approach spanning photo-collages, machine-learning, and experiments to examine how photos impact consumers' social sharing, their persuasion attempts, and brand relationships. In this session, we examine, in online contexts, whether and how visuals affect consumers' own relationships with brands and with other consumers. Specifically, this session provides insights into how consumers' brand perceptions change in response to others' positive feedback to their own brand selfies (*Paper 1*). Further, we examine how color palette in consumer-created collages can convey cues as to how consumers perceive brands (*Paper 2*). Next, we examine when consumer content that includes both photos and text is more helpful. First, we examine the impact of similarity between visual and verbal information on review helpfulness in the context of restaurant reviews (*Paper 3*). Then, we investigate how the visual properties of photos and the balance between photos and text impact consumers' online sharing (*Paper 4*).

The authors of the first paper find that positive feedback to consumers' selfies with a brand strengthens the selfie-takers' brand relationship. This effect is driven by consumers' tendency to attribute positive feedback to the brand relationship. Consequently, consumers further invest in that brand relationship. The effect is not symmetric as negative feedback is attributed to the self and does not lead to "brand-blaming".

The second paper explores how visual mining can help understand consumers' brand perceptions. The authors examine the color palettes that characterize different brand attributes in various consumer-created brand collages. Combining experiments, machine

learning, and econometrics, they identify causal relationships between algorithmically generated color palettes and brand attributes.

The third paper examines whether and why photo-text similarity improves helpfulness of consumer-generated content (in restaurant reviews). Using machine learning and lab experiments, they find that similar information conveyed in photo and text makes the review easier to process. They also show that the effect is attenuated when the review becomes disfluent and hard to process.

In the fourth paper, authors find that consumers are more likely to share content with more salient, dynamic images (vs. static ones). This is because dynamic images attract greater attention. They also find that a balance is required between image dynamism and salient features of the content. For instance, larger overlays (e.g., text) on images weaken the effect of dynamic images on consumer sharing, longer captions increase it.

Taken together, these presentations identify the antecedents and consequences of visual choices in consumer-generated content by adopting novel methodologies in a variety of consumption settings. All papers are at an advanced stage, employing a range of methodologies and contexts. None of these papers has been previously presented at ACR. Authors represent a range of methodological and substantive backgrounds, and we expect this session will generate significant interest among researchers studying word of mouth, online sharing, natural image processing, and social media.

Share the Fame, Take the Blame: How Social Media Feedback Influences Brand Perceptions

EXTENDED ABSTRACT

Many brands encourage consumers to create branded content and a popular type of such content are brand selfies, i.e., selfies taken by a consumer with a brand or a product (e.g. Dunkin' Donuts 2014; Johnson 2016). As a type of visual content, brand selfies tend to receive high engagement on social media in the form of likes and comments (Hartmann et al. 2021; Li and Xie 2020). Although past research has shown that feedback can have a positive impact on content creators (Burrow and Rainone 2017), little is known about how it influences creators when their content also contains a brand in tow.

We argue that feedback creators receive not only affects how they perceive themselves but also how they perceive the brands they shared the content with. Consumer-brand relationships can be seen as similar to interpersonal relationships (Fournier 1998), and therefore, the received feedback may be attributed not only to the self (internal attribution) or the brand (external attribution), but also to the consumer-brand relationship as such, which is known as making a so-called "relational attribution" (Eberly et al. 2011, 2017). When receiving positive feedback, we propose that the feedback will be attributed to the relationship of the consumer with the brand, reinforcing that very relationship and increasing preferences for the brand in turn. When receiving negative feedback, however, consumers will less likely attribute it to the relationship but rather internalize it in an effort to maintain the self-brand connection. Consumers tend to defend brands when they have close self-brand relationships in an effort to defend the self (Cheng, White, and Chaplin 2012). Similarly, we argue that consumers will protect the relationship with the brand by taking the blame when both are confronted with negative feedback.

Three studies provide evidence for these expectations. In Study 1, we tested the main effect of feedback valence on the brand relationship. A total of 313 participants ($M_{\text{age}} = 30.17$) were asked to take a consumer selfie and told that their selfie will be evaluated by the other participants. After having taken the selfie, participants were either given no information on how many likes/dislikes their photos received (“no feedback”), or were told that their selfie had received 42 dislikes and 0 likes (“negative feedback”), or 42 likes and 0 dislikes (“positive feedback”). Participants in the positive feedback condition expressed higher self-brand connection ($M = 3.65$) compared to the no feedback condition ($M = 2.70$, $t(218) = 4.69$, $p < .001$) and to the negative feedback condition ($M = 2.45$, $t(214) = 5.54$, $p < .001$). Participants in the negative feedback and no feedback conditions expressed similar self-brand connection. These findings persist when controlling for positive and negative affect, indicating that the positive effect of feedback on brand relationship is not driven by mood alone. Similar results were found for purchase intention.

Study 2 assessed the attribution of the feedback. A total of 187 participants ($M_{\text{age}} = 25.31$) took a consumer selfie and subsequently received negative or positive feedback. When asked what they considered as the reason for the feedback (me, the brand, both equally or other), participants in the positive feedback condition were most likely to attribute the feedback to both relationship partners equally (59.57%) while those in the negative feedback condition were most likely to attribute it to themselves (51.61%). A chi-square test of independence showed that there was a significant association between the feedback condition and the attributed cause for the feedback ($\chi^2 = 44.38$, $p < .001$).

In Study 3, 238 participants ($M_{\text{age}} = 26.39$) followed the same procedure as in Study 2 with additionally measuring purchase intention. After providing feedback, we assessed participants’ tendency for relational attributions using the scale of Eberly et al. (2017) with two items for each possible locus of causality (internal, external and relational; e.g. “to what extent you think the feedback the selfie received was because of your relationship with the brand Pivella”) as well as purchase intention. As hypothesized, a mediation analysis revealed that relational attributions mediate the relationship between feedback valence and purchase intention (indirect effect = .15, BootSE = .073, 95% CI = [.029, .311]; $c' = .27$, SE = .24, $p = .25$; Hayes 2017; PROCESS Model 4), confirming that relational attributes are more likely when positive feedback is received with positive downstream consequences for the brand.

These findings extend our understanding of the attribution of success and failure when engaging with brands. Receiving negative feedback to a consumer selfie does not harm the brand relationship, however positive feedback has the potential to strengthen it. When consumers consider their relationship with the brand as close, they tend to take the fall for failure and ascribe success to the consumer-brand relationship. These findings help us understand if and why encouraging consumers to share consumer selfies can be beneficial for brands not only to establish self-brand connections during content creation but also thereafter.

Color analytics for data-driven brand management

EXTENDED ABSTRACT

Motivation. Visuals are at the core of brand communication. Advertising, product design, packaging, interior design of bricks and mortar stores and website design for e-commerce all have a strong visual dimension which contributes to consumer perceptions and attitudes. However, even as firms move to make their marketing activities increasingly data-driven and quantifiable, visual design has re-

mained a largely creative task, and its relationships to brand attributes are based on artistic interpretation and design expertise. In this work, we begin to close this gap by measuring a meaningful relationship between colors and key dimensions of consumer brand perception. We develop a novel methodology in which large respondent panels create online visual collages representing their brand perceptions. We use the combination of image processing, topic modeling, and controlled experiments to analyze these collages and identify causal relationships between algorithmically generated color-palettes and brand attributes.

Data. We obtain visualizations of consumer brand perceptions via a collage making task on a customized platform. Drawing inspiration from qualitative research methods that use visual collages to elicit attitudes and deep metaphors, we developed a web-based platform to collect collage data at scale (Dzyabura and Peres 2021). Respondents use this platform to create a collage on a virtual canvas, by browsing through thousands of photographs and positioning them on the canvas. After creating their collage, respondents fill out a survey, rating the brand on each of 49 brand personality and equity characteristics. We collect a total of 4743 collages for 303 US National brands from nine different categories (beverages, food and dining, cars, medications, etc.). Each collage consists of 12 photographs on average.

Analysis. A first challenge in exploring color-brand relationships is to define a color space which is relevant for brand perceptions. The original RGB color space, consisting of 17 million different colors, is too large, and it is not a-priori clear how to reduce it. For example, while some shades of the same color might not differ in their corresponding brand perception, other shades (e.g., neon green and forest green), might bear important perceptual differences. Therefore, we must reduce dimensionality in a meaningful way. We do so using topic modeling, a method developed for text analysis that groups words in a corpus of documents by topic. First, we group the colors into 140 buckets in the RGB space. Then, we estimate a Latent Dirichlet Allocation topic model with each collage as one document, and each color bucket as a word. This results in a set of 16 color palettes (topics) which we use in our subsequent analysis. For example, we obtain two different palettes with predominantly yellow colors: one with warm yellows and yellow-oranges, and another with pastel yellows, and some pastel blues and greens. We also get two green palettes (one with warmer brownish greens, the other with brighter greens), and four different blue palettes. As we will see, these palettes are associated with different brand characteristics, even though some of them contain the same major color group (e.g. green, yellow, blue). Thus, our topic modeling approach is a more meaningful way to obtain a color space than using pre-defined groups of colors, for example, grouping them by hue (greens, yellows, reds, etc.), or brightness.

Each brand collage is represented as a probability distribution over these palettes. For each brand attribute of interest, we then regress a respondent’s rating of the brand on that attribute on the distribution of color palettes in their collage. These regressions show which brand characteristics are significantly positively/negatively correlated with which color palettes. Notably, these relationships are quite different depending on the product category. For example, the palette with pastel shades of yellow, green, and blue is undesirable for the beauty category (negatively correlated with attributes such as good looking, successful, trendy) but more desirable for the beverage category (positively correlated with imaginative, innovative, and intelligent).

Experiments. To validate our results, we conduct two experiments in which we manipulate the color composition of visual mar-

keting communications. In the first experiment, we test the perceptions of the color palettes directly. To that end, we collect a set of beverage ads, of brands that are either very generic (“Bubble Tea”) or unfamiliar to US consumers. We convert the ads to grayscale images and hire a graphic designer to color the ads in the 16 color palettes from our analysis. We then ask respondents on MTurk to look at the ad and rate their perception of the brand based on just this ad (after checking that they are not familiar with the brand).

In the second experiment, we test whether our results can be useful to graphic designers in creating marketing materials. We ask graphic designers to create an ad for a beverage brand that would have a certain perceptual characteristic (e.g. trendy). After they submit their proposed design, we show them the color palettes that are associated with that characteristic, according to our results, and ask them to incorporate this information into their design. Then, both their first and second submissions are shown to MTurk respondents.

Results. Our research demonstrates how the color space can be represented as a collection of color palettes which are meaningfully associated with well-established brand characteristics. We show that the relationship is causal, that is - keeping all else constant, changing the color composition can influence brand perceptions. We also show how these relationships can be used to provide data-driven guidance to practitioners on the use of colors in brand communications.

Words Meet Photos: When and Why Visual Content Increases Review Helpfulness

EXTENDED ABSTRACT

People learn from others about a range of things: from places to visit products to buy. In the past, such information was exchanged predominantly verbally between friends or acquaintances. Today, however, people frequently access information from people they do not know or do not know well in the form of online posts and reviews. For example, 60 million posts appear daily on Instagram, and a total of 224 million reviews have been posted on Yelp. Notably, online information is no longer predominantly verbal. Thanks to the wide availability of camera phones, people communicate their experiences using photos and words. While most research focused on verbal elements in word-of-mouth (Dillard & Marshall 2003), research is limited on visual word-of-mouth, even though this type of communication is now ubiquitous. Our research aims to close this gap.

The mere presence of a photo can heighten engagement with online platforms (Li & Xie, 2020) and review platforms often suggest that adding a photo to a review could increase that review’s helpfulness (Schwartz 2019). We examine not just whether readers find communication helpful when it includes visual content (vs. not), but, more importantly, we identify the type of visual content that increases helpfulness. Specifically, we examine whether photos and text that convey similar information are more helpful than those conveying different information. While conveying different information by definition is more informative and may thus be more helpful, greater similarity between photo and text makes what is conveyed easier to process and possibly more helpful.

In study 1, we examined the effect of text-photo similarity on review helpfulness in a real-world dataset. Our dataset consisted of 6.8M Yelp reviews (3.28M included photos) of 22,678 Los Angeles County restaurants written by 1.96M reviewers from 2004 to 2020. We used a novel image identification algorithm combined with a representation learning algorithm to connect the content of the photos with the content of the review text. We first tested whether merely including photos with a review affected users’ helpfulness votes, controlling for review, reviewer, and restaurant characteristics. The

coefficient of interest, *has photos*, was positive and significant, suggesting that adding photos to reviews increased the review’s perceived helpfulness. Next, we tested whether the *similarity* between photo and text content affected helpfulness votes. To create a similarity measure, we used Google Cloud Platform Vision API and the “Detect Labels” function to extract labels characterizing the photo content. Next, we applied Doc2Vec to obtain vector representations of both reviews and photo labels (Le & Mikolov, 2014). We then measured the semantic similarity between review content and photo labels by computing the cosine similarity between their vectors.

Regressing helpfulness votes on similarity, controlling for review, reviewer, and restaurant characteristics, we found that (in addition to having photos) greater similarity had a positive and significant effect on helpfulness, suggesting that increasing similarity by one percentage point increased the helpful votes by 0.13%. Overall, these results suggest that including photos with the review text increases the helpfulness of the review. More importantly, similarity between photos and text matters: greater similarity heightens review helpfulness.

In study 2, we set out to replicate the real-world correlational findings and assess the underlying mechanism. Specifically, we predicted that greater photo-text similarity makes a review easier to process which heightens review helpfulness. We randomly assigned 440 participants to one of two similarity conditions (high vs. low) in a between-subjects design. All participants examined a review consisting of a photo and text. Reviews were selected from the Yelp data set and pre-tested to differ in photo-text similarity. After examining the review, participants rated the review’s helpfulness, usefulness, and value of review on a 9-point scale (1 = not at all, 9 = very; $\alpha = .97$). Next, participants responded to a three-item measure assessing processing ease (i.e., our proposed mediator) on a 7-point scale (1 = not at all, 7 = very much; $\alpha = .93$). Finally, as a manipulation check, participants rated photo-text similarity by responding: Overall, how similar is the information in the photo to the information in the text? (1 = not at all, 9 = very).

In line with the pre-test, the manipulation of similarity was successful: Participants rated photo-text similarity significantly higher in the high ($M = 6.74$, $SD = 2.05$) than in the low condition ($M = 3.78$, $SD = 2.26$), $t(438) = 14.42$, $p < .001$. Also, replicating the findings from study 1, participants in the high-similarity condition ($M = 7.27$, $SD = 1.59$) rated the review more helpful than those in the low-similarity condition ($M = 6.81$, $SD = 1.80$; $t(438) = 2.84$, $p = .005$). Further, participants in the high-similarity condition ($M = 6.62$, $SD = 0.62$) rated the review easier to process than those in the low condition ($M = 6.24$, $SD = 1.08$; $t(438) = 4.50$, $p < .001$). In line with our predictions, we found that processing ease significantly mediated the effect of similarity on perceived helpfulness in the predicted direction ($B_{indirect} = 0.20$, $SE = .05$, 95% [CI] = [0.11, 0.30]).

Our findings uniquely examine the interplay between photos and text in consumer-generated content. Our findings shed light on drivers of helpfulness in reviews that include both photos and text: Greater similarity between text and photos heightens helpfulness by making the overall message easier to process. These findings are important for consumers who want to create helpful content and platforms that want to feature such content – they can improve their review rankings by incorporating text-photos similarity into their algorithms.

Striking Visual Salience in Social Media Brand Posts: Implications for Consumer Sharing

EXTENDED ABSTRACT

Growing streams of content across social media platforms, together with diminishing consumer attentional resources, pose the formidable challenge for digital marketers of crafting engaging text and image content to compete in today's attention economy (Smith and Fischer 2020). Anecdotal evidence suggest that brand images prompt the greatest social media engagement if they portray some action or movement (Convince and Convert 2018), such as tilting sneakers or ice-cream rather than still shots. Yet, it remains unclear how to use these types of images in combination with other communication modes in social media such as overlays (i.e., customized text format within the image) and captions (i.e., standard text format on top or below the image) (Visme 2019).

To address these challenges, we turn to a scholarship base on how to combine visual and verbal elements in social media to increase attention and engagement. Previous research on visual engagement in social media has focused on image features such as valence (Rietveld et al. 2020), pattern regularity (Farace et al. 2020), visual concealment (Sevilla and Meyer 2020), and image complexity (Overgoor et al. 2022). These contributions have mostly focused on the symbolic and stylistic features of pictorials (McQuarrie and Mick 1996), but not so much on their ability to capture attention. Furthermore, the study of textual features accompanying image content has been mainly studied from the perspective of semantics and intentions (Villarroel Ordenes et al. 2019; Li and Xie 2020; Rietveld et al. 2020), neglecting that consumers' focus may also be captured by visual properties of text (e.g., font size) (Smith and Fischer 2020). To stop consumers' scrolling down behavior and engage them with brand content through heightened attention, more research on individual visual properties (i.e., motion in images, font size in text) and their combined effect in social media is needed (Badenes-Rocha, Bigne and Ruiz 2022).

Drawing on visual salience, that is, the distinct perceptual quality which makes some items immediately grab the viewer's attention (Itti 2007), this research examines visual properties of images and texts (overlays and captions) in social media brand posts and their joint impact on consumer sharing. We hypothesize that greater dynamism in social media brand images increase consumer attention, and subsequently consumer sharing. Furthermore, we study the boosting and attenuating properties of salience properties in overlays in captions. In text overlays, we study the attenuating effect of overlay size, and the boosting effect of placing overlays following the rule of thirds. In captions, we study the boosting effect of lengthier text and greater emphasis through the use of capitalized words and exclamation marks.

Using a multi-method approach, we test through experiments the positive effect of image dynamism on attention and consumer sharing; then we assess moderation with two field studies using text and image mining in Twitter and Instagram. Experimental work confirms our hypotheses, and the Twitter field study demonstrates that an increase of image dynamism by 1-point (in a 7-point scale) results in a 10% increase in sharing. Based on our findings, and using computer vision techniques (Liu, Dzybura and Mizik 2020), we develop an automated tool for classifying social media images as dynamic or static, and replicate our findings on Instagram.

Both the Twitter and Instagram studies demonstrate that the positive effect of image dynamism on sharing can be attenuated by a larger overlay size or boosted by positioning the overlay in a strategic place. Our field work demonstrates that, on both Twitter and In-

stagram, greater overlay size salience weakens the positive effect of dynamic images on sharing. We explicate this effect by the attention competition caused by two salience properties that share a common visual space. Contrarily to overlay size, we identify a boosting effect of the overlay positioning within the dynamic image. Our evidence suggests that positioning the overlays in areas where the eye naturally lands using the rule of thirds, creates a cooperation effect with greater image dynamism. Differently from overlay size, the adequate placement seems to be a more subtle form to drag viewer attention, which enhances the positive effects of dynamic visuals.

Regarding the effect of caption salience, we find strengthening effects of the caption length in Twitter but not in Instagram. When considering caption emphasis in the form of capital words and exclamation marks, we find a boosting effect of the dynamic image on consumer sharing. We speculate that these effects occur due to the fact that captions (differently from overlays) do not take from the visual space of the image; thus, translating into a positive transfer between the dynamic image and salient captions.

We offer three key insights into how and when consumers are more likely to share brand posts. First, consumers are more willing to share images that imply dynamism rather than static images. Brands should adapt their media visual language and think of ways to present a stand-alone product in a dynamic fashion. For example, stylistic color saturation, shading, and line properties can engender perceived dynamism, even without human-looking characters (Mourey and Elder 2019). With the image classifier, we provide an efficient way to identify images with a greater probability of dynamism. Second, content managers should refrain from using large sized text overlays, which might distract consumers from the dynamic image. If positioned in strategic spots, salient overlays can be included in dynamic images though, because they do not compete for attention with each other. Third, captions work in concert with dynamic images, because they are disconnected spatially. Managers should emphasize captions when presented with dynamic images, given that the latter generate positive attention transfer to the caption which is beneficial to virality. These insights thus provide clear guidelines for social media content managers to compose effective multimodal messages that can boost brand post sharing.

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New Perspectives on Experiential Consumption

Chair: Jean Zhang, University of California San Diego, USA

Paper #1: Doubling Down on Losses—How Experience Unavailability Leads to Choice of Lesser Alternatives

Jean Zhang, University of California San Diego, USA
Gal Smitzky, University of California San Diego, USA
On Amir, University of California San Diego, USA

Paper #2: Expecting a Better Subsequent Experience Inhibits Adaptation to a Negative Experience

Guy Voicheck, Yale University, USA
Minju Han, Hanyang University, South Korea
Ravi Dhar, Yale University, USA

Paper #3: “It Could Be Better” Can Make It Worse: When and Why People Mistakenly Communicate Upward Counterfactual Information

Xilin Li, University of Chicago, USA
Christopher Hsee, University of Chicago, USA
Ed O’Brien, University of Chicago, USA

Paper #4: Consuming Experiences in a ‘Materialistic’ Way Leads to Less Happiness

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Jesse Walker, The Ohio State University, USA
Selin Malkoc, The Ohio State University, USA
Joseph Goodman, The Ohio State University, USA

SESSION OVERVIEW

Much of consumer research has investigated attitudes toward and preferences for the consumption of products, with an assumption that the consumption of experiences follows the same principles. This session challenges this assumption by providing four converging perspectives about the unique nature of experiential consumption. This topic is of growing importance in light of the underdevelopment of corresponding research compared to other areas of consumer behavior (Schmitt and Zarantonello, 2013), and the recent explosion in post-pandemic experiential consumption (e.g., ‘revenge travel’).

The first paper examines a situation that consumers often face—the disappointment of learning that an experience they anticipated having is no longer available. The authors document a systematic, counterintuitive response to experience unavailability whereby consumers select an alternative they would not have otherwise selected instead of abandoning the search. This effect is driven by the hedonic editing of outcomes, and only holds when the loss from the unavailable experience and subsequent choice are bracketed together, and the initial perceived loss is not too large. The mechanism uncovered contributes to our understanding of how consumers derive hedonic value from experiences.

The second paper focuses on adaptation to negative experiences. The authors find that consumers are slower to adapt to a negative feature of an experience if they expect this feature to be either better or worse in a subsequent experience. This occurs because expecting a feature to differ between experiences causes consumers to sustain attention on this feature, inhibiting adaptation to it. These findings contribute to research on how anticipated experiences affect ongoing experiences.

The third paper investigates how consumers’ experiences depend on the counterfactual information they receive. The authors find a discrepancy between what people believe will enhance experiencers’ evaluations, and what information actually enhances it. Spe-

cifically, whereas most people believe that upward counterfactual information would improve an experience, it actually worsens it—but not if the experience has an obvious imperfection or the experiencer can vividly envision the upward counterfactual. This research highlights the prevalence and consequences of providing upward counterfactual information.

The fourth paper explores “experientialistic” consumption, a novel phenomenon whereby individuals can consume experiences with a materialistic mindset. The authors investigate the antecedents and consequences of experientialistic consumption, and find that individuals with high materialistic orientation are also likely to be high in experientialistic orientation, which can adversely impact happiness and well-being, as well as others’ inferences of the consumer’s personality. Furthermore, they identify attributes of experiences—achievement qualities and consisting of multiple stand-alone parts—that are highly valued by those consuming experientialistically.

Taken together, these papers deepen our understanding of how consumers evaluate, choose, and derive hedonic and materialistic value from experiences.

Doubling Down on Losses—How Experience Unavailability Leads to Choice of Lesser Alternatives

EXTENDED ABSTRACT

In this paper, we document a systematic, counterintuitive effect such that individuals choose to undertake a negative alternative (vs. not) after an experience unavailability, i.e., when an attractive experience they anticipated having is no longer available. We implicate the hedonic editing of outcomes (Thaler 1985) as a major driver of our findings, and show that undertaking the negative alternative actually minimizes the overall negative hedonic impact via aggregation (i.e., averaging). We rule out alternative mechanisms, such as a reference shift, a sunk cost effect, and a break-even effect. The mechanism uncovered contributes to our understanding of the actions and motivations underlying the striving for hedonic well-being. Counter to a purely separable additive utilitarian view, we suggest that choosing a slightly negative alternative can improve well-being.

The first three studies demonstrate the effect. In Study 2B, MTurk participants ($N = 777$) were randomly assigned to either an unavailable experience or a control condition. In the unavailable experience condition, participants were told that they were planning to see a wildflower superbloom later that day, only to learn prior to their trip that the superbloom was no longer available (i.e., the park was closed). In the control condition, there was no mention of a superbloom. The main DV was choice of whether to do an activity that was pretested as negative. Participants who encountered the experience unavailability were significantly more likely to undertake the negatively rated activity compared to those in control (51.17% vs. 32.4%; $p < .001$), demonstrating our effect, and did not perceive the subsequent activity as more enjoyable than those in control, ruling out a shift in reference point account. We ran two conceptual replications, including a consequential study in the lab with undergraduate participants.

Next, we sought to demonstrate that undertaking a negative alternative after an experience unavailability (vs. not) in fact improves one’s hedonic state. Study 3 employed an adapted version of Study 2B. This time, participants were asked to imagine that they drove to a park to see a wildflower superbloom, only to find out upon ar-

rival that the park was closed. Participants reported their hedonic state on a 0-100 scale at three time points: before leaving to see the superbloom, after learning that the park was closed, and either after doing a negatively rated activity (negative alternative condition) or driving home (control condition). Hedonic state evaluations were significantly higher for those who undertook the negatively rated alternative ($M = 54.21$) than those who did not ($M = 39.12$; $p < .001$), showing the counterintuitive result that a negatively rated experience can lead to an improved hedonic state.

Study 4 introduces bracket type as a moderator. Because the hedonic editing of two outcomes is less likely to occur when the outcomes are coded in separate mental accounts (Kahneman and Tversky 1984; Evers, Imas, and Kang 2021), we expect that when narrow bracketing is facilitated, the subsequent negative alternative is less likely to be seen as an opportunity to edit the negative impact from the unavailable experience. We found a significant interaction between scenario (unavailable experience vs. control) and bracket type ($p = .007$), such that under broad bracketing, participants in the unavailable experience condition were more likely to choose to do a negatively rated activity (51.32%) compared to control (14.63%; $p < .001$). The effect was completely attenuated in the narrow bracketing condition, where participants in the unavailable experience condition (19.48%) were as likely to prefer the unenjoyable activity as those in control (15.48%; $p = .64$).

Study 5 tests a boundary on hedonic editing. The shape of the value function curve in the loss domain implies a boundary condition on aggregation (i.e., averaging), such that aggregating a larger loss (the unavailable experience) with a smaller one (the negative alternative) will only minimize overall negative hedonic impact when the initial loss (from the unavailable experience) is not too large. This is because the unenjoyable alternative can only appreciably decrease overall negative impact when the individual is on the steeper (vs. flatter) portion of the loss curve. Participants were randomly assigned to one of four between-subjects conditions: unavailable small, medium, or large prize, and control (no prize). Participants in the unavailable experience conditions were asked to imagine they had just won a Disney Park sweepstakes with either a small, medium or large prize. Then, they were told that on the day they planned to visit the Disney Park, the sweepstakes was voided. Participants in the unavailable large prize condition (36.92%) were significantly less likely than those in the unavailable small prize condition to choose to do the negatively rated activity (57.38%; $p = .03$), and not significantly different from those in control (30.16%; $p = .53$). The choice percentage in the unavailable medium prize condition (43.08%) was between the unavailable large prize condition (36.92%; $p = .59$) and the unavailable small prize condition (57.38%; $p = .15$).

Taken together, these findings present novel evidence for the motivation to hedonically edit prior negative hedonic impact by taking on an additional negative alternative, as well as contributes to the body of work examining the effects of retail out-of-stock situations that have mostly focused on products.

Expecting a Better Subsequent Experience Inhibits Adaptation to a Negative Experience

EXTENDED ABSTRACT

Two passengers are cramped into middle seats on their flight from Boston to Chicago, where they will catch a connection to Denver. Whereas one was assigned to a middle seat on both her flights, the other was assigned an aisle seat for her flight to Denver. During their flight to Chicago, would the passengers adapt to their middle

seats at a different rate depending on their expectations about their subsequent flight?

Adaptation, a diminishment in hedonic response to a stimulus with continued exposure, can often be explained by changes in attention: people adapt to a stimulus because they gradually turn attention away from it (Frederick and Loewenstein 1999). Therefore, anything that leads people to sustain attention on a stimulus inhibits adaptation (Nelson, Meyvis, and Galak 2009; Wilson et al. 2005). Building on this finding, as well as on research showing that people compare their ongoing experiences to other salient experiences (Carter and Gilovich 2010; Gilbert, Giesler, and Morris 1995) and pay attention to differences when making comparisons (Tversky 1977), we propose that if a negative feature of an ongoing experience is expected to be different in a subsequent experience, people sustain their attention on that feature, inhibiting adaptation to it.

Study 1 shows that expecting a negative feature of an experience to be positive in a subsequent experience inhibits adaptation. Six-hundred participants watched a music video, rotated 90° (472 completed the study). Prior to watching the video, participants in the no subsequent experience condition read that this is the only video they will watch in the study. Participants in the similar subsequent experience condition read that they will subsequently watch another rotated video and those in the better subsequent experience condition read that the subsequent video will not be rotated. As participants watched the first video, they provided online evaluations of it, using unnumbered 21-point scales from extremely unpleasant (coded as -10) to extremely pleasant (coded as 10) that appeared near the beginning, middle, and end of the video. There was no second video. We conducted two repeated-measures ANOVAs with participants' online evaluations as a within-subjects factor and expectations about the subsequent experience as a between-subjects factor. One analysis compared the better condition and the similar subsequent experience condition, and the other analysis compared the better condition and no subsequent experience condition. Both analyses yielded significant interactions (better and similar: $F(2, 616) = 4.46$, $p = .012$, $\eta_G^2 = .005$; better and no subsequent experience: $F(2, 636) = 10.25$, $p < .001$, $\eta_G^2 = .012$), such that participants adapted to the rotated video at a slower rate when they expected to subsequently watch a non-rotated video.

Study 2 shows that the impact of expectations on adaptation cannot be readily explained by known hedonic contrast effects. Specifically, prior research has shown that something may seem better or worse when evaluated in the context of something worse or better, respectively (Carter and Gilovich 2010; Voicheck and Novemsky 2021). We propose that any difference along a feature of an ongoing experience and a subsequent experience can determine whether people attend to it. Therefore, we predict that adaptation is also inhibited by the expectation that a negative feature of an experience will be worse in a subsequent experience.

Three hundred participants took part in Study 2, which was similar to study 1 (292 completed the study). However, instead of the no subsequent experience condition, in study 2 some participants expected to watch a subsequent video that is flipped upside-down (worse subsequent experience). ANOVAs with participants in the better and similar subsequent experience conditions, and with participants in the worse and similar subsequent experience conditions, both yielded significant interactions (similar and better: $F(2, 386) = 7.71$, $p = .001$, $\eta_G^2 = .013$; similar and worse: $F(2, 382) = 3.28$, $p = .039$, $\eta_G^2 = .006$), such that expecting a negative feature of an experience to be either more positive or more negative in the subsequent experience inhibited adaptation.

Study 3 directly tested our prediction that expecting a negative feature of an experience to be different in a subsequent experience inhibits adaptation because it leads people to sustain attention on this feature. Six-hundred participants took part in a study similar to study 1 (409 completed the study), including the similar and better subsequent experience conditions. However, study 3 also included a manipulated attention condition, in which participants who expected the subsequent video to be similar to the first video were prompted to think, as they were watching the first video, about how their current experience compares to the experience of watching a non-rotated video. This study was preregistered at <https://aspredicted.org/blind.php?x=zi4dg4>.

An ANOVA comparing participants in the similar and better subsequent experience conditions yielded a significant interaction ($F(2, 544) = 10.63, p < .001, \eta_G^2 = .013$), replicating the previous finding that participants in the better subsequent experience condition adapted at a slower rate than those in the similar subsequent experience condition. Furthermore, an ANOVA comparing participants in the similar subsequent experience and similar subsequent experience/manipulated attention conditions yielded a significant interaction ($F(2, 536) = 11.54, p < .001, \eta_G^2 = .016$), but an ANOVA comparing participants in the better and similar subsequent experience/manipulated attention conditions did not ($F(2, 544) = 0.15, p = .86, \eta_G^2 < .001$). Thus, giving people the expectation that a negative feature of an experience will be positive in a subsequent experience inhibits adaptation about as much as prompting them to sustain attention on that negative feature.

In conclusion, expecting a negative feature of an experience to be different in a subsequent experience – either for better or for worse – causes people to sustain attention on this feature, inhibiting adaptation. It is important to note, however, that our findings do not imply that people who go through negative experiences should avoid positive expectation; our studies simply demonstrate that hope and anticipation, as important and even vital as they might be, may come at a cost.

It Could Be Better” Can Make It Worse: When and Why People Mistakenly Communicate Upward Counterfactual Information

EXTENDED ABSTRACT

Imagine you are a realtor and are showing a prospective buyer a house with a lake view, but it is foggy and the view is less than ideal. Are you inclined to tell the prospective buyer, “Unfortunately it is foggy outside. If it were not foggy, the view would be even better!”? Four studies, spanning diverse domains, reveal a novel discrepancy: Most presenters (e.g., sellers) choose to communicate such upward counterfactual information (UCI) to experiencers (e.g., prospective buyers), believing it will enhance experiencers’ impressions (e.g., of the house)—yet UCI actually worsens their impressions.

Study 1 ($N = 450$) provided initial evidence for the presenter-experiencer discrepancy. Participants were assigned to three conditions: presenters, experiencers with UCI and experiencers without UCI. Presenters assumed the role of a tour guide, who was taking a group of people on an aurora tour when there were clouds and the aurora was not bright. The presenters saw a picture of the current not-bright bright aurora as well as a picture of a bright aurora, and were asked what they would tell the tourists in the situation; they could freely say whatever they wanted. We categorized these freely-generated statements as either containing UCI or not containing UCI. Experiencers assumed the role of a tourist, and saw a picture of the current not-bright aurora, along with either a randomly-picked

statement from the with-UCI category or one from the without-UCI category, and reported their impression of the aurora they saw. Most presenters’ freely-generated statements (83.8%) contained UCI, $\chi^2 = 64.90, p < .001$, but experiencers who received with-UCI statements actually had a worse impression of the auroras than experiencers who received without-UCI statements, $M_s = 6.83$ and 7.35 , $SD_s = 1.67$ and 1.66 , $t(298) = 2.71, p = .007$.

Study 2 ($N = 454$) demonstrated the discrepancy with real consequences. Participants were assigned to one of three groups: presenters, experiencers with UCI, and experiencers without UCI. The presenters’ task was to present a set of two photos, one was pretested as less impressive than the other, and give the experiencers the best possible impression of the set. Presenters saw both photos in the set, while experiencers saw only the less-impressive photo. Presenters decided whether to communicate UCI (i.e., if you saw the other photo, you would be more impressed). Experiencers either received the UCI or not, and reported their actual impression of the photo set. Most presenters (65.6%) chose to communicate the UCI, $\chi^2 = 14.96, p < .001$, compared with 50%, but experiencers who received the UCI had a worse impression of the photo set than experiencers who did not, $M_s = 7.00$ and 7.40 , $SD_s = 1.65$ and 1.35 , $t(298) = 2.30, p = .022$.

We propose that the presenter-experiencer discrepancy arises because presenters insufficiently account for the fact that they possess more knowledge about the presented target than experiencers, failing to realize that noting an imperfection reveals it. Accordingly, when experiencers are knowledgeable about the target, either because the imperfection is obvious (Study 3) or because they can easily envision the upward counterfactual (Study 4), the discrepancy should attenuate.

Study 3 ($N = 904$) tested whether the presenter-experiencer discrepancy attenuates when the current target has an obvious (vs. non-obvious) imperfection. The study adopted a 3 (role: presenter vs. experiencer-without-UCI vs. experiencer-with-UCI) \times 2 (imperfection: non-obvious vs. obvious) between-subjects design. Presenters assumed the role of a business consultant who gave a presentation to their client, and realized that the slides were either slightly distorted (non-obvious imperfection) or severely distorted (obvious imperfection) due to an unexpected malfunction of the laptop. Presenters decided whether to convey UCI (i.e., my slides would look better if the laptop worked properly). Experiencers assumed the role of the client and evaluated the presentation by receiving UCI or not. The results showed that regardless of whether the imperfection was non-obvious or obvious, presenters chose to convey UCI, 85.4%, $\chi^2 = 75.82, p < .001, 87.9%, \chi^2 = 85.70, p < .001$, respectively. However, UCI hurt experiencers’ evaluation when the imperfection was non-obvious, $M_s = 5.15$ and 6.08 , $SD_s = 1.96$ and 1.86 , $t(303) = 4.29, p < .001$, but increased experiencers’ evaluation when the imperfection was obvious, $M_s = 3.82$ and 2.97 , $SD_s = 1.89$ and 2.03 , $t(297) = 3.74, p < .001$.

Study 4 ($N = 907$) tested whether the experiencers’ ability to vividly envision the upward counterfactual would reduce the adverse effect of UCI on their own impressions of the target and thereby reduce the presenter-experiencer discrepancy. The study adopted a 3 (role: presenter vs. experiencer-without-UCI vs. experiencer-with-UCI) \times 2 (envisioning: without vs. with) between-subjects design. Presenters assumed the role of a seller who tried to promote an indoor plant to a prospective buyer, and the plant looked a bit withered due to insufficient sunlight. Presenters decided whether to convey UCI (i.e., the plant would look fresher and livelier if it received sufficient sunlight). Experiencers assumed the role of the buyer and rated the withered plant. We manipulated whether experiencers saw what the plant would look like when it was fresh. The results showed

that regardless of whether or not experiencers could see the better counterfactual, presenters chose to convey UCI, 83.3%, $\chi^2 = 66.67$, $p < .001$, 76.5%, $\chi^2 = 41.89$, $p < .001$, respectively. However, UCI hurt experiencers' evaluation when experiencers did not have a vivid view of the better counterfactual version, $M_s = 5.34$ and 7.20 , $SD_s = 1.77$ and 1.43 , $t(301) = 10.05$, $p < .001$, and still hurt—but hurt less—when experiencers had a vivid view, $M_s = 6.36$ and 7.03 , $SD_s = 1.65$ and 1.52 , $t(300) = 3.63$, $p < .001$.

In sum, this research highlights the prevalence and cost of communication of UCI. Our research yields practical implications for both consumers and marketers. Consumers should be aware that receiving UCI might bias their evaluation of a product, especially when they lack knowledge about variation in the product. Meanwhile, marketers should be cautious about communicating UCI with consumers when promoting and advertising a product.

Consuming Experiences in a 'Materialistic' Way Leads to Less Happiness

EXTENDED ABSTRACT

After the seminal demonstration of the experiential advantage (Van Boven & Gilovich 2003), a recommendation emerged: to be happy and well liked, choose experiences over material goods (Gilovich & Gallo 2020; Van Boven et al. 2010). This recommendation is driven by robustness of the advantage (Weingarten & Goodman 2021) and evidence linking materialism (i.e., valuing the acquisition and ownership of material goods) with loneliness and lower well-being (Kasser 2016). Yet, this recommendation may overlook critical nuances of materialism. When people are focused on satisfying external referents (i.e., others and the future) with their purchases, materialism can trigger loneliness; however, when people are focused on internal referents (i.e., self and the present), materialism can decrease loneliness (Pieters 2013). It is possible, then, that the conventional wisdom that material consumption is extrinsic and thus negative, while experiential consumption is intrinsic and thus positive may not always hold. Across three studies we test whether experiences can also be acquired and consumed in a 'materialistic' way (i.e., "experientialistic consumption"), thereby reducing well-being and leading to negative interpersonal consequences.

Study 1 ($n=311$, 41% female), investigated the relationship between dispositional materialism and happiness (i.e., SWB; Dittmar et al. 2014) in both material and experiential contexts. Participants responded to the Material Values Scale (MVS; $\alpha=.93$; Richins & Dawson 1992) and to an Experiential Values Scale (EVS; $\alpha=.91$), which reworded MVS to reflect experiences. MVS has three distinct subfactors, two with external referents (to others and to the future, respectively) and one with internal referents (to the self; Pieters, 2013). For the analysis we combined the two external referent subfactors into one and compared it to the internal referent subfactor. Overall MVS and EVS were positively correlated ($r=.60$, $p<.001$), demonstrating that consumers high in materialism have similar values when consuming experiences. Further, both the internal referent subfactors of MVS ($\alpha=.78$) and EVS ($\alpha=.79$) and the external referent subfactors of MVS ($\alpha=.91$) and EVS ($\alpha=.88$) were positively correlated ($r=.53$, $p<.001$ and $r=.62$, $p<.001$). In terms of SWB, externally-referent acquisition was negatively association with SWB for both material ($r=-.22$, $p<.001$) and experiential ($r=-.12$, $p=.04$) consumption. For internally-referent acquisition, the correlations with SWB were not significant (MVS: $r=-.04$, $p=.46$; EVS $r=.09$, $p=.11$).

The results of study 1 suggest that while material goods can be consumed in a 'materialistic' way, consumers can also engage in 'experientialistic' consumption by consuming experiences in a ma-

terialistic way. The negative association that both materialistic and experientialistic consumption had with well-being was driven by external referents. This result demonstrates that it may not be material consumption itself that reduces well-being, but rather a focus on external referents during consumption – a motivation that may in fact exist when consuming either possessions or experiences.

Study 2 experimentally tested whether happiness from purchases of either type is attenuated when an external referent is present. Study 2 ($n=371$, 57% female) was a 2(purchase: material vs. experiential) x 2(referents: internal vs. external) between-subjects design. Participants described a material or experiential purchase they had made for the sake of personal gratification and pure enjoyment (internal referents) or achieving status and impressing others (external referents). They then indicated their happiness with the purchase. Overall, participants were happier with their experiential ($M=6.34$) than their material purchases ($M=5.98$, $p=.002$). As predicted, purchases with an internal ($M=6.41$) referent resulted in more happiness than those with an external referent ($M=5.91$) $p<.001$). There was no interaction ($p=.93$), suggesting that consuming with an external referent in mind attenuates the well-being derived from both material and experiential purchases.

Study 3 ($n=275$, 44% female) examined the downstream social consequences of experientialistic consumption. Participants read one of three conditions (one internal and two external) about a hypothetical person, Sam, who was planning a dining experience that would be either personally gratifying (internal), six courses (external), or at an exclusive restaurant (external). Participants then rated Sam on the EVS and several undesirable personality traits (e.g., arrogant, selfish, shallow). In the external referent conditions, Sam was perceived as having higher EVS ($p<.001$) and a more undesirable personality ($p<.001$) than in the internal condition. Critically, the personality inference was driven by the externally-referent subfactors of the EVS (95%CI=[.01,.15]) and not the internally-referent subfactor ([-.09,.05]), providing evidence that purchasing experiences in 'materialistic ways' (i.e., with an external referent) may carry considerable downstream social costs.

This research suggests that consumers can engage in 'experientialistic' consumption much like they engage in 'materialistic' consumption. Experientialistic consumption occurs when individuals consume experiences in order to satisfy external rather than internal referents. This 'experientialistic' consumption attenuates happiness and leads to negative interpersonal consequences.

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“Encouraging Repair: Bringing Together Behavioral Perspectives on a Sustainable Consumption Practice”

Chair: Dr. Donald Lehmann, Columbia University, USA

Paper #1: “Replace or Repair?: How Companies Can Signal Unused Utility and Decrease Product Replacement”

Nathan Allred, Pennsylvania State University, USA
Karen Winterich, Pennsylvania State University, USA

Paper #2: “Reluctance to Repair: Perceived Relative Income and Entitlement as barriers to DIY Repair”

Aprajita Gautam, University of Texas – Austin, USA
Rajagopal Raghunathan, University of Texas – Austin, USA

Paper #3: “Materializing Sustainable Service Delivery Through an Ethos of Repair”

D. Matthew Godfrey, University of Massachusetts Amherst, USA
Linda L. Price, University of Wyoming, USA

SESSION OVERVIEW

Cycles of mass production, consumption, disposal, and waste pose a serious threat to the health and sustainability of human and natural environments. Repair diverts consumer products from waste streams, yet current research and theory remain uncertain regarding practical solutions for increasing consumer engagement in repair (Godfrey, Price, and Lusch 2021). This session brings together a multidisciplinary group of scholars to examine the ways that marketers, service providers, and policy makers can increase the prevalence of repair in consumer societies.

Repair is challenged by manufacturers discouraging repair through rapid product lifecycles and planned obsolescence (Cooper 2005; Joy et al. 2012). Additionally, consumers often prefer new products over old ones (Gregson, Metcalfe, and Crewe 2009), and repair services have become less accessible as tradespeople dwindle in number (McCullough 2009). Still, many consumers repair worn or damaged products (Godfrey et al. 2021). Cell phone repair is a growing \$4 billion industry in the United States (Bell et al. 2018; IBIS World 2019), textile mending is gaining popularity (Lewis-Hammond 2014), community repair shops and online repair groups are gaining prominence (Dant 2019; Graziano and Trogal 2017; iFixit 2020; Larsen and Christensen 2015; Repair Café 2020)(iFixit 2020; Repair Café 2020)(iFixit 2020; Repair Café 2020), and some apparel companies promote and service the reparability of their products (Engel and Engel 2019). Despite this growth, theoretical and practical research questions remain. What psychological, sociological, and market factors drive consumer repair decisions? How can repair be facilitated or encouraged to enable more sustainable consumption?

Three papers and one discussant examine these questions and provide strategies that can encourage consumer repair of used products. The first paper demonstrates that consumers are more likely to repair non-functional products, such as broken mobile phones, when they perceive those objects as having unused utility. Through five experimental studies, the authors show that repair initiatives engaged in or certified by the original manufacturer can increase repair likelihood by boosting consumer perceptions of unused utility. The second paper examines how consumers who perceive their own wealth as higher than others are more reluctant to repair old or broken products. Four experiments show that perceptions of relative wealth create feelings of entitlement toward new and better products, which explains consumer reluctance to engage in repair. The third paper presents an ethnographic study of repair service providers and

online consumer reviews of their services. The authors analyze more than 50 hours of participant observation and over 2,400 consumer reviews to define an “ethos of repair.” They show how an ethos of repair shapes both the success of service providers’ repair interventions and the decisions of consumers to repair worn and damaged products. Finally, an expert discussant will provide commentary on the three papers and their theoretical and practical implications for product adoption, disadoption, and consumer behavior broadly.

Taken together, this session introduces consumer researchers to the important and rapidly growing context of repair. By launching this conceptual and practical discussion, we hope to bring together a diverse community of scholars to tackle issues of repair and environmental sustainability in consumer behavior.

“Replace or Repair?: How Companies Can Signal Unused Utility and Decrease Product Replacement”

EXTENDED ABSTRACT

When a product breaks, consumers must decide whether to repair or replace the broken product. While repairing broken products is a better option for the environment, given it takes fewer resources than producing a new product, consumers tend to replace broken products. Such replacement tendencies likely increase consumption and thus resource use. In this project we investigate the role of company repair initiatives in decreasing replacement behavior.

The prominence of disposal over repair seemingly contradicts the notion that consumers are generally averse to waste (Bolton and Alba 2012). Past research suggests that some consumers are reluctant to replace products through upgrading because of the remaining utility in the products they own (Cripps and Meyer 1994; Okada 2001). In these cases, consumers seem to be aware of the unused utility in the possession, which makes it wasteful to replace. However, given consumers’ perceptions of planned obsolescence in product design (Guiltinan 2009), consumers may no longer tend to infer that utility remains when a product is broken. As such, consumers may not perceive the decision to replace their product as wasteful, thereby allowing consumers to replace rather than repair products without experiencing any aversion to being wasteful. Yet, today, many companies are engaging in repair initiatives such as offering repair parts, providing repair ratings for their products, and offering repair services. For example, Apple recently started an iPhone repair program that allows customers to buy repair parts for their broken iPhones (Apple 2021).

We suggest that when companies engage in repair initiatives, they signal that their broken products have unused utility in a similar manner that warranties have been shown to signal product quality (Boulding and Kirmani 1993). We hypothesize that company repair initiatives decrease consumers’ likelihood to replace non-fully functioning products due to an increased perception of unused utility signaled by the original equipment manufacturer’s (OEM) repair initiative. However, we theorize that the ability to signal unused utility in non-fully functioning products is specific to the OEM’s repair initiatives; the local tailor or third-party computer repair shop does not indicate to customers that their specific product has remaining utility when it breaks. Thus, we predict that the provider of the repair initiative will moderate the effect such that OEM repair initiatives

will decrease replacement likelihood to a greater extent than third-party repair initiatives.

In Study 1, we leveraged the introduction of Apple's new iPhone repair program to test the effect of a repair parts initiative on real Apple customers. Specifically, Study 1 tests whether a repair parts initiative signals unused utility in non-fully functioning iPhones. iPhone owners that had not heard of the new Apple program were sampled using Mturk. Participants were shown Apple's press release about the new program or they were not (control). As predicted, iPhone owners that were informed of the repair parts program perceived a non-fully functioning iPhone to have more unused utility than participants that were unaware of the new program.

Study 2 investigates the effect of three repair initiatives (repair parts, repair ratings, repair services) on unused utility and replacement of non-fully functioning products. Participants were told that a fictional company was currently participating in one of the repair initiatives or no repair initiative was mentioned (control). Next, participants were asked to imagine that they owned a product from the company (headphones, air fryer, toaster) that broke after a couple of years of use. As predicted, participants who were told that the OEM was currently engaging in a repair initiative perceived the non-fully functioning product to have more unused utility and they were less likely to replace it, opting for repair.

Study 3 examines whether the repair initiative provider moderates the effect of repair initiatives on consumers' replacement likelihood and also tests the mediating role of unused utility. Undergraduate students were randomly assigned to one of three conditions in a 3 (provider: OEM, third-party, none) between-subjects design. Participants were asked to imagine that they owned a toaster from a fictional kitchen appliance company that broke after two years of use. Next, participants saw an ad for a paid repair service that was either offered by the OEM, a third-party, or no ad was viewed. Participants were less likely to replace their non-fully functioning product in the OEM condition than in the third-party condition or no repair service condition. However, replacement tendencies did not differ between the third-party and no repair conditions. Unused utility perception mediated the effect of provider on replacement likelihood.

In our last two studies we test the effect of repair initiatives and unused utility perceptions on repair behavior in the field. We collaborated with a laptop repair company based in New York City to test whether OEM-certification of a third-party repair service could lead to increased repair rates. Two landing pages were developed for the repair company's website. One landing page mentioned that the company was Dell repair certified while the other did not. We then captured how many lead actions each landing page received. As predicted, more lead actions were generated on the Dell certified landing page than on the regular landing page, suggesting that OEM-certification provides third parties with the ability to signal unused utility and increase repair rates.

Finally, we examine an alternative method of promoting repair. Since unused utility perceptions are vital in the decision to repair or replace, we tested the influence of waste salience in advertisements on repair engagement. Using Facebook ads, we ran two advertisements for a third-party appliance repair company, one ad mentioned waste while the other did not. As predicted, the waste salient ad resulted in a higher click-through-rate than the control ad, suggesting that making waste salient will increase consumers' likelihood to repair instead of replace non fully-functioning products.

In sum, consumers' tendency to replace a non-fully functioning product can be overcome when they perceive the product to have unused utility, which can be signaled by the OEM or OEM-certified

repair initiatives. This research has implications for reducing consumer waste, resulting in more sustainable consumption.

“Reluctance to Repair: Perceived Relative Income and Entitlement as barriers to DIY Repair”

EXTENDED ABSTRACT

Each year, Americans throw away 50 million tonnes of durable goods—including over 150 million cell phones and over 2 billion pounds of clothes—many of which can be repaired or repurposed (Bradford 2018; Clarke and Bridgewater 2012). While it could be argued that an emphasis on recycling can mitigate the quantity we waste, some products are just too complex to be recycled, or recycling them may require additional resources; hence, recycling may not be as environmentally friendly as it might initially appear. In recognition of this fact, the EPA has developed a waste management hierarchy that ranks strategies from most to least environmentally friendly, with repair and reuse of products ranking higher than recycling. Yet, academic research, especially in marketing, has focused almost entirely on understanding consumers' recycling behavior (see Trudel 2019 for a review), with relatively little focus on repair and reuse (for exceptions, see Scott and Weaver 2012, 2014).

We conducted a pilot study ($n=275$) in which we asked participants for their opinions about various pro-environmental behaviors, including repairing and recycling. Results revealed that while repairing is perceived as benefitting oneself more than benefitting others or society, the reverse is true for recycling. In other words, lay-people appear to believe that recycling is more pro-social than repairing—despite indications by the EPA to the contrary. While there are many implications of this finding, we point to two which are important in our context. First, given the difference between the perception of repair and others, the drivers of repair should be different from other pro-environmental behaviors – thus there is a need for research specifically focussing on understanding repair. Second, given that repair is construed as providing personal benefits much more than benefits to others, the decision to repair (or not) might be motivated more by self-centered (and material) concerns as opposed to other-centered (and ecological) concerns.

In view of this, we posit that there is a link between perceived relative income (which is a self-centered variable) and the decision to repair 'such that the higher a person believes his income is in comparison to similar others, the higher the reluctance to repair broken products. Importantly, we posit that this effect holds even after controlling for objective income; indeed, our findings show that this effect is more pronounced for the objectively poorer (vs. richer) such that these people choose to repair less, thereby shooting themselves in the foot (by not maximizing the limited resources they possess). We also propose that this link (between relative income and reluctance to repair) is at least partially mediated by feelings of entitlement.

We believe that entitled individuals engage in a form of thinking wherein, not only do they attach high importance to material goals and goods (Richins and Dawson 1992) and believe that they deserve more than others (Campbell et al. 2004), they also hold their possessions to higher standards than others. As such, as confirmed by results from a second pilot study, those higher in entitlement are more likely to discard a product earlier as it degrades. Specifi-

1 In the present research, we focus on the antecedents of “DIY (do-it-yourself) repair” behavior, which we distinguish from “extensive repairs,” that typically require the services of a professional organization. By contrast, DIY repairs (e.g., cloth repair, simple repairs using glue/duct tape/nails) typically involve lower cost and time, with most consumers being capable of undertaking them with limited skill levels.

cally, findings from this pilot study revealed that consumers with higher (vs. lower) entitlement expected their products (cushion, side table, bedsheet, and T-shirt) to wear out significantly faster ($\beta=-.12$, $p=.017$).

To date, we have conducted 4 studies (pilot study, and studies 1-3), to test our central hypotheses: those higher in relative income are more reluctant to repair because they are more entitled. Results from the pilot study ($n=202$) showed that consumers higher in relative income were less willing to repair a torn jacket as opposed to disposing it (throw/recycle/donate), even after controlling for their objective income levels and environmental concerns ($\beta=-.301$, $p=.008$).

Results from study 1 ($n=261$) provided evidence of the full conceptual model; specifically, consumers higher in relative income ranked repair lower when given a choice between throwing, recycling, donating, or repairing a ripped jacket ($\beta=.174$, $p=.008$). This effect was partially mediated by entitlement (measured by PES—Campbell et al. 2004) ($ab=0.03$, 95%CI[0.002, 0.043], 10,000resamples) even after controlling for objective income and environmental concerns.

Study 2 was designed to generalize our findings across a wider range of income groups and across other product categories. We recruited participants across different objective income levels ($n=268$). We replicated the effect of perceived relative income on reluctance to repair across three different products: a ripped shower-curtain, a stained cushion, and a side table with a broken leg ($\beta=0.248$, $p=.002$). Replicating study 1, entitlement (measured by non-verbal—MeVersusYou scale—Campbell et al. 2004) mediated the effect of perceived relative income on the reluctance to repair ($ab=0.0225$, 95%CI[0.0073, 0.0442], 10,000resamples). Further, the effect of relative income on reluctance to repair was the highest at the lowest income levels. These results remained robust to adding social desirability as a covariate.

In study 3 ($n=234$), we adopted a manipulation of the mediator approach. We manipulated entitlement using a pre-validated written task of entitlement (Redford and Ratliff, 2018) which reduced or enhanced the feelings of entitlement ($p<.000$). After the manipulation, all participants were shown 3 hypothetical scenarios and were asked to imagine that a product that they owned (bedsheet, cushion, side table) had broken. Our DV was an 8-point bipolar scale between disposal and repair. Consistent with expectations, there was a significant interaction effect of entitlement condition (low versus high) and perceived relative income on reluctance to repair— the effect of perceived relative income on reluctance to repair was low when entitlement was suppressed versus when it was enhanced ($\beta=-.252$, $p=.007$).

Taken together, our findings provide evidence that not just objective income, but perceptions of relative income shape feelings of entitlement in consumers which in turn lead to a reluctance to repair broken products. In addition to the relatively straightforward public policy implications, our research makes two meaningful theoretical contributions. First, we add to the sparse research landscape on post-consumption behaviors by identifying a hitherto unexplored antecedent of DIY repair decisions, namely perceived relative income. Second, we investigate consumer entitlement and show how feeling entitled might impact one's relationship with his/her possessions, thereby impacting disposal decisions.

"Materializing Sustainable Service Delivery Through an Ethos of Repair"

EXTENDED ABSTRACT

Repair is a ubiquitous and integral part of everyday life that can also serve as a guiding philosophy for areas as diverse as healthcare services, justice systems, and relationships (Jackson 2014; Spelman 2002). Reparative activities are critical components of many services, including healthcare, technology, utilities, and numerous others. Skilled service providers must repair consumers' ability to continue practices that rely on the usability of material objects (Godfrey et al. 2021).

However, despite interactions between consumers and repair service providers being pivotal to promoting repair at individual and market levels, this relationship has not been examined in detail. To address this, we ask: how do the ways that service providers understand and act toward the objects they repair impact customer satisfaction or dissatisfaction? We also ask: how do customers and service providers manage differences in their perceptions of repair service processes and quality? Since many services involve interactions between humans and fragile material objects, understanding repair also enables us to contribute to services marketing theory and consumer behavior more broadly.

We build our study on a foundation of ethnographic fieldwork with 36 service providers at 18 shoe repair shops in the United States. Our ethnographic dataset includes over 50 hours in the field, 459 photographs, 477 minutes of recorded interviews, 67 minutes of video, and 147 single-spaced pages of fieldnotes. Since consumer evaluations of repair services also unfold over time in the months and years after a repair is initially completed, we also collected evidence of consumers' post-repair experiences. This includes two consumer review datasets obtained from Yelp.com: 1,100 reviews from Yelp's public research dataset, and 1,325 reviews collected manually from review pages for the 18 shops included in our ethnographic dataset. Our analysis began with open coding of ethnographic field notes to identify the meanings and processes of repair that service providers drew upon during our fieldwork (Miles and Huberman 1994). We then used open coding to identify the types of repair successes and failures reported by consumers in online reviews. Finally, we compared themes found in fieldwork with those found in consumer reviews to develop conceptual links between service provider processes and consumer perceptions and experiences.

Our analysis uncovers an "ethos of repair" that shapes the way service providers repair worn or damaged objects. Repair service providers embody and exhibit an ethos of repair through two dimensions. First, service providers develop and exhibit a sense of empathy for material objects. Second, service providers develop a networked understanding of how objects interact with past, present, and future materials. We also find that consumers often unfairly evaluate the processes and outcomes of repair services due to consumers' misalignment from the ethos of repair. An ethos of consumption undermines consumers' capacity to appreciate and account for the material complexities inherent in repair service provision.

First, we find that repair professionals can develop a sense of empathy toward the material objects they service, which leads them to care *about* and care *for* these objects. An empathetic orientation toward materiality plays a critical role in shaping repair service outcomes and experiences. In other words, caring *about* objects influences the way service providers care *for* objects. Many cobblers display an emotional connection to materials. They finding innate satisfaction, as one cobbler explains, in "bringing things back from the dead." One consumer reviewer writes, "I think it pains [my cob-

bler] a bit to see how I sometimes love my shoes to death, but he does his best to breathe some life back in to them.” Material empathy manifests in emotional responses toward a shoe that direct a service provider’s attention to its unique attributes. Consumers infer the level of a service provider’s material empathy through limited available physical evidences. Delivering personalized attention to specific shoes rather than standardized efficiency shows consumer reviewers that “great craftsmen still care.” Conversely, emotional disengagement and unsuccessful repairs convince consumers cobblers “don’t give a hoot about what their work looks like.” While these evaluations may indicate material apathy, often repair service failures arise from factors outside a service provider’s control.

Second, to translate material empathy into a successful repair service, cobblers must draw on a networked understanding of the ways that past, present, and future interactions between a shoe and other materials shape its current capacities. For example, past interconnections with pavement or weather throughout a shoe’s use shape how it will react to current interactions with the tools and processes required to deliver a repair service. Repair interventions must also account for possible futures between the shoe and a consumer’s everyday life in order to properly tailor a successful and durable repair. As cobblers work with materials, they connect their own past experience with the material cues embodied in a shoe to assess its reparability and adapt their services around its limitations, their own service processes, and the anticipated future life of the shoe. Cobblers with a well-developed networked understanding can diagnose and treat broken shoes in ways that seem “magical” or “miraculous” to consumer reviewers who lack the same material comprehension. Conversely, consumers who do not embody the service provider’s networked understanding typically perceive repair failures simply as evidence of “amateur” or “incompetent” service providers. A cobbler expresses a common complaint about customers who “leave a one star or a terrible review on Yelp because we can’t fix their garbage shoes.” Repair success and failure both emerge around an uncertain interplay between individually worn and broken materials and personalized care and attention toward them.

Consumers in our data typically embody an ethos of consumption, which prioritizes services that can satisfy fairly rigid preferences and expectations. Many common frustrations expressed by consumer reviewers actually point to misalignments between service providers’ ethos of repair and consumers’ ethos of consumption. This points to the necessity for a more materially grounded understanding of services, which often rely on adaptations around relatively unpredictable physical objects, processes, and evidences. By developing an ethos of repair, consumers and service providers can more sustainably and harmoniously adapt around material breakdowns and avoid wasting economic and material resources.

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Text as a Window into Past Motivations and Future Behaviors

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Paper #1: Passive voice and Consumer Complaints

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Paper #2: How Motivations Affect the Language of Informative versus Social User Generated Content

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Paper #3: The Language of (Non)Replicability

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Shin Oblander, Columbia Business School, Columbia University, USA
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Paper #4: Deescalating Arousal in Social Media Complaints: Using Active Listening and Empathy to Enhance Customer Gratitude

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SESSION OVERVIEW

A burgeoning stream of research has begun to examine how the language of things like ads, sales pitches, and charitable appeals impacts consumer behavior (for a review, see Berger et al. 2019, Humphreys and Wang 2017).

But while it is clear that the language affects the people and firms that *consume* it, less work has examined the production side, or what language reveals about the people that *produce* it. For example, how might the different platforms users post on (e.g., Amazon vs. Facebook) shape their motivations for sharing and thus the type of content the post? Might consumers use of passive (vs. active) voice provide insight into who they think is at fault for negative service experiences, and thus their likelihood of complaining in response? Might the content and style of academic writing reveal how likely results are to replicate? And how can the language of consumer complaints provide insight into how firms should respond? The session examines these and related questions as it provides new insights into what language reflects about the people that produce it.

The first paper examines the language of consumer complaints. The authors demonstrate that passive voice signals less perceived responsibility for the issue, which leads to greater likelihood of negative word of mouth and disputing the resolution provided by the company.

The second paper examines how language reflects consumer motivations for posting user generated content. Relying on research showing the way motivation to share information and persuade yields certain linguistic characteristics, the authors first use text analysis of user-generated content to show that, compared to content posted while socializing (e.g., Instagram), content focused on information sharing

(e.g., online reviews) is characterized by more concrete, familiar, emotional, and extreme language. A follow up experiment shows that these linguistic differences are driven by the predicted motivations.

The third paper explores the language of academic research. The authors demonstrate that, consciously or not, the language researchers use provides insight into how likely the results are to replicate.

Finally, the fourth paper examines how firms should respond to consumer complaints. Specifically, the authors explore how active listening and empathy may help firms deescalate complaints with negative, high-arousal emotions.

Taken together, these papers highlight what language reveals about language producers; Everything from their past intentions and motivations to likely reactions and behaviors in the future.

The session should attract a wide range of scholars, from those interested in language and customer service, to those interested in word of mouth, user-generated content, and open science more generally. By understanding what language signals about the people that produce it, the session hopes to shed light on both the past and future.

Passive Voice and Consumer Complaints

EXTENDED ABSTRACT

Consumers are often dissatisfied with companies. For example, there may be a mistake in processing a payment or an online order (on the consumer or the company's side) that could result in customer dissatisfaction.

While some consumers may choose to ignore these experiences, others "voice" their complaints (Fornell and Wernerfelt 1987; Hirschman 1970). They may share negative word of mouth, ask to speak to a manager, or escalate things if they are not satisfied with the response.

We examine the role of passive voice in such responses. When describing a disappointing service experience, consumers may emphasize actors or actions (Anisfeld and Klenbort 1973). By focusing on the actor, active voice (e.g., *I made* mistake in the payment process) suggests that at least some fault lies with a particular actor. By focusing on the action (e.g., A mistake *was made* in the payment process), however, passive voice suggests that the fault is less clear.

We suggest that consumers that use passive voice to describe their actions may attribute less fault to themselves, and, as a result, be more likely to complain, share negative word of mouth, or engage in other actions that are detrimental to the firm. If true, this suggests two things. First, consumers who naturally use passive voice should be more likely to engage in such conduct, and second, using passive voice to describe an experience should have similar effects.

Study 1 examines a restaurant order gone wrong. Participants imagined they had a negative service experience that described their role using either active voice [or passive voice] ("I placed a pizza order online. Maybe I made a mistake [a mistake was made], but the pizza had the wrong toppings").

As predicted, when passive voice was used, consumers were more likely to escalate. They were more likely to write a negative online review ($M_{\text{Passive}}=2.31, M_{\text{Active}}=1.85, F(1,198)=6.71, p=.01$), complain to the restaurant owner ($M_{\text{Passive}}=4.02, M_{\text{Active}}=2.77, F(1,198)=23.45, p<.001$), and tell friends and family about their negative experience ($M_{\text{Passive}}=3.60, M_{\text{Active}}=2.58, F(1,198)=17.69, p<.001$).

Further, mediation analyses (Hayes 2017) demonstrates that the effect of passive voice was driven by relative attributed fault (online review $b=.20$, 95% CI=[.10,.32]; complaining to the owner $b=.53$, 95% CI=[.38,.71]; and telling others about their experience $b=.39$, 95% CI=[.23,.58]). All three analyses indicate full mediation, casting doubt on the likelihood of presence of another underlying mechanism as strong as attributed fault.

Study 2 tests our theorizing in the field. Using natural language processing, we analyzed the text of over 150,000 real consumer complaints submitted to the Consumer Financial Protection Bureau. We used the PassivePy package (Sepehri, Markowitz and Mirshafiee 2022) to code passive voice.

As predicted, consumers who used more passive voice (i.e., more passive voice sentences or a great percentage of passive voice sentences) were more likely to dispute the resolution offered by the company ($b_j=.22$, $p<.001$). Further, this relationship holds controlling for a host of factors related to (a) the complaint itself (e.g., issue, product, and topics discussed); (b) other language features (e.g., emotionality and LIWC features), (c) company response; and (e) other features of the complaint.

While the results of Study 2 are consistent with our theorizing, one could argue they are somehow driven by some other factor. While including dozens of controls reduces this possibility, to provide more direct causal evidence, **Study 3** uses an experiment.

Further, one could also wonder whether rather than being driven by passive voice about their own actions, the results of Study 2 were driven by passive voice regarding the company's actions. To test this possibility, Study 3 orthogonally manipulates passive voice for both consumer and company actions in a 2 (Consumer actions: passive vs. active voice) x 2 (Company actions: passive vs. active voice) between subjects design.

Results revealed only an effect of consumer action language. People were more interested in disputing the offered resolution when sentences regarding their actions used passive ($M=3.97$) rather than active language ($M=3.53$, $F(1,396)=4.66$, $p=.03$). There was no main effect ($F(1,396)=1.89$, $p=.17$) or interaction ($F(1,396)=.01$, $p=.92$) of voice used describing the company's actions.

Further, mediation analysis (Hayes 2017) confirmed that relative attributed fault drove the effect ($b=.26$, 95% CI=[.10,.45]). Passive voice made consumers think they were less responsible for the issue, which made them more likely to dispute the resolution.

A final study (**Study 4**) examined how companies should respond. If perceived relative fault is driving the effect, then using active voice should be particularly useful for companies because they take more ownership for the issues.

Results are consistent with that notion. In addition to a main effect of passive voice in the complaint narrative, ($M_{\text{Passive}}=4.89$, $M_{\text{Active}}=4.35$, $F(1,596)=9.08$, $p=.003$), there was a significant interaction effect between complaint narrative and company response ($F(1,596)=4.93$, $p=.03$; figure 1). Specifically, while consumers tended to be more likely to dispute if they had used passive voice in their complaint, companies using active language in response mitigated this effect.

These findings make four main contributions. First, previous work in text-analysis has looked at content (e.g., emotions, topic models) and style (e.g., pronouns, storytelling style), but less attention has been paid to structure and syntax. We hope that our work on passive voice draws attention to this understudied element of text. Second, most of past research on passive voice has been focused on perceptions of readers. We expand work on passive voice by focusing on psychological drivers and behavioral intentions of "writers." Third, we use a novel computational linguistics method that measures passive voice in large-scale text data. Past research has examined passive voice either by experimental

manipulations (Chan and Maglio 2020) or through coarse proxies such as auxiliary verbs (Markowitz and Griffin 2020). We measure passive voice in large-scale textual data and hope our approach could be used by other researchers. Lastly, we offer an intervention that can buffer against the effect of passive voice on escalation. Managers may use our suggestions to use active voice and to own the responsibility when responding to the complainers who are "at the fence."

How Motivations Affect the Language of Informative versus Social User Generated Content

EXTENDED ABSTRACT

People post user-generated content (UGC) driven by different motivations. We divide the main motivations into two types: information-sharing and socializing. Information-sharing motivation includes goals such as transmitting information to others (Sepp, Liljander, and Gummerus 2011; Chung and Kim, 2008; Nonnecke et al. 2006) and persuasion (Berger, 2014). Socializing motivation includes goals such as connecting to others (de Vries et al. 2017), relationship management (Luarn, et al., 2016), and impression management (Berger, 2014).

We propose that these two motivations – information-sharing and socializing – drive different types of user-generated content. We name them: informative UGC and Social UGC. Informative UGC includes content such as product reviews and recommendations, and would typically involve users sharing information about their consumption experiences or about products. Social UGC involves content such as posts on social networks and would typically involve users posting to socialize.

How might the motivations to post informative versus social UGC influence its language? We next elaborate on this question and develop predictions about linguistic differences between informative and social UGC.

When posting informative UGC, users aim to transmit useful information and to influence others' opinions and decisions. Informative UGC posters aim to share their unique experiences and alert others about positive or negative experiences (Cho et al. 2015). By contrast, users who post social UGC, aim to connect to others, draw reactions and responses from others, and engage in conversation. For example, they want to be perceived as likable and get feedback from others (Lee and Jang, 2019; Cho et al. 2015). We suggest that these differences in motivations reflect in the language of these two types of content. Specifically, literature suggested that when people have the motivation of information sharing, they try to provide accurate, high-quality information (Sepp, Liljander, and Gummerus 2011; Chung and Kim, 2008). Therefore, we suggest that informative UGC will include more concrete languages than social UGC because the writers have the intention to provide more detailed and accurate information. Driven by the same logic, we also suggest that posters of informative UGC will tend to use more familiar language than posters of social UGC, because these writers want the information to be easier to understand. Literature also suggested that people tend to use more emotional language when they have the goal to persuade (Berger, 2014). Therefore, we suggest that, as the goal of informative UGC posters is to be more convincing, compared with social UGC informative UGC will be characterized by more emotional and more extreme language.

In sum, we suggest that, compared with users who post social UGC, users who post informative UGC such as product reviews are driven by the motivation to inform and persuade others and will be more likely to use language that is more concrete, more emotional, more extreme, and contains more familiar words.

Formally stated:

Hypothesis 1: Informative UGC posters are mainly driven by information-sharing motivation, whereas social UGC posters are mainly driven by the motivation to socialize.

Hypothesis 2: The motivations for posting UGC influence the language characteristics of UGC messages, such that informative UGC includes more concrete, familiar, emotional, and extreme language than social UGC.

METHOD

We conducted three studies to provide empirical support for our hypotheses. Studies 1 and 2 are text analyses based on data from different platforms. Study 3 is an online experiment testing the causal relationship between motivation and language characteristics. Table 1 provides a summary of empirical evidence for Studies 1-3.

Study 1 compared the language of Amazon reviews for various products ($n=9997$) as informative UGC and Twitter posts ($n=8812$) from various posters as social UGC. To conduct our text analysis, we employed an open-source text analysis tool (Berger, Sherman, and Ungar, 2020; Paetzold and Specia, 2016; Rocklage, Rucker, and Nordgren, 2018). Supporting H2, results showed that the informative UGC displayed language with a higher level of concreteness, familiarity, emotionality, and extremity.

Study 2 is a text analysis of Yelp reviews from three different restaurants ($n=1001$) as informative UGC, and Facebook posts ($n=1003$) as social UGC. Results replicated the findings of Study 1, comparing two different platforms.

Study 3 is an online two-cell (information-sharing vs. socializing motivation) between-subject experiment. 373 Prolific workers ($n=37.5$, 43.2% female) were asked to imagine that they were posting a review with the purpose of information-sharing or a social media post while socializing, and typed in their review/post. After that, they filled out a 7-pt. scale of motivation: 4 information-sharing items (e.g., give the readers useful and valuable information) and 4 socializing motivation items (e.g., form a bond with people with similar interests to mine). Supporting H1, results showed that people who wrote a review expressed higher information-sharing motivation, whereas participants who wrote a post showed higher socializing motivation. Additionally, supporting H2, participants who wrote a review showed a higher level of concreteness, familiarity, emotionality, and extremity, compared to those who wrote post.

DISCUSSION

This research provides evidence that motivations of posting UGC influences its language, such that informative UGC posters, who are driven by information-sharing motivation, use more concrete, familiar, emotional, and extreme language compared with social UGC posters, who are more driven by socializing motivation.

This research extends the literature on user-generated content by distinguishing between two types of UGC – informative UGC and social UGC, based on motivations to write and post the content. This work also contributes to the research of the language of UGC, identifying four linguistic features distinguishing between the two types of UGC. Future research can apply our findings to other contexts involving information-sharing or socializing motivation.

From a practical standpoint, distinguishing between the two types of UGC informs companies about ways to understand and to react to UGC related to their brands, potentially satisfying consumer need for socializing or for sharing information. Managers can also use our re-

sults to identify informative UGC and make use of its persuasive intention. For example, companies can choose informative UGC as sample reviews, or repost informative UGC to deliver information to the customers.

The Language of (Non)Replicability

EXTENDED ABSTRACT

The words we write carry implications beyond their literal meanings. Authors have a choice about what they write as well as how they write. The same idea can be presented in many ways, using a variety of words, writing styles, and at different lengths. These word choices, whether conscious to the writer or not, have been associated with writers' state of mind (Ventrella 2011), intentions (Netzer et al. 2019), emotions (Tausczik and Pennebaker 2010), identity (McAdams 2001), personality (Hirsh and Peterson 2009), mental health (Eichstaedt et al. 2018), and subject matter expertise (Packard and Berger 2017). Interestingly, word choice carries valuable information even when a text is edited by multiple authors. For example, the language in companies' 10-K filings has been associated with the company's stock return and volatility, trading volume, fraud, and unexpected earnings (Loughran and McDonald 2011; Karapandza 2016; DeSola, Hanna, and Nonis 2019). Furthermore, the information embedded in word choice has been documented even after controlling for observed and verified sources of information related to the text writer.

We explore whether the language used by scholars in academic publications carry information about the likelihood that the main findings will replicate. Indeed, prior research alludes to this possibility, as nonreplicated papers have been shown to use rarer word combinations than replicated papers (Yang et al. 2020), and fake research written by sophisticated AI programs has been found to include unusual language instead of common terms (e.g., "colossal information" instead of big data; Cabanac et al. 2021). In a similar, albeit more extreme vein, fraudulent research has been shown to include more words associated with deception, fraud, and obfuscation of information (Markowitz and Hancock 2014; 2016).

We contribute to the emerging movement toward Open Science, that aims to increase the openness, integrity, and reproducibility of scholarly research. As part of this movement, many research labs and individual researchers have attempted to replicate published papers. Our dataset includes 299 original studies in psychology and economics, whose replications were published in well-regarded journals and were not done by the original authors. Specifically, 96 studies were replicated by Open Science Collaboration (2015), 49 by Many Labs (Kline et al. 2014; 2018; 2019; Ebersole et al. 2016), 18 by Camerer et al. (2016), 22 by Camerer et al. (2018), 8 by Zwaan et al. (2018), and all others were individual replications. Using publicly available data on the original and replications papers, we collected three types of variables for each paper: (i) a binary replicability measure based on whether or not the replicating paper finds an effect in the same direction as the original paper that is significant at the 5% level (replication rate is 42% in our dataset), as well as end-prices in four published replicability prediction markets (Dreber et al. 2015; Camerer et al. 2016; Camerer et al. 2018; Forsell et al. 2018); (ii) metadata from the original papers (i.e., those being replicated; Altmejd et al. 2020): the paper's discipline, journal, and publication year, information about the authors, citation count, the design of the original study, as well as statistics reported in the text of the original study; and (iii) text from the original papers, broken into abstract, full text, and replicated study. The text in each section was processed in two ways. First, we look at the specific words used in each paper represented in a 100-dimensional embedding model, trained on a set of 2,400 papers coming from the same set of journals as the

original papers. Second, relying on a well-researched and context-free dictionary, the Linguistic Inquiry and Word Count, we calculated the frequency of each dictionary in the text.

Our two main findings are that the text in academic publications alludes to their replicability and that certain text features and dictionaries are associated with replicability while others with non-replicability. To elaborate, controlling for a large set of metadata variables and using machine learning methods to regularize the model complexity (ridge regressions), the text of the original study significantly improves predictions of replicability above and beyond a predictive model that does not use textual information. This result is robust and holds in different slices of the dataset and dependent variables.

Next, we seek to understand the text features that distinguish between replicable and non-replicable studies. We performed three analyses and control for the metadata in all of them. We use a LASSO regression that is a form of variable selection, and forced the controls to be selected.

In the first analysis we constructed three measures that evaluate the text: the Flesch-Kincaid readability index, domain specificity (using “speciteller”), and obfuscated text index, and then calculated their elasticities. None of these variables significantly differentiate between replicable and non-replicable studies.

Then we analyzed the content in two ways: (1) using over 1000 most common bi-grams (all single words and 2-word combinations), and (2) using the Linguistic Inquiry and Word Count (LIWC) dictionaries (Pennebaker, et al. 2015). Both analyses included the metadata and were done using a LASSO regression.

Replicable papers are associated with more quantifying words, numbers, and interrogative words suggesting they provide more objective information about the study. They are also associated with words related to certainty and present tense that project confidence. Finally, the function words related to prepositions, auxiliary verbs and conjunctions are associated with replicability.

On the other hand, non-replicable studies are likely to include more emotions, and in particular positive emotions; first and second person plural pronouns; and words related to performance, achievement, and revelation.

Taken together our findings show that consciously or unconsciously, knowingly or unknowingly, researchers’ language usage alludes to their research replicability likelihood.

De-escalating Arousal in Social Media Complaints: Using Active Listening and Empathy to Enhance Customer Gratitude

EXTENDED ABSTRACT

Despite numerous suggestions for how to recover service failures in prior literature (Van Vaerenbergh et al. 2019), research thus far has not focused much on how to improve negative customer emotions. The limited research that has examined this space has focused on face-to-face interactions (Simon 2013; Tax, Brown, and Chandrashekar 1998), yet, 89% of customers now prefer using social media to communicate with firms (Avochato 2021). Therefore, understanding how to deescalate negative arousal in online social settings is crucial to current-day recovery attempts.

Although recent research indicates that firms should address public complaints briefly (Golmohammadi et al. 2021; Herhausen et al. 2019), it is unclear which response strategies are best suited to deescalate highly aroused complaints and evoke a feeling of gratitude in social media service recoveries. We focus on customer gratitude as it is a crucial first step in restoring customer relationships (Bonchek 2015; Simon 2013). Drawing from crisis negotiation literature (Vecchi, van

Hasselt, and Romano 2005) and dual threshold models (Geddes and Callister 2007), we believe that firms should adopt two response strategies to deescalate negative arousal and enhance consumer gratitude in social media: active listening and empathy. Active listening implies paying attention to what the customer says and demonstrating that attention through actions such as repeating, paraphrasing, or adapting the language to the customer. Empathy involves connecting emotionally with complaining customers by indicating understanding of their feelings, using explicit expressions of validation and affirmation.

For high arousal complaints, we hypothesize and find that consumers’ gratitude toward the firm increases when the firm exhibits more active listening or expresses more empathy. For low arousal complaints, we theorize a nonlinear, inverted U-shaped effect, such that active listening and empathy should have positive effects on gratitude until a certain level, after which the effect reverses, and gratitude decreases. We test these predictions with three field studies and three experiments across a variety of cultures and social media channels.

In Study 1a, using field data from the social media pages of German service firms, we find that for high arousal negative customer complaints, there are positive linear effects of active listening ($p < .01$) and empathy ($p < .01$) on customer gratitude. On the other hand, in low arousal complaints, we find an inverted U-shaped relationship between active listening and the probability of gratitude and a linear negative effect for empathy ($p < .10$). In Study 1b, we examine whether there is causality between active listening and empathy strategies when there is no actual service recovery for the de-escalation of high negative arousal. We use a single-factor between-subjects experiment (control vs. high active listening vs. high empathy) where participants imagine that they experienced a negative high arousal airline experience and wrote a complaint on the airline’s social media page before getting a response from the employee. Comparing arousal before and after the employee’s response, we found that when an employee uses high active listening or empathy in their response, both reduce negative arousal after a service failure compared to the control (active listening compared to the control, $p = .048$; empathy compared to the control, $p = .009$).

In Study 2, we analyze social media text-based service interactions between a *Fortune* 500 airline and its customers where there were complaints, employee responses, and subsequent customer responses. Similar to Study 1a, we find that for high arousal complaints, there are positive linear effects of active listening ($p < .05$) and empathy ($p < .01$). Again similar to Study 1a, we find an inverted U-shaped effect of active listening for low arousal complaints. However, in this context, we find no significant linear nor quadratic effect for empathy in responses to low arousal complaints.

In Study 3a and 3b, we experimentally test for the effects of providing low, medium, or high levels of active listening (Study 3a) or empathy (Study 3b) on gratitude for both high and low arousal complaints. Similar to Study 1b, participants imagined writing a complaint on the airline’s social media page (low or high arousal) and receiving a response from the employee (low, medium, or high active listening or empathy). None of the employee responses recovered the failure. Examining felt gratitude post-response, in Study 3a we find that the effect of high active listening vs. medium active listening is stronger for the high arousal scenario ($p = .097$), but not for the low arousal scenario ($p = .577$). Similarly, in Study 3b, we find that the effect of high empathy vs. medium empathy is stronger for high arousal complaints ($p = .022$), but not for low arousal complaints ($p = .288$).

Finally, in Study 4, we examine the generalizability of our effect from service to product-focused recovery contexts using scraped data from a UK product retailer’s social media account. We again find positive linear effects of active listening ($p < .05$) and empathy ($p < .01$) for high arousal complaints. For low arousal complaints, we again find an

inverted U-shaped effect of active listening, however, we find a positive linear effect of empathy for low arousal complaints ($p < .05$). As empathy was differentially impactful for low arousal complaints across our field data across different cultural samples, we believe empathy may be differentially interpreted by customers based on factors such as culture and consumption contexts.

While it may seem to be intuitive that firms should use active listening or empathy to deescalate customers' complaints, we are not aware of any empirical efforts to quantify their potential benefits using social media data and our field studies indicate that firms do not know how to exploit these strategies optimally in social media service recoveries. Thus, using real data, natural language processing tools and dictionaries, and experiments, we provide concrete linguistic recommendations for how company employees should address high and low arousal complaints in social media channels in the context of service recovery.

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Joint Decisions and Joint Consumption: When and How Consumers Prefer, Communicate About, and Choose What to Share

Chair: Ms. Nikkita Sarna, University of Texas at Austin

Paper #1: It Takes One to Buy but Two to Say Goodbye: Preferring Others' Involvement at Different Customer Decision Journey Stages

Theresa A. Kwon, University of Pittsburgh, USA
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Kelly L. Haws, Vanderbilt University, USA

Paper #2: Beyond Persuasion: Developing a Framework of Communication Patterns in Joint Decision Making

Kelley Gullo Wight, Indiana University, USA
Holly S. Howe, HEC Montreal, Canada
Danielle J. Brick, University of New Hampshire, USA
Gavan J. Fitzsimons, Duke University, USA

Paper #3: You Must Have a Preference: The Impact of No Preference Communication on Joint Decision Making

Nicole Kim, Hong Kong Polytechnic University, Hong Kong
Yonat Zwebner, Reichman University, Israel
Alix Barasch, New York University, USA
Rom Schrift, Indiana University, USA

Paper #4: Choosing for Joint Consumption: How Avoiding Appearing Selfish Can Be Worse for Everyone

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SESSION OVERVIEW

Consumer research has historically focused on the individual journey of decision-making and consumption—considering how individual preferences and situations affect consumer choices and evaluations (Payne et al. 1993; Lemon and Verhoef, 2016). Yet, in practice, many consumer decisions are not made alone nor consumed alone. Consumers frequently make decisions with plans to share experiences, ownership, and use. In four papers, this session offers a broad consideration of this “joint” aspect of consumption, considering when decisions are more or less likely to include others, how consumers making joint decisions communicate, how partners' stated or unstated preferences influence outcomes, and how self-presentation goals influence what is selected. The session also uses a range of research approaches, including experimental methods and shop-along interviews, and is likely to interest a wide range of ACR researchers.

In the first paper, *It Takes One to Buy but Two to Say Goodbye: Preferring Others' Involvement at Different Customer Decision Journey Stages*, the authors examine when people prefer making decisions with others (vs. by themselves). Six studies show when and why consumers often prefer joint decision-making more for product disposal decisions than product acquisition decisions. Disposal decisions are perceived to be more permanent and, thus, there is greater risk of not engaging household partners in the decision.

The second paper, *Beyond Persuasion: Developing a Framework of Communication Patterns in Joint Decision Making*, explores how consumers communicate when making joint decisions. The authors conducted 20 dyad shop-along interviews to understand communication patterns during joint decision-making. Using a grounded theory approach, the authors develop a framework detailing four different communication patterns: getting on the same page, contrasting, building, and one-sided communication. Insights are also

offered on the optimal communication strategies decision partners can use.

The third paper, *You Must Have a Preference: The Impact of No Preference Communication on Joint Decision Making*, examines how communicating having no preference in joint consumption decisions can backfire. The authors find that decision makers infer that the person communicating no preference (vs. explicit preference), actually has preferences. These perceptions of undisclosed preferences increase decision makers' decision difficulty, causes them to like the other party less, and leads them to choose an option they like less.

Lastly, the fourth paper, *Choosing for Joint Consumption: How Avoiding Appearing Selfish Can Be Worse for Everyone*, examines no-communication situations where one consumer chooses on behalf of themselves and their consumption partner. In six studies, the authors examine how the goal to avoid appearing selfish can lead consumers to focus on the benefit they obtain relative to their partner. This leads to avoidance of options where the decider gains more than their partner. Ironically, this can increase choices that are less preferred by both.

Overall, this session consists of four advanced-stage papers that will offer a deeper understanding of the process and outcomes of joint decisions and shared consumption. Additionally, this session will identify strategies consumers can use to address consumption and interpersonal goals and strategies that marketers and policy makers may use to shape those decisions and outcomes.

It Takes One to Buy but Two to Say Goodbye: Preferring Others' Involvement at Different Customer Decision Journey Stages

EXTENDED ABSTRACT

Although the customer decision journey has traditionally been conceptualized through the lens of individual consumers (Lemon and Verhoef 2016), each decision journey stage can also be social such that consumers can choose whether to make decisions by themselves or to involve others in their decisions at various stages of the journey (Hamilton et al. 2021). In this research, we examine when and why consumers prefer to make decisions along the customer journey solitarily versus with others. Specifically, we ask: do consumers have different preferences to make product decisions solitarily or jointly as a function of acquisition versus disposal stages, and if so, why?

We propose that an asymmetry arises as a function of decision stage, such that consumers prefer to make decisions jointly (vs. solitarily) more so for disposal decisions than for acquisition decisions. We theorize that a key difference between acquisition and disposal stages is that the outcomes of disposal decisions tend to be more permanent. Whereas it is difficult to get the exact item back once consumers dispose of a possession, it is relatively easier to reverse purchase decisions (at least in the near term) as consumers can simply return the product. Due to this differing permanence of the outcome (Gilbert and Ebert 2002), consumers may associate disposal (vs. acquisition) decisions with greater potential of risk associated with partner non-engagement, thus favoring joint (vs. solo) decision-making more so for disposal decisions than for acquisition decisions.

Six pre-registered studies (N=2,403) tested our predictions. Study 1a tested the core effect by randomly assigning participants to consider making an acquisition decision (which platter to buy between A and B) or a disposal decision (which platter to dispose of between A and B) about a household product of which they were described as the primary user/manager. The final state was held equivalent across conditions (i.e., participants end up with one platter). Participants then chose to make the decision by oneself or with their roommate. As predicted, participants preferred joint (vs. solo) decision-making more so for disposal decisions than for acquisition decisions (acquisition_{joint}:45.2% vs. disposal_{joint}:70.2%, $p<.001$). Study 1b showed that this effect generalizes to a different type of relationship (couples) and another consumer good (Bluetooth speakers) (acquisition_{joint}:54.4% vs. disposal_{joint}:67.6%, $p=.052$).

Study 2 then delved into a more complete picture of the decision journey by testing whether the difference in decision-making preference across acquisition and disposal stages varies based on how products considered for disposal were acquired earlier: by the participant, jointly by the participant and the partner, or the partner. Participants were randomly assigned to one of four conditions (acquisition vs. disposal/self-acquired vs. disposal/jointly-acquired vs. disposal/partner-acquired). Participants in the acquisition condition considered having no coffeemakers and planning to buy one; those in the disposal conditions considered having two coffeemakers and planning to get rid of one. Depending on condition, participants in the disposal conditions further read about who bought the coffeemakers: themselves (disposal/self-acquired), themselves and their partner (disposal/jointly-acquired), or their partner (disposal/partner-acquired). All participants then chose to make the decision by oneself or with their partner. The gap in joint (vs. solo) decision-making preference across acquisition and disposal stages was larger when disposal decisions involved products jointly acquired (acquisition_{joint}:70.0% vs. disposal/jointly-acquired_{joint}:89.3%, $p<.001$) or acquired by the partner (acquisition_{joint}:70.0% vs. disposal/partner-acquired_{joint}:94.0%, $p<.001$), and the gap was mitigated when products were originally acquired by the participant (acquisition_{joint}:70.0% vs. disposal/self-acquired_{joint}:78.0%, $p=.115$).

Study 3 tested the process using a serial mediation approach. After indicating their preference for joint (vs. solo) decision-making for either acquisition or disposal (based on randomly assigned condition), participants responded to the two mediators: perceiving the decision as permanent and perceived risk associated with partner non-engagement. We found serial mediation evidence: disposal (vs. acquisition) decisions were perceived as more permanent, increasing perceptions of risk associated with partner non-engagement, thereby increasing preference for joint (vs. solo) decision-making (CI_{95%}[.06, .29]).

Study 4 used a moderation approach to provide further evidence of the role of permanence. Specifically, besides acquisition and disposal conditions, we introduced a third condition (acquisition/permanent) wherein participants considered making an acquisition decision that is permanent (i.e., a no returns/no refunds store policy). Consistent with our theorizing, the gap in joint (vs. solo) decision-making preference between acquisition and disposal stages was mitigated when acquisition decisions were permanent. Specifically, although participants preferred joint (vs. solo) decision-making more so for disposal decisions than for acquisition decisions (acquisition_{joint}:37.4% vs. disposal_{joint}:81.5%, $p<.001$; acquisition/permanent_{joint}:62.0% vs. disposal_{joint}:81.5%, $p=.004$), the preference for joint (vs. solo) decision-making increased when acquisition decisions were permanent (vs. baseline acquisition condition) (acquisition_{joint}:37.4% vs. acquisition/permanent_{joint}:62.0%, $p<.001$).

Finally, study 5 used a moderation approach to provide further evidence of the role of risk of partner non-engagement by examining whether the effect is specific to household partners as we theorize. We thus manipulated not just acquisition versus disposal stages but also the choice set of decision-makers (choice set 1: solo vs. joint with a household partner, choice set 2: solo vs. joint with a non-cohabitating close friend). There was a significant interaction ($p<.001$). Replicating the core effect in choice set 1 (i.e., solo vs. joint with a household partner), participants preferred joint (vs. solo) decision-making more so for disposal decisions than for acquisition decisions (acquisition_{joint}:54.3% vs. disposal_{joint}:75.9%, $p<.001$). However, this pattern was reversed for choice set 2 (i.e., solo vs. non-cohabitating close friend), such that participants preferred joint (vs. solo) decision-making more so for acquisition decisions than for disposal decisions (acquisition_{joint}:15.3% vs. disposal_{joint}:4.9%, $p=.003$). This reversal thus further supports the role of the risk of partner non-engagement, while addressing an alternative explanation about greater decision difficulty/pain associated with disposal (vs. acquisition) decisions in general leading to the effect, as this alternative explanation would not predict an interaction.

Altogether, the present research thus bridges the literature on customer journeys by examining factors that lead consumers to prefer social versus solitary customer decision journey stages. Moreover, this research offers a novel perspective on why clutter accumulates: whereas it only takes one person to decide which new products to buy, it takes two people to decide which products to say goodbye to.

Beyond Persuasion: Developing a Framework of Communication Patterns in Joint Decision Making

EXTENDED ABSTRACT

A joint decision cannot be reached without conversation between the two partners, making communication a core aspect of the joint decision-making process. Yet, the primary communication style studied in joint decision-making is persuasion (Corfman and Lehmann 1987; Davis 1976; Davis and Rigaux 1974; Spiro 1983). Not all joint decisions involve persuasion, leaving many understudied questions about the process of communication in joint decision-making. For example, how do partners communicate agreement (vs. opposition) during joint decision-making? How do dyads communicate to form joint preferences? How do dyads communicate non-preference?

We develop a framework that offers a holistic view of communication in the joint decision-making process that can begin to answer these questions. In terms of the scope of the framework, we focus on joint decisions that require systematic processing (e.g., non-habits). In line with prior conceptualizing, we suggest does not become joint until the same two partners are involved in two or more stages of the decision lifecycle (i.e., need recognition, information search, evaluation of alternatives, choice, post-choice evaluation; Kardes, 2014), regardless of whether consumption outcomes are shared (Simpson et al., 2012). While it is common to oscillate between being social or solo across different stages of the decision lifecycle (Hamilton et al., 2021), the inclusion of another person during only one stage (e.g., asking for recommendations) does not make a decision *joint*. Finally, the framework can accommodate communication in any type of dyadic relationship, from strangers to family and friends.

We conducted shop-a-long interviews with 20 dyads (40% male, 60% female; $M_{age} = 43.55$, $SD = 14.40$; $M_{relationshipLength} = 18.49$ years, $SD = 15.24$; 65% romantic, 25% friendships, 10% familial) where at least one member of the dyad was in the market for a major home improvement purchase (e.g., flooring, new appliances,

landscaping). Dyads discussed many decisions during each shop-a-long, resulting in 90 joint decision conversations. Analyses based in grounded theory unveiled four primary communication patterns used during the joint-decision making process, three of which are novel. In support of the primacy of these communication patterns, on average they account for 72.16% of the total conversation between the two members of each dyad in our data (the rest was peripheral chat, such as talking about their kids). Further, 70% ($n = 14$) of decision partners used every communication pattern at least once throughout the shop-a-long interview and 100% of decision partners used at least three of four of the unique communication patterns.

We define the communication patterns below, and illustrate each using an example based on the joint decision of a couple from a shop-a-long interview—we'll call them Penny and Patrick—who wanted to put a shed in their backyard. We then use the communication patterns as building blocks to identify an optimal flow of conversation during joint decision-making.

Get on the same page. Dyads get on the same page by checking their partner's prior knowledge and/or their needs and wants; often characterized by “why” “what” or “how” questions. For example, if Patrick knows more about HOA regulations regarding sheds, Penny may ask questions to ensure that she and Patrick have the same working knowledge.

Contrast. Contrasting occurs when dyads counter each other's statements; often characterized by “or” “but” and “no” language. For example, Patrick and Penny might differ on whether they prefer a prefabricated or DIY shed. In this case, they would discuss the pros and cons of each before coming to a decision. We further subdivide contrasting into whether the intention of the contrasting communication is to *persuade* the other partner (Aribarg et al., 2002) or to *play devil's advocate* to make sure the pros and cons of different alternatives are fully considered (Schwenk & Cosier, 1993).

Build. Building occurs when dyads expand on each other's statements; often characterized by “yes, and...” language. For example, Penny may suggest getting a shed large enough to hold a workbench for her woodworking, and Patrick may build on her suggestion by saying a bench might also be good for his gardening. Of note, building is not always about ruling *in* an alternative, it can also be used to rule *out* an alternative. For example, a dyad could agree on all the reasons they do not prefer a white appliance or do not need to replace their car.

One-sided. One-sided communication occurs when one member of the dyad only passively engages despite the other partner trying to engage them in the decision-making process (Kim et al., 2020; Liu & Min, 2020); often characterized by “sure” and “whatever you want” language. For example, Patrick may try to engage Penny about the color of the shed but Penny may leave the choice up to Patrick. Critically, this differs from individual decision-making because the ultimate decision maker is trying to solicit and accommodate the other partner's preferences.

To our knowledge, this is the first framework of communication in joint decision-making beyond persuasion. As such, our framework answers a recent call by Hamilton and colleagues (2021) for more research on “joint journeys” through the decision lifecycle and makes important contributions to both theory and practice. We contribute by adding three novel primary communication patterns used during joint decision-making. By expanding beyond persuasion, our model includes meta-communication, communication about agreement, joint preference expression and formation, and unreciprocated attempts at joint decision-making. Moreover, it provides insights on optimal communication strategies during joint decision-making, which opens exciting new areas for future research.

From a practical perspective, understanding the ways in which decision partners communicate during joint decisions may facilitate more optimized advertising, negotiation strategies, and consumers' personal communications, such as advertising that encourages one pattern of communication over another and salesperson training that is sensitive to decision partners' communication patterns. Professional negotiators and managers may learn to steer conversations towards optimal communication patterns as a way to achieve excellent outcomes while maintaining or building a relationship with the other negotiating party. Finally, consumers who understand the optimal patterns of communication may find that strategically using these communication patterns helps them in joint-decision contexts.

You Must Have a Preference: The Impact of No Preference Communication on Joint Decision Making

EXTENDED ABSTRACT

In many day-to-day joint consumption decisions, such as choosing a restaurant or a movie to watch together with friends, family members, and colleagues, one party often communicates to the other that they do not have any particular preference among the options (e.g., “I have no preference”). Despite their prevalence, prior literature has relied on the assumption that two people in a joint decision will have shared their preferences (Corfman and Lehmann 1987; Fisher, Grégoire, and Murray 2011; Spiro 1983), while little is known about the impact of communicating no preference in a joint consumption decision. Consumers may intuit that communicating having no preference would allow the other party to choose according to their own preferences (instead of having to incorporate the preferences of someone else).

We demonstrate that when one party states having no preference (henceforth, the co-consumer), it negatively impacts the person to whom no preference message is relayed (henceforth, the decision maker). Specifically, we build on related work (DePaulo et al. 1996; Hilton, Fein, and Miller 1993; Grice 1975) and argue that when no preference is communicated, the decision maker infers that the co-consumer actually does possess a preference for one option over another, yet is not revealing it. In a series of four studies using both hypothetical and real joint consumption decisions, we demonstrate that the perceptions of undisclosed preferences increase the decision makers' decision difficulty, cause them to like the co-consumer less, lead them to choose an option they like less, and ultimately decreases their enjoyment. Interestingly, these negative effects are not anticipated by the co-consumer.

Study 1 ($N = 236$) tested the effect of no preference communication on decision difficulty. In a 2-cell (Preference communication: No preference vs. Explicit preference) between subjects design, participants imagined choosing a dinner restaurant with a friend. Using five ecologically valid phrases for each condition, participants imagined either hearing their friend expressing having no preference or explicitly expressing their preference. Participants were then asked to evaluate their decision difficulty after receiving the other person's expression and whether they believed the co-consumer actually had preferences that were not being disclosed. As predicted, participants in the no preference condition reported significantly greater decision difficulty ($M = 3.89$, $SD = 1.67$) compared to those in the explicit preference condition ($M = 2.40$, $SD = 1.24$; $F(1,235) = 60.74$, $p < .001$). Similarly, participants in the no preference condition were significantly more likely to believe that the co-consumer had preferences that they were not disclosing ($M = 3.42$, $SD = 1.76$) compared to those in the explicit preference condition ($M = 1.70$, $SD = 1.10$; $F(1,235) = 80.99$, $p < .001$). The perception of undisclosed prefer-

ences significantly mediated the effect on decision difficulty (95% CI: [-1.096, -.501]).

Study 2 ($N = 584$) demonstrated that co-consumers do not correctly anticipate the negative impact of no preference communication on the decision makers' decision difficulty. Building on Study 1, participants were randomly assigned to one of four conditions in a 2 (Preference communication: No preference vs. Explicit preference) \times 2 (Perspective: Decision maker vs. Co-consumer) between subjects design. The decision maker conditions' manipulations were similar to that of Study 1. The co-consumers either imagined telling their friend that they have no preference or explicitly telling their friend their preference. As predicted, the results revealed a significant interaction ($F(3,580) = 10.18, p = .001$). Specifically, no preference communication significantly increased difficulty for the decision makers ($M = 4.47, SD = 1.61$) compared to an explicit preference communication ($M = 3.45, SD = 1.74; F(1,580) = 38.87, p < .001$). However, co-consumers did not expect a difference in decision difficulty as a function of their preference communication ($M_{no\ preference} = 4.00, SD = 1.59$ vs. $M_{explicit\ preference} = 3.84, SD = 1.55; F(1,580) = .69, p = .408$).

Study 3 ($N = 120$) aimed to test the social cost of the expression of no preference. Particularly, in a 2-cell (No Preference vs. Explicit Preference) between subjects design, we employed an incentive-compatible joint decision, where two participants in the lab were paired to jointly decide on one snack out of four options, to share. Those in the no preference condition were told that their partner said they had no preference, while the explicit preference condition were told that their partner said they liked a certain type of candy (presented in counter-balanced order). The results revealed that decision makers who received a no preference communication liked the co-consumer significantly less ($M = 4.87, SD = .91$) than those who received an explicit preference communication ($M = 5.39, SD = 1.10; F(1,119) = 7.84, p = .006$).

Finally, Study 4 ($N = 531$) employed a real joint decision and consumption to examine the impact of no preference communication on the ultimate choice that decision makers select and their consumption enjoyment. In a 3-cell (No preference vs. Explicit similar-preference vs. Explicit dissimilar preference) between subjects design, participants chose a Trivia game topic (1 = most preferred, 5 = least preferred) to virtually play with an online partner. Results revealed that participants in the no preference condition chose a topic they preferred significantly less ($M = 1.71, SD = .83$) compared to participants in the explicit similar-preference condition ($M = 1.32, SD = .60; F(1,352) = 25.59, p < .001$). Participants in the no preference condition chose topics that they preferred significantly more ($M = 1.71, SD = .83$) than those in the explicit dissimilar-preference condition ($M = 2.93, SD = .97; F(1,352) = 162.91, p < .001$). Further, participants in the no preference condition enjoyed the experience less ($M = 4.17, SD = 2.04$) than those in the explicit similar-preference condition ($M = 4.67, SD = 1.91; F(1,352) = 5.59, p = .019$), and equally less as those in the explicit dissimilar-preference condition ($M = 4.35, SD = 1.95; F(1,352) = .726, p = .395$).

Choosing for Joint Consumption: How Avoiding Appearing Selfish Can Be Worse for Everyone

EXTENDED ABSTRACT

Individuals are often responsible for making decisions for products that they will consume with others (e.g., selecting restaurants, movies, or hotels to share with friends and family). When making these decisions, consumers have a variety of goals that lead to either maximizing others' outcomes, maximizing their own outcomes, or maximizing the sum of their outcomes (Liu et. al, 2019; Garcia-

Rada et. al, 2019; Tu et. al, 2016). When choosing in an interpersonal setting, consumers may also have impression management goals (Leary, 2019). One important goal in this setting is avoiding appearing selfish due to its social benefits (Shaw, 2016).

Intuitively, one might assume that the desire to avoid appearing selfish leads to choosing options that the partner enjoys most. However, selfishness tends to be judged in terms of relative benefits (what you gain vs. what I gain) not absolute benefits (what you gain vs. what was possible; Newman et. al, 2014; Keenan et. al, 2022). Therefore, we predict a goal of avoiding appearing selfish for joint consumption leads to a focus on relative outcomes, eventually leading to avoiding options that offer more benefit to the decider than to others. Ironically this may make deciders choose worse options for both parties, in an absolute sense.

In six studies ($n=2,325$) participants made choices for shared products and experiences. Concern for appearing selfish and focus on relative versus absolute benefits were both manipulated and measured.

First, a pilot study ($n=307$) examined how concern of appearing selfish impacts joint consumption choices. Participants chose between two dessert options either for themselves, a partner, or for joint consumption. Not surprisingly, for themselves, 93 % selected their more preferred option, and for their partner, 93% selected the partner's more preferred option. For those choosing for joint consumption, deciders chose from two options (A and B) each with one dessert for each person. Option A was preferred by both in an absolute sense—each person would independently prefer the dessert in Option A to their dessert in Option B. However, the decider's dessert in Option A was much larger than the partner's dessert. In Option B, both desserts were less preferred but equally sized. Here, almost half (46%) selected Option B, the less preferred dessert box. We measured concern for appearing selfish (i.e., importance of avoiding appearing selfish; appearing fair, appearing equal; $\alpha=.93$). This predicted choice of the non-preferred dessert ($\beta = .82, SE = .18, p < .01$).

Study 1A ($n=135$) manipulated concern for appearing selfish. We expected more concern for appearing selfish with new friends (Chen, 2017; Leary & Kowlski, 1990). Therefore, participants were assigned to vacationing with a new, close, or undefined (control) friend. Participants chose between two equally priced hotels—a 5-star with a regular room for their friend and a VIP room for themselves, or a 3-star with two regular rooms. Participants chose the 3-star hotel option 38% of the time with a close friend, 38% with a friend, and 67% with a new friend ($\chi^2(2) = 9.8; p < .01$). Open-end responses suggested “*appearing selfish*” was a factor.

Study 1B ($n=352$) replicated 1A with 44% choosing the 3-star hotel option with a close friend and 59% with a new friend ($\chi^2(1) = 7.8; p < .01$). This was fully mediated by one's concern of appearing selfish ($\beta = .06, SE = .03, 95\% CI: [.01, .11]$).

Study 2 ($n=452$) tasked participants with choosing a restaurant—manipulating type of friend (new vs. close) and whose birthday it was (self vs. friend). Restaurants differed in driving time. Restaurant A was closer for both but unequally far (Self: 2 minutes; Friend: 21 minutes). Restaurant B was farther for both but equally distant (Self: 22 minutes; Friend: 24 minutes). There was a significant interaction effect of birthday and friend on choice ($\beta = -.78, SE = .38, p = .04$). For a new friend, participants chose the farther restaurant on their friend's birthday (56%) versus their own birthday (40%; $p = .01$). However, for a close friend, preference for the farther restaurant did not differ for own birthday (47%) and friends' birthday (44%; $p = .67$).

Study 3 ($n=282$) manipulated control over choice. Participants categorized movies as “love to watch” and “like to watch.” They

learned their friend liked all options equally. Participants then either selected a movie or had it randomly chosen to watch together. When asked which movie they would rather watch together, 74% chose their loved movie but 86% said they'd prefer it if randomly chosen ($p < .02$).

Study 4 ($n=394$) measures focus on the relative benefit. There were four conditions—friend (new vs. close) and membership in Marriott loyalty program (self vs. friend). Participants rated likelihood of choosing a Marriott (1) versus Wyndham (9) hotel for joint consumption. Participants were less likely to choose Marriott ($M=3.1$) if they would benefit from gaining points compared to if their partner would benefit ($M = 1.7$; $p < .01$). Further, participants were less likely to choose Marriott for a new friend ($M=2.8$) than a close friend ($M=2.0$; $p < .01$). This avoidance was predicted by concern for appearing selfish ($\beta = .16$, $SE = .07$, $p < .03$) and focus on the difference between self/friend benefit for each hotel option ($\beta = .55$, $SE = .05$, $p < .01$).

Study 5 ($n=403$) manipulated focus on relative benefit. Participants chose between two vacations; Option A (self rating 9/10; friend rating 6/10); and Option B (self rating 5/10; friend rating 4/10). Option A is better for both while Option B is more equal. Participants were randomly assigned to the relative framing condition (e.g., consider “your liking versus friend’s liking”) or an absolute condition (e.g., “your liking of A vs. your liking of B”). On a seven point scale, participants in the relative condition ($M = 3.4$) were more likely to choose option B than those in the absolute condition ($M_{\text{absolute}} = 2.3$; $p < .01$).

This research provides a unique perspective on joint decision-making by illustrating how one may purposefully make worse decisions for all and the impact of avoiding negative signals on decision-making for shared experiences.

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“A Change in Perspective” in Context Effects

Chair: Eric Park, Columbia University & Ozgun Atasoy, University of Basel, Switzerland

Paper #1: Preferential Attraction Effects Occur with Quantitative Perceptual Attributes, but Break Down with Qualitative Perceptual Attributes

Miguel Brendl, University of Basel, Switzerland
Ozgun Atasoy, University of Basel, Switzerland
Coralie Samson, University of Basel, Switzerland

Paper #2: When Does The Attraction Effect Occur?: A Case for Value Construction in Attraction Effect

Eric Park, Columbia University, USA
Martijn Willemsen, Eindhoven University of Technology, Netherlands
Eric J. Johnson, Columbia University, USA

Paper #3: The Upscaling Effect: How the Decision Context Influences Tradeoffs between Desirability and Feasibility

Ioannis Evangelidis, ESADE, Universitat Ramon Llull, Spain
Jonathan Levav, Stanford Graduate School of Business, Stanford University, USA
Itamar Simonson, Stanford Graduate School of Business, Stanford University, USA

Paper #4: Skewed Stimulus Sampling is Distorting Our Understanding of Consumers

Hannah Perfecto, Washington University in St. Louis, USA

SESSION OVERVIEW

Choice is at the heart of marketing and marketers often aim to make consumers choose their brand and products over others through their work. In the last few decades, research has profoundly increased our understanding of classic and novel contexts (e.g., option sets, valence of choice, attributes of choice) that can affect decisions challenging the standard economic theories of rationality. This in turn gave marketers a tool to change consumer choice with subtle and low-cost interventions. Interestingly, as the documentation of context effects challenged standard thinking, recent findings questioned the existence of these effects themselves and therefore the applicability in the market. Some research argued that the contexts in which some of these reversals occur are severely restricted; therefore, they are less relevant to real consumer choices than was initially believed. However, we believe a change in perspective is necessary to understand preference reversals. The four papers in this session investigate the factors that determine the existence and nature of some well-known and some novel preference reversals.

First, we discuss the nature of a well-known context effect—the attraction effect. Recently, this effect has come under scrutiny as it seemed to occur only with highly controlled and stylized stimuli. To address this concern, the first two papers find important moderators that explain the apparent conceptual replication issue. The first paper investigates the elusiveness of attraction effects when options are presented visually as opposed to numerically. The paper demonstrates strong attraction effects with quantitative perceptual attributes (e.g., size of a product) and reverse attraction effects (i.e., repulsion effects) with qualitative perceptual attributes (e.g., shape or color of a product). The second paper investigates how the presentation order of options influence the size of the attraction effect. The findings shed light on how specific presentation orders push consumer’s search process towards a temporary leader—which is often the first option in presentation order—that leads to the attraction effect.

Secondly, we provide insights to novel preference reversals and a cautionary tale in the current research paradigm of preference reversals. The third paper investigates a previously unexplored effect of a choice option dominated by two other options, i.e., a symmetrically dominated decoy. The authors suggest that when two options, one high in desirability, the other in feasibility, are available, offering a symmetrically dominated decoy shifts choice toward the option high in desirability. The authors dub this novel effect “upscaling effect”. The final paper demonstrates that well-known decision biases, such as opportunity-cost neglect and present-bias, diminish when outcomes are negative instead of positive—the type of context most heuristics and biases literature studies. Specifically, the author shows evidence for increased deliberation when stimuli are negatively vs. positively valenced. The author further posits a potential explanation for why these preference reversals may be occurring more when stimuli are positively valenced.

Ultimately, the four papers in this session contribute to the discussion of how restricted or expansive preference reversals are by providing novel moderators to classic effects and demonstrating new types of preference reversals.

Preferential Attraction Effects Occur with Quantitative Perceptual Attributes, but Break Down with Qualitative Perceptual Attributes

EXTENDED ABSTRACT

The attraction effect (Huber et al. 1982) was considered large and replicable until recent research raised doubts about its generality (Frederick et al. 2014). The effect occurs when adding an inferior (therefore, irrelevant) third option (i.e., a *decoy* option) to a two-option choice set. Then, paradoxically, decision makers change their preferences between the former two competing options toward the one most similar to the inferior option (i.e., to the *target* option).

It is unclear why this effect arises in some domains and not in others. It is large when the choice options are presented in number format (Huber et al. 1982; Simonson 1989), yet difficult to find when the choice options are images of physical objects or the objects themselves (Frederick et al. 2014; Gaudeul and Crosetto 2019; Simonson and Tversky 1992; Stewart 1989; Trendl et al. 2021; Yang & Lynn 2014).

Many explanations of the attraction effect assume that a contrast effect ensues between a target and a decoy (Ariely and Wallsten 1995; Dhar and Glazer 1996; Roe et al. 2001). Being able to compare two magnitudes such as size or length may facilitate contrast effects (Choplin and Hummel 2002; Wedell 1991; Ratneswar et al. 1987; Bonn and Cantlon 2017; Walsh 2003). However, there are attributes such as color and shape that do not fall onto a magnitude scale, akin to the distinction between prothetic and metathetic attributes in psychophysics (Smith and Sera 1992; Spence 2011, 2019; Stevens 1957). If a contrast effect involving magnitude comparisons produces the attraction effect, the effect may be facilitated if the perceptual attributes are quantitative rather than qualitative.

Indeed, when we presented images of choice options with quantitative attributes, we observed strong attraction effects. In Experiment 1 respondents (N = 1,493) observed photographs of olive oil bottles and chose one that they would purchase. A decoy bottle cost the same as the target bottle but contained a smaller amount of oil. Introducing a decoy increased the choice share of the target against

a competing choice option (i.e., resulted in an attraction effect; $\chi^2(1, N = 1456) > 58, p < .001, \phi > 0.2$). Showing or not showing numerical price tags on the bottles and presenting the options using various alignments (e.g., horizontal or vertical) consistently led to attraction effects (Experiments 1b, $N = 101$; Experiment 1c, $N = 402$; $\phi > 0.2$). Other experiments with various types of quantitative perceptual attributes also resulted in attraction effects: Experiment 2 had respondents ($N = 200$) choose a seat from an auditorium seating chart while varying the distance between each seat and points of interest on a stage ($\chi^2(1, N = 182) = 6.33, p = .01, \phi = 0.19$); Experiment 3 had respondents ($N = 1,604$) choose a game of chance among visual representations that specified chances of winning and winner's reward by sizes of surface areas on a pool table ($\chi^2(1, N = 1476) = 18.64, p < .001, \phi = 0.11$); and Experiment 4 had respondents ($N = 237$) choose a photograph print among prints of different sizes and image resolutions ($\chi^2(1, N = 232) = 19.19, p < .001, \phi = 0.29$). Therefore, in contrast to some earlier work (Frederick et al. 2014; Huber et al. 2014; Król and Król 2019; Simonson 2014; Trendl et al. 2021; Yang and Lynn 2014), our evidence suggests that the visual versus numeric distinction does not constitute a conceptual boundary condition for the attraction effect—visual attraction effects can be strong and robust.

On the other hand, when we presented images of choice options with qualitative attributes, we observed reversals of the attraction effect (i.e., repulsion effects). In Experiment 5 respondents ($N = 1,496$) chose a scarf fabric among options with different colors and patterns. Introducing a decoy scarf with an undesired pattern (a qualitative distinction) decreased the choice share of the target scarf ($\chi^2(1, N = 768) = 7.26, p = .007, \phi = 0.10$). Other experiments with various types of qualitative perceptual attributes also resulted in repulsion effects: Experiment 6 had respondents ($N = 2,005$) choose their preferred logo design among designs with different fonts and arrangement of letters ($\chi^2(1, N = 1879) = 17.04, p < .001, \phi = 0.10$); Experiment 7 had respondents ($N = 2,504$) choose signage among designs with different colors and shapes ($\chi^2(1, N = 2434) = 20.01, p < .001, \phi = 0.09$). These results support our main hypothesis that *quantitative perceptual attributes* facilitate the emergence of an attraction effect more than do *qualitative perceptual attributes*. Some prior failures to observe visual attraction effects may be due to the use of qualitative perceptual attributes.

Statistically reliable repulsion effects for preferential choices have been observed only rarely (Król and Król 2019; Liao et al. 2020; Spektor et al. 2020), yet, they are just as interesting as attraction effects (MacKay and Zinnes 1995; Roe et al. 2001; Thurstone 1954). Here we only speculate about a possible mechanism, namely that decoy and target may be perceived as two instances of one category, resulting in assimilating their attributes toward the category norm (Medin and Schaffer 1978; Nosofsky 1986). The discovery of repulsion effects for qualitative perceptual attributes raises important questions for future research.

When Does The Attraction Effect Occur?: A Case for Value Construction in Attraction Effect

EXTENDED ABSTRACT

The seminal paper by Huber and colleagues (1982) introducing the attraction effect has amassed a significant amount of attention from various fields (924 citations in web of science; 2365 in Google Scholar) including medical, managerial, political, and marketing. In fact, this context effect has often been applied in a variety of scenarios, from e-commerce to innovation launches, and the presence of attraction effect has been considered nearly ubiquitous in marketing.

However, in recent years, it has come to question whether the effect is truly replicable in the marketplace (Frederick, Lee, and Baskin 2014), or if it requires a highly stylized and controlled environment, thus becoming less relevant to managers. To address this concern, we provide a novel process account of presentation order as a moderator to the attraction effect.

Previous research in attraction effect suggests that what is critical in replicating the attraction effect is the recognition of dominance – that the decision maker sees dominance of the target when compared to the decoy (Król and Król 2019). To extend this idea further, it has been shown that increase of comparisons between the target and decoy predicted the attraction effect (Noguchi and Stewart 2014). However, these studies have yet to show when and why these favorable comparisons are created in the attraction effect. Research in leader effects (Russo et al., 2006) have shown that when options with dominant attributes are placed first in the order of option presentation, these options tend to be favored and often chosen. Specifically, the option first in the order of presentation is argued to become a temporary leader and information search becomes distorted in favor of this option (Weber and Johnson 2009; Willimsen, Böckenholt, and Johnson 2011). Thus, in the attraction effect paradigm, we argue when the option pair of target and decoy (vs. competitor first in order of presentation) come first in the presentation order, the target quickly becomes established as the temporary leader and search becomes distorted in favor of the target leading to the attraction effect (Value Construction Index, VCI; Willimsen et al. 2011) leading to more favorable comparisons that have been shown to result in attraction effects. In a set of 4 studies using mouse and eye-tracking, we show that orders matter in replicating the attraction effect and an intervention that strengthens the attraction effect.

In **study 1a** ($N_{\text{obs}} = 732$, subjects = 373), we investigated whether order of presentation moderates the attraction effect. For the experiment, we used a within-subjects design providing participants with all possible combinations of presentation orders with 4 choice trials that consisted of binary, attraction, and filler trials. As expected, we find that when target-decoy pairs come first in order of presentation, we replicate the attraction effect ($P(\text{Target Choice})_{\text{TDf}} = .58, SE = .06, p = .06$) while the average effect of other orders were much weaker ($P(\text{Target Choice})_{\text{CF}} = .53, SE = .04, p = .11$). In **study 1b** ($N_{\text{obs}} = 795$, subjects = 134), we replicate the findings from study 1a with eye-tracking and show first evidence of mediation through our index. Similar to study 1a, we had participants go through a set of 9 choice trials within-subject, varying the presentation order which was limited to target-decoy-competitor and competitor-decoy-target for trinary choice sets and both possible orders in the binary choice set. Finally, in this study we varied the modality of process tracing between-subjects (mouse vs. eye-tracking). As expected, we find that the interaction between modality and choice set did not matter ($\beta_{\text{mod}} = -.031, SE = .334, p = .925$) but still replicates the attraction effect ($\beta_{\text{attr}} = 1.08, SE = .214, p < .0001$). While we did not find a direct effect of the presentation order on choice of target within the trinary set conditions, we find initial evidence of mediation through VCI for both mouse-tracking (95% CI: [.0392, .15]) and eye-tracking (95% CI: [.0314, .1]; Zhao et al., 2010).

In **study 2** ($N_{\text{obs}} = 598$, subjects = 264) we utilized the same paradigm, but compared one target-decoy first order (decoy-target-competitor) against the two competitor-first orders. For this study, participants were asked to go through a set of 8 choice trials within-subject. We confirm our prediction that the target-decoy first presentation order results in stronger attraction effect compared to competitor-first presentation orders ($\text{Contrast} = .55, SE = .21, p = .009$) and that this effect is significantly mediated by VCI (95% CI: [.06, .13]).

Finally, in **study 3** ($N_{\text{obs}} = 1066$, subjects = 388), we add a between-subjects condition where we delayed certain comparisons (favorable vs. non-favorable vs. no-delay) as an intervention to nudge decision makers against favorable or non-favorable comparisons. While we do not see a direct effect of the delay, we do find a marginal significant mediation through VCI (95% CI: [0, .08]) providing initial evidence that this distorted search is a causal process which can be manipulated to affect the attraction effect.

In the set of 4 studies, we show that the order of presentation is important when it comes to replicating the attraction effect. For marketers and managers who are building choice sets, it is imperative to understand how their design can become less efficient due to a simple reorientation of order. Ultimately, this paper contributes to a better understanding of when and how attraction effects occur and furthers the dialogue regarding the importance of context effects in practice.

The Upscaling Effect: How the Decision Context Influences Tradeoffs between Desirability and Feasibility

EXTENDED ABSTRACT

Purchase decisions often involve tradeoffs between attributes associated with desirability and feasibility. For instance, consumers need to choose between a higher-quality higher-price option and a lower-quality lower-price alternative. In this paper we examine how the decision context impacts consumers' preference between a high-desirability (HD) option and a high-feasibility (HF) alternative. We demonstrate a novel context effect, the "upscaling effect," whereby introducing a symmetrically dominated decoy option to a set (i.e., an option that is inferior compared to all alternatives in the set) leads to an increase in the choice share of the HD option. To account for the upscaling effect, we advance a hierarchical reason-based view of choice. According to our account, when the decision context provides a reason for choosing either option, such as when a symmetrically dominated decoy option is added to the set, consumers tend to prioritize reasons that support choice of HD options over HF alternatives.

We present evidence for the upscaling effect in 12 well-powered, preregistered experimental studies. Studies 1-7 test for the upscaling effect across a wide range of stimuli and decisions. Study 1 ($N=2,014$) tests for the effect using five different sets of stimuli that involve price-quality tradeoffs. Participants were significantly more likely to select the HD option when the symmetrically dominated decoy was added to the choice set compared to the control two-option condition (53.1% vs. 33.9%; $p<.001$). Studies 2 and 3 test whether the upscaling effect can be observed when consumers face tradeoffs on other attributes associated with desirability and feasibility besides quality and price. Study 2 ($N=1,005$) shows robust evidence for the upscaling effect in tradeoffs between quality and time ($p=.011$). Study 3 ($N=504$) provides further evidence in decisions that involve tradeoffs between quality and reliability ($p=.017$). Study 4 ($N=247$) provides evidence for the effect using consequential purchase decisions ($p=.048$). Study 5 ($N=801$) demonstrates that the effect is not moderated by the presence (vs. absence) of a no-choice option. We find robust upscaling effects ($p<=.001$) regardless of the presence of a no-choice alternative. Study 6 ($N=604$) replicates the upscaling effect in a situation where the decoy option is not strictly dominated by the focal alternatives but is a relatively inferior option instead ($p<.001$). Study 7 ($N=402$) tests whether the upscaling effect extends to situations that involve a higher number of options. Specifically, it provides evidence that adding a symmetrically dominated decoy option to a three-option set can produce similar results ($p=.002$).

Studies 8-10 test our hierarchical reason-based choice account. Study 8 ($N=602$) uses an open-ended question that asks participants to justify their choices. We replicate the upscaling effect ($p<.001$) and also find that consumers are more likely to invoke reasons that support choice of HD options than they are to invoke reasons supporting the choice of HF alternatives ($p<.001$). Study 9 ($N=506$) uses a repeated-measures design to demonstrate that the HD option is liked more by choosers of the HF option than the HF option is liked by choosers of the HD option in an initial choice. Consequently, it shows that there are more participants that switch from the HF option to the HD option than there are participants switching from the HD option to the HF option when the decoy is added to the set ($p<.001$). Study 9 also shows that participants are more likely to express the belief that the HD (vs. HF) option is better than the decoy. Study 10 ($N=503$) replicates the latter finding across a wide range of stimuli.

Finally, Studies 11-12 shows that manipulations that influence the ease of discerning dominance relationships between the alternatives influence the magnitude of the upscaling effect. Their results carry practical implications for managers that wish to boost sales of high-end products. Study 11 ($N=2,018$) shows that the upscaling effect is larger in magnitude when the HD option is adjacent to the decoy compared to when the HF option is positioned next to the decoy (interaction $p=.013$). Study 12 ($N=805$) shows that the upscaling effect is larger in magnitude when the alternatives are presented in the same page compared to when they are presented in different pages (interaction $p=.05$).

The theoretical contribution of our research is twofold. First, our paper contributes to consumer research on context effects. Prior research on this topic has primarily focused on two context effects, attraction (Huber et al. 1982) and compromise (Simonson 1989), both of which violate normative choice principles. Here we present a novel context effect that, similar to attraction and compromise, violates two normative principles (i.e., IIA and regularity). Extant theories and choice models do not predict or account for the upscaling effect. Second, our research suggests a potential modification to the well-established dominance rule (Montgomery 1983) which asserts that a given option dominates an alternative in the choice set when the former is better than the latter on at least one attribute and not worse on all other attributes (see also Evangelidis and Levav 2013; Evangelidis et al. 2018; Tversky et al. 1988). The classic formulation of the dominance rule assumes that consumers treat all attributes the same when they assess dominance relationships. However, our data suggest that attributes related to desirability are prioritized over attributes related to feasibility in dominance judgments. Therefore, we propose a modification to the dominance rule, whereby a given option dominates an alternative in the choice set when the former is better than the latter on desirability attributes and not worse on feasibility attributes. The modified dominance rule can account for previously unexplained findings reported in the consumer behavior literature, such as asymmetric attraction effects (Heath and Chatterjee 1995).

Finally, the upscaling effect holds important managerial implications. Our studies repeatedly demonstrate that introducing a clearly inferior decoy option can increase the likelihood that the consumer purchases options that are superior in desirability, such as higher-quality higher-price alternatives within the set. Additionally, although not the main focus of our research, our data also show that introducing clearly inferior decoy options can also increase the overall likelihood that the consumer makes (vs. defers) a purchase.

Skewed Stimulus Sampling is Distorting Our Understanding of Consumers

EXTENDED ABSTRACT

“Would you prefer to have \$20 tomorrow or \$50 in 3 months?” “Imagine you are looking to buy a new digital camera and are deciding between the following options...” Scenarios like these have been used in countless papers to uncover the heuristics and biases in how people assess and interact with the world around them. However, the world these studies investigate—e.g., in which one receives money for nothing and can easily afford exciting new purchases—is quite different from the one their participants inhabit. In reality, people frequently are faced with less desirable outcomes. A similar, more subtle problem is how the decisions are framed: Overwhelmingly, researchers frame decisions as choices (e.g., “Which would you prefer?”), yet in a pilot study participants classified 36% of the decisions they make on a daily basis as rejections.

Past work has found that these differences in valence matter. Whether given a rejection task (Sokolova & Krishna 2016) or bad outcomes (Botti & Iyengar 2006), participants respond to negativity with greater difficulty—summarized as a more deliberative mindset—compared to positive stimuli (Sokolova & Krishna 2016; Perfecto et al. 2017). Given that many biases arise from an overreliance on intuition/a failure to deliberate further (Dhar & Gorlin 2013), this exclusion of negative stimuli may lead researchers to overestimate the extent to which participants commit these errors in their everyday lives. To demonstrate this, I present a preregistered set of four well-known findings ($N_s > 800$) that shrink or disappear entirely when I introduce a negative decision frame or negative outcomes/topics.

Study 1 involved opportunity-cost neglect (Frederick et al. 2009). The original authors offered a choice (positive) between two desirable outcomes (positive) and changed choice-share by reminding some participants of the money they would save by not purchasing the more expensive option (the opportunity cost). That this prompting changes participants’ responses suggests that they were not thinking of it initially. I therefore predicted that introducing negativity to this previously all-positive proposition will spur participants to think more deeply about the decision at hand, and consider the opportunity costs even unprompted. Introducing opportunity costs for negative options would be an odd and confusing concept for participants and researchers alike, however; hence, I introduce negativity here in the decision itself: choice vs. rejection. As predicted, the original effect replicated under choice ($\chi^2(1)=5.53, p=.019$), but disappeared when participants were instead given a negatively-framed rejection ($\chi^2(1)=3.32, p=.069$), even trending in the opposite direction (Cost X Frame interaction: $B=.85, SE=.29, p=.003$).

In **Study 2**, I again considered the effect of a negative decision frame on deliberation, but in context of a broader literature: intertemporal discounting. In this work, participants are often asked to decide between receiving a smaller amount of money sooner in the future vs. a larger amount later. If participants are more patient (i.e., discount future money less), then they would select the latter option more frequently. This type of decision is operationalized as choice so frequently that the literature is often referred to as “intertemporal choice” (e.g., Loewenstein & Prelec 1992, cited over 2,000 times with this terminology). The goal of Study 2 then was to show how vulnerable these measures are to changes in the decision’s frame, even when the options themselves remain the same. Participants were randomly assigned to make six choices or rejections between smaller-sooner and larger-later sums. Consistent with Study 1, rejecting participants were more likely to wait for the larger-later

amount than participants who were choosing between those same options, $b=1.46, SE=.17, p<.001$.

Study 3 extends these findings to negative outcomes by reducing the false-consensus effect (Ross et al. 1977): an egocentric bias in which people overestimate the level of agreement around a position they hold. Thinking more deeply about this judgment increases the likelihood of considering information outside of one’s own stance, which improves the accuracy of the consensus estimate. Participants were asked to imagine they were recruiting models for a series of advertisements and were asked to choose one candidate from each of 8 desirable pairs (professional model headshots) and 8 undesirable pairs (regular people). After each choice, participants estimated what percentage of other participants made the same selection. Just as with rejection decisions in Studies 1&2, participants on negative-option trials were significantly more accurate (less “false”) in their consensus estimates than were participants who chose from desirable options (4.25% points vs. 13.42% points, respectively; $b=-9.17, SE=.48, p<.001$).

To find evidence of our deliberation mechanism, and replicating existing evidence (Sokolova & Krishna 2016; Perfecto et al. 2017), after each trial in Studies 2 and 3, I also asked participants “How easy or difficult did that decision feel to make?” In Study 2, rejecting participants reported their decision to be marginally more difficult, $b=.19, SE=.10, p=.067$. Participants who chose between negatively-valenced options in Study 3 reported the decisions were significantly harder than those with positive options, $b=1.36, SE=.11, p<.001$. However, for more direct evidence, in our final study we asked participants to consider an item from the Cognitive Reflection Test (Frederick 2005), which has an intuitive-but-wrong “lure” that is only overridden with additional deliberation. Participants either saw the CRT item in a positive (trees generating fresh, clean oxygen) or negative context (factories dumping toxic sludge), with identical numbers. In line with positive contexts reducing deliberation, participants were 36% more likely to give the intuitive, incorrect “lure” in a positive vs. negative context, $\chi^2(1)=7.45, p=.006$.

Although this is by no means an exhaustive audit, these studies highlight how vulnerable well-known findings can be the introduction of negativity, because of the increased deliberation it brings. Had the original researchers in these studies incorporated a greater range of valence in their designs, they would have drawn very different conclusions. As marketers, we aim to learn how consumers behave in the real world, but the real world is fraught with hard decisions and less-than-ideal outcomes. Until our studies more accurately mimic the types of experiences consumers are likely to have, we will have only an incomplete picture.

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Gut Feelings: Consumers' Intuitive Judgments of Companies

Chair: Mr. Mohin Banker, Yale University, USA

Paper #1: Dual Process Intuitions: Consumers' Beliefs About Persuasion Processing Drive Morality of Marketing Communications

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Paper #2: Asymmetric Reactions to Erroneous Punishments and Rewards

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Paper #3: Consumers' Lay Beliefs around Company Profitability

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Paper #4: The Effect of Political Ideology on Consumer Response to Company Silence

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SESSION OVERVIEW

Intuitions shape how consumers form judgments and perceptions about what they consider to be moral (Haidt 2001), competent (Todorov et al. 2005) and/or trustworthy (Everett et al. 2016). A large body of consumer research has documented many cases where consumers make inferences based on intuitions, including tradeoffs inferred from environmentally-friendly enhancements (Newman et al. 2014), halo effects resulting from corporate social responsibility efforts (Chernev and Blair 2015), and overgeneralizations about product health in nutritional disclosures (Andrews et al. 1998). This session seeks to add to this literature by documenting four ways, across a variety of domains, in which consumers apply intuitions in forming their judgments about companies.

We address the following questions: how do consumer intuitions affect responses to and judgments toward firms' actions? When and why do these intuitions change consumers' responses?

Papers 1 and 2 look at theoretical foundations of consumers' intuitions. Paper 1 focuses on the morality of persuasion through the lens of consumers' own beliefs about persuasion processing. The authors demonstrate that persuasion directed towards System 1 processing is perceived as immoral, and therefore, is less effective at changing brand attitudes. Paper 2 examines consumers' intuitions about how companies should respond to mistakes in punishment and reward systems at different points in time. In prospect, consumers deem it worse not to punish the deserving than to punish the undeserving, and deem it worse to reward the undeserving than not to reward the deserving. In retrospect, the reverse is true: consumers judge having punished the undeserving as worse than having failed to punish the deserving, and judge having failed to reward the deserving as worse than having rewarded the undeserving. These intuitions are driven by the heightened vividness of "bad actors" versus "good actors" in prospect versus retrospect, and this means that –

when designing punishment and reward systems – firms may be less attentive to "good actors" than consumers desire.

Papers 3 and 4 examine practical implications of intuitions on company judgments. Paper 3 studies consumer intuitions about company profitability. Consumers predominantly attribute a company's profits to its sales, even though profits are determined by other factors, and, therefore favor companies who report profit growth. But, these intuitions change when consumers are reminded of the effect of company prices on profits. Paper 4 looks at intuitions about a company's decision to stay silent on socio-political issues. While company silence is preferred relative to taking an opposing stance, liberals believe it is more appropriate for companies to take socio-political stances, and therefore, dislike company silence more than conservatives.

In summary, this session consists of four papers that detail circumstances in which consumers use their intuitions to form judgments about companies, giving both a theoretical perspective on how consumers reach these intuitions and a practical perspective on how these intuitions impact judgments. Each paper studies consumer responses to common company decisions: advertising decisions, creating incentive systems, disclosing profitability, and company social responsibility.

Dual Process Intuitions: Consumers' Beliefs About Persuasion Processing Drive Morality of Marketing Communications

EXTENDED ABSTRACT

Firms are often criticized for manipulating their customers (Kilbourne 1999). Consumers might disapprove using fear appeals to promote car insurance or sex appeals to promote upscale clothes because it is *immoral* to interfere with consumers' emotions. Conversely, an information leaflet about new fitness programs might seem moral and helpful. Existing literature argues that morality is a significant foundation for consumers' behavior (Campbell 1995; Kirmani and Zhu 2007), but little is known about *how* consumers form beliefs about persuasion morality.

We suggest that consumers use a simplified version of dual process theory (Kahneman 2011) as their *own* intuitive theory—*Dual Process Intuitions* (DPI). If consumers think persuasion aims at emotions and intuition (system-1), they will evaluate it as more manipulative and immoral than persuasion believed to be processed rationally (system-2). We argue this is because system-1 tactics are seen as *bypassing consumers' autonomy* compared to system-2 tactics. We predict this will, ultimately, affect brand attitudes.

Study 1 tested whether system-1 persuasion seems more immoral than system-2 persuasion. Participants ($N=60$) read descriptions of 24 marketing tactics from Isaac and Grayson (2017) and Mogaji and Danbury (2017) ("A company pays a celebrity to endorse its product"). For each tactic, they rated agreement with the five statements describing how the tactic is processed (2 items for system-1, $\alpha=.95$, "This tactic relies on emotion"; 3 items for system 2, $\alpha=.99$, "This tactic relies on reason") and three questions measuring each tactic's immorality ($\alpha=.98$; "I feel manipulated when I encounter this tactic") on 7-point scales.

For each tactic, the PCA showed that system-1 and system-2 belong to one component where participants see them as strongly opposing, $r(22)=-.89, p<.001$. We, therefore, combined the system-2

and system-1 (reverse-coded) questions into a single Dual Process Intuitions scale ($\alpha=.97$), where higher values indicate beliefs about system 2 processing. A multi-level model with participants and tactics as random factors showed that perceptions of immorality significantly decrease when tactics are evaluated higher on DPI ($b=-0.41$, $p<.001$), supporting predictions.

Study 2 examined the effect of how consumers think the stimuli are processed—via system-1 or system-2—on consumers' brand attitudes. Participants ($N=125$) each watched 5 ads randomly selected from a set of 25. For each ad, they indicated attitude toward the company before and after watching the video on a scale from -5 ("Very negative") to 5 ("Very positive"). Then, they answered the dual process and immorality questions from study 1. To test how DPI predicts variability in morality perception over-and-above traditional moral foundations (Haidt 2001), for each ad participants also answered questions adapted from Moral Foundations Scale (Graham et al. 2011).

After regressing attitude change (the difference between attitude before and after watching an ad) on DPI, the multi-level model showed significant result ($b=0.45$, $p<.001$), meaning that the perception that the ad is processed by system-2 (vs. system-1) positively affects brand attitudes. Importantly, this effect was mediated by ad immorality (95%CI [0.12,0.30]; PROCESS Model 4; Hayes 2013), where DPI decreases ad immorality ($b=-0.27$, $p<.001$). A regression with moral foundations and DPI showed that DPI has a distinct and larger effect on attitude than some moral pairs ($b_{DPI}=0.35$, $p<.001$; $b_{purity}=-0.28$, $p=.006$; $b_{authority}=-0.24$, $p=.002$; $b_{fairness}=-0.22$, $p=.005$; harm/loyalty $p\geq.251$).

Study 3 tested the effect of DPI on attitude change via automaticity and immorality—we predicted that system-1 tactics will be evaluated as more automatic, therefore, immoral, compared to system-2 tactics. The study used a 2 (Advertising: celebrity endorsement, information) \times 2 (Framing: hedonic, utilitarian) between-subjects design ($N=400$). Celebrity endorsement (system-1) vs. information (system-2) manipulation now provided experimental evidence of DPI's effect, whereas hedonic vs. utilitarian manipulation tested generalizability across product types. In hedonic condition, participants read a description of Omega (company) and Omega Seamaster watch (product) stressing emotional benefits ("Omega Seamaster is bold yet elegant"). In utilitarian condition, participants read a description of the same company and product but emphasizing functional benefits ("Omega uses 316L stainless steel"). Then, participants encountered a print advertising in a magazine. In celebrity endorsement condition, participants saw advertising featuring James Bond wearing the watch. In information condition, participants saw advertising with a large picture of the same watch and a paragraph about improved durability.

Next, participants evaluated the product and company ("How would encountering this advertising change your overall evaluation of [Omega Seamaster watch]/[Omega]?") on scales from -5 to 5. Then, they answered the dual process, immorality, and moral foundations questions from study 2. Participants then answered a question rating the product as primarily "functional" (1) or "enjoyable" (7) from Kempf (1999). Finally, they evaluated each ad's processing automaticity (3 items, $\alpha=.76$) built on Bargh (1994).

First, company and product ratings were correlated, $r(371)=.89$, $p<.001$, so we averaged them as *attitude*. Then, both manipulations worked: Participants evaluated the watch as marginally more enjoyable in the hedonic ($M=4.26$) than the utilitarian condition ($M=3.94$; $p=.068$); DPI was significantly higher in information ($M=4.08$) than celebrity endorsement condition ($M=3.07$; $p<.001$). Non-significant interactions between conditions manipulation on immorality

($p=.431$) and attitude ($p=.167$) show that the effect of DPI generalize across both hedonic and utilitarian products.

To see how all measurements are related and what effect advertising manipulation has on attitude, we conducted a serial mediation analysis (PROCESS, Model 6; Hayes 2013), showing there was a significant indirect effect via condition \rightarrow automaticity \rightarrow immorality \rightarrow attitude (95% CI [0.01, 0.11]). This means that system-1 (vs. system-2) advertising is more (vs. less) automatic, therefore, it is more (vs. less) immoral, resulting in lower (vs. higher) attitude change, supporting predictions. Finally, only DPI had a significant effect on attitude but not moral pairs ($b_{DPI}=0.44$, $p<.001$; moral pairs, $p\geq.331$).

Implications. Marketing is often seen as morally charged (Murphy and Laczniak 1981) particularly around persuasion (Kimmel and Smith 2001). Existing literature (Friestad and Wright 1994) explains well how consumers' beliefs about persuasion help them understand if someone is trying to persuade them. However, little is known how beliefs about persuasion relate to beliefs about autonomy, and what mechanisms explain consumers' conclusions about persuasion morality. Our research showed that the way how consumers think persuasion is processed—their *dual process intuitions*—might address these questions.

Asymmetric Reactions to Erroneous Punishments and Rewards

EXTENDED ABSTRACT

Companies and policymakers use punishments and rewards to encourage positive behaviors and discourage negative ones. For example, firms use surcharges to ward off costly customers and discounts to attract profitable ones; policymakers use fines to deter socially harmful actions and subsidies to promote socially beneficial ones; and so on. But mistakes happen: sometimes, people who deserve to be punished or rewarded are not (false negatives), and other times, those who do not deserve to be punished or rewarded are (false positives). Which mistakes do consumers judge to be worse, when, and why?

While prior work has explored how individuals respond to punishments and rewards, in general (e.g., Andreoni et al. 2003; Balliet et al. 2011; Dickinson 2001; Oliver 1980; Schnake and Dumler 1989; Wilson et al. 1989), less work has explored intuitive judgments about how punishment and reward systems should be designed, and how to address potential or realized errors. We seek to fill this gap in the current research, and document a systematic asymmetry in such judgments.

Specifically, we find that for punishments, consumers believe it is more important to prevent false negatives than it is to fix them, yet for rewards, consumers believe it is more to prevent false positives than it is to fix them.

We propose this is because potential "victims" are less identifiable in prospect. That is, it is unclear who will be harmed by false positive punishments or false negative rewards. So due to negativity bias (Baumeister et al. 2001; Kahneman and Tversky 1979; Ledgerwood and Boydston 2014; Rozin and Royzman 2001), consumers attend to "bad actors" (i.e., the deserving who will not be punished/the undeserving who will be rewarded) when considering which errors to prevent. In retrospect, however, "victims" are more identifiable; it is clearer who has been harmed by false positive punishments or false negative rewards. So, consumers empathize with those identifiable victims (i.e., the undeserving who were punished/the deserving who were not rewarded; Jenni and Loewenstein 1997) when considering which errors to fix.

We tested this account across five preregistered studies ($N = 2,562$).

Study 1 ($N = 357$) employed a 2 (type: punishments vs. rewards) \times 2 (frame: fix vs. prevent) between-subjects design. We described generic punishment and reward policies, and two types of errors: false positives (e.g., “10 individuals will be [punished/rewarded], but they will not deserve it”) and false negatives (e.g., “10 individuals will deserve to be [punished/rewarded], but they will not be”). We then asked: “Which mistake should be [prevented/fix]?”

We observed a significant interaction ($b = 2.44, p < .001$) between type and frame. That is, for punishments, 56% preferred to prevent false positives (i.e., 44% preferred to prevent false negatives), while 69% preferred to fix them (i.e., 31% preferred to fix false negatives; $p = .083$). This pattern flipped for rewards, where 39% preferred to prevent false positives (i.e., 61% preferred to prevent false negatives) while only 9% preferred to fix them (i.e., 91% preferred to fix false negatives; $p < .001$).

Put differently, for punishments, participants preferred fixing false positives after the fact to preventing them at the outset; for rewards, participants preferred fixing false negatives after the fact to preventing them at the outset.

In Study 2 ($N = 917$), we replicated these effects with richer stimuli. We employed the same basic 2 \times 2 between-subjects design, but asked all participants to review three scenarios: (1) a firm docking pay for poor performance/issuing bonuses for good performance; (2) an automobile insurer raising premiums for unsafe driving/reducing premiums for safe driving; and (3) a town assessing taxes for excessive water use during a drought/issuing tax credits for conserving water during a drought. Then, we again asked which type of mistake to prevent/fix.

We analyzed participants’ mean preferences for false positives versus false negatives and observed the predicted type-frame interaction ($b = 4.14, p < .001$). That is, for punishments, participants cared more about fixing false positives (87%) than preventing them (47%; $p < .001$), and for rewards, participants cared more about fixing false negatives (86%) than preventing them (43%; $p < .001$).

In Study 3 ($N = 565$), we adapted scenario (1) from the prior study to probe the role of victim identifiability (our proposed mechanism). After choosing which error to prevent/fix (as before), participants rated the vividness of individuals subjected to false positives/false negatives (e.g., “how vivid are these [employees]?”; adapted from Keller and Block 1997). We observed the same type-frame interaction ($b = 4.44, p < .001$) and simple effects ($ps < .001$), and found that “victims” (the undeserving who were punished/the deserving who were not rewarded) were more vivid in retrospect than in prospect, mediating these effects (bootstrapped 95% CI = [.07, .44]).

Our final studies probed a boundary condition: if these errors arise in systems discouraging negative behaviors/encouraging positives ones, then removing motivational consequences should attenuate the effect. Studies 4A ($N = 360$) and 4B ($N = 363$) tested this for punishments and rewards, respectively. In each, we described a program intended to curb water use via tax penalties/rebates (“motivational” condition) or simply measure it (“non-motivational” condition), and again asked which error to prevent/fix: false positives versus false negatives.

In the Study 4A motivational condition, 45% preferred to prevent false positive punishments and 86% preferred to fix them ($b = 1.99, p < .001$); as predicted, this effect was attenuated in the non-motivational condition ($b = -.40, p = .187$). In the Study 4B motivational condition, 57% preferred to prevent false negative rewards whereas 83% chose to fix them ($b = -1.31, p < .001$); again, this effect

was attenuated in the non-motivational condition ($b = -.44, p = .152$).

Ultimately, we believe our findings contribute meaningful theoretical insights for researchers, and practical insights for companies. They demonstrate a surprising asymmetry in judgments about errors in punishment and reward systems, and illuminate why this asymmetry emerges. Accordingly, our findings help explain reactions to numerous real-world policies (e.g., support for “tough-on-crime” reforms in prospect versus support for “innocence projects” in retrospect).

Consumers’ Lay Beliefs around Company Profitability

EXTENDED ABSTRACT

By mandate or with volition, companies often divulge their earnings to the public. Media outlets and social networks communicate these companies’ profits to the public (e.g., “Facebook and Amazon double their profits”, New York Times 2021), but little research has studied how consumers incorporate this information into their impressions of companies.

Consumers can feel their relationship with companies is zero-sum; if a company profits, it comes at the expense of the customer. Indeed, research has shown that firms with profit motives are seen as immoral and cold (Bhattacharjee et al. 2017; Aaker et al. 2010). However, thinking about profitability can spur favorable inferences about companies and the quality of their products (Posavac et al. 2010). The present research examines how consumers react to profit announcements and whether such announcements spawn positive or negative inferences about the company.

Although profit growth can be driven by changes in price, costs, or sales, we find across 9 studies that consumers intuitively associate increasing profits with increasing sales rather than lower costs or higher prices, which causes consumers to like companies described to have an increase in profits. While consumers have an intuitive liking of profitable firms when profits are unsourced, when prices are implicated as the source of profit, consumers like companies less. Consistent with our theory that increased profits are spontaneously attributed to increased sales, explicitly attributing profits to sales does not change consumers’ evaluations.

We test our hypotheses by showing real and hypothetical companies described to have an increase in profits in the previous year. Specifically, we examine consumers’ evaluations of companies for different attributions of equivalent profit changes (e.g., Profits increased by 15% as prices increased vs. number of customers increased). We compare these evaluations to when consumers are presented no explicit attribution, a baseline to show how consumers spontaneously react to a change in profits.

Our first study shows that consumers evaluate companies more positively when they are more profitable. In study 1A ($N=200$), participants read headlines about real companies (sampled from a set of 50 companies) and their actual profit growth in the previous year before reporting their liking of the company. Participants reported higher liking for companies with higher profit growth ($r=0.10; p<0.01$). In study 1B, participants were randomly assigned to read about a generic company, which only varied in its profitability (ranging from “100% decrease” to “100% increase”) between seven conditions. Across the range of profit changes, participants who read about more profitable companies reported that they liked the company more ($N=700; b=0.32; p<0.01$).

In studies 2A–2E, we show that, absent any explicit attribution for profit growth, consumers spontaneously attribute profit growth to sales growth. In study 2A ($N=300$), participants rated four real companies after reading headlines about the companies’ profits. The

source of the profits was either attributed to increasing prices, increasing sales, or given no attribution. Liking in the no attribution condition was significantly higher than when profits were attributed to prices ($b=0.40$; $p<0.01$), but no different when profits were attributed to sales ($b=0.05$; $p=0.69$). Study 2B ($N=300$) replicated the experimental design of 2A but instead used a hypothetical company ("Company Z") as the stimuli, and again found no difference between profits with no attribution and profits attributed to sales ($b=0.06$; $p=0.67$), but attribution to prices significantly decreased liking ($b=-1.11$; $p<0.01$). Study 2C ($N=379$) mirrored Study 2B but presented a profit loss; we found no difference in liking between the no attribution and sales attribution conditions ($b=0.04$; $p=0.78$), but attributing profit loss to prices significantly increased liking ($b=0.91$; $p<0.01$). Study 2D ($N=400$) used the same design but added a fourth condition attributing profits to a cost decrease. We found the same pattern in the original three conditions, but liking for a company with profit growth absent any attribution was lower than for a company with profits attributed to a cost decrease ($b=0.35$; $p<0.01$). Study 2E ($N=300$) used a likelihood to purchase DV instead of a liking DV, and found no difference in purchase intent for a company with profits absent attribution and a sales attribution ($b=0.14$; $p=0.38$), but lower purchase intent when profits were attributed to prices ($b=0.80$; $p<0.01$).

In study 3 ($N=291$), we tested whether consumers attribute profits to increases in unit sales not because they infer other causes are implausible but rather because they are not readily accessible. Specifically, if alternative causes are seen as unlikely, they would be equally unlikely to be selected when explicitly provided in a list of options as when people simply enumerate likely causes. In this study, participants read about a made-up company and its profit growth for the previous year. In a closed-ended condition, participants ranked four possible causes for a profit increase in order of likelihood. In an open-ended condition, participants wrote explanations for why the company's profits increased, and these explanations were coded into equivalent categories as the closed-ended condition. Consistent with the notion that consumers find alternatives to be relevant but not equally accessible, participants in both conditions reported unit sales to be the most likely cause of profits (Closed-ended: 41.4%; Open-ended: 49.6%; $p=0.16$), but participants were significantly more likely to attribute profits to prices as the primary cause when faced with the 4 options than when asked to state what the cause was (Closed-ended: 25.7%; Open-ended: 13.1%; $p<0.01$).

Study 4 ($N=453$) further tests differential accessibility by reminding participants of different causes for profit changes in an unrelated task before reading about a made-up company's profit increase absent any attribution. Participants were randomly assigned to answer a question about the effect of price on profits, the effect of sales on profits, or given no question. Participants who were reminded about price changes reported liking the company less relative to no reminder ($b=0.32$; $p<0.01$), while there was no significant difference for participants who were reminded about sales changes ($b=0.18$; $p=0.10$).

In summary, we show that (a) consumers like companies whose profits increase, (b) consumers spontaneously attribute profit increases to sales increases, and (c) increases in profitability decrease liking when attributed to price changes.

The Effect of Political Ideology on Consumer Response to Company Silence

EXTENDED ABSTRACT

When Georgia Republicans advanced a potentially discriminatory voting rights bill in early 2021, some consumers and activists urged major companies in Georgia to speak up against the bill. While Coca-Cola and Delta Airlines eventually denounced the bills, Home Depot remained silent on the issue. How might consumers respond to companies that remain silent on controversial socio-political issues that have moral underpinnings, like LGBTQ rights and gun rights? We define company silence as a lack of communication from a company or its failure to take a clear supportive or oppositional stance when it is expected to speak on a socio-political issue (Brummett 1980; Woon & Pang 2017). Companies' response on these issues often reflects their moral beliefs.

We propose that political ideology (PI) will drive consumers' responses to a company's silence on controversial socio-political issues. Specifically, conservatives and liberals will react differently based on 1) their beliefs about whether companies should take a stance on moral issues and 2) the congruence of their political beliefs with the stance companies could take instead of staying silent. Conservatives (vs. liberals) tend to defend the status quo and value traditionalism more than social justice (Janoff-Bulman et al. 2008; Jost 2017). These ideological differences may be extended to how liberals and conservatives view companies' normative role in society. The notion of companies as socially responsible entities is nascent, compared to the traditional perspective of companies as business-focused entities (Serafeim 2020). Given conservatives' traditionalist emphasis, we propose that conservatives will be more likely than liberals to believe that companies should solely focus on business and not engage in socio-political issues. Therefore, we predict that consumers' PI will moderate the effect of company silence on brand attitude.

We explicate this effect in two ways. First, compared to a no-information baseline without a socio-political issue, we predict that company silence will decrease brand attitudes among liberals, but not conservatives. Second, compared to a company taking a stance *incongruent* with consumers' PI, company silence will increase brand attitudes among both liberals and conservatives. In contrast, compared to a company taking a stance *congruent* with consumers' PI, company silence will decrease brand attitudes among liberals, while this negative effect of silence will be attenuated among conservatives.

We also investigate different types of company silence. When staying silent, companies may offer a reason for their silence, such as stating their policy to never comment on socio-political issues. Service recovery research has found providing a reason for service failures increases justice perceptions and recovery satisfaction (Gelbrich and Roschk 2011). Similarly, we predict that when companies provide (vs. do not provide) a reason for their silence, brand attitude increases for both liberals and conservatives.

To illustrate the ideological difference in beliefs about companies' normative societal role, we conducted Study 1 (Prolific, $n=409$). All participants read about a hypothetical company's CEO remaining silent when being asked about the company's stance on a transgender bill. As expected, liberals (vs. conservatives) were more likely to indicate that it is appropriate for the focal company to take a stance on the transgender issue ($p=.098$) and that it is generally appropriate for companies to take a stance on socio-political issues ($p=.001$).

Study 2 used a 4 (company stance: silence vs. supporting gun control vs. supporting gun rights vs. no information) X continuous (PI) between-subjects design (MTurk, $n=493$). PI was measured at the beginning of the study (1=strongly liberal, 7=strongly conservative) (Graham et al., 2009). All participants read about a fictitious brand. Participants, except for those in the no-information condition, then read about the gun rights/control debate and how the fictitious brand had responded to the debate. Silence was operationalized as the company having no comment on the debate. Brand attitude was measured with four items (bad-good / unfavorable-favorable / negative-positive / dislike-like; $\alpha=.98$).

We first tested the effect of silence versus no information. A regression analysis revealed a marginally significant interaction of the silence-no information dummy variable and PI on brand attitude ($p=.055$). A Johnson-Neyman analysis showed that silence (vs. no information) reduced brand attitudes for liberals ($PI \leq 3.97$), but not conservatives. We next tested the effect of silence versus taking a stance. We found significant interactions of the silence-gun control stance and silence-gun rights stance dummy variables with PI on brand attitude ($ps < .001$). Both liberals ($PI \leq 4.01$) and conservatives ($PI \geq 4.61$) reacted more positively toward silence (vs. incongruent stance; i.e., gun rights for liberals, gun control for conservatives). In contrast, both liberals ($PI \leq 3.49$) and conservatives ($PI \geq 5.83$) responded more negatively toward silence (vs. congruent stance); moreover, as expected, the negative effect of silence was smaller for conservatives than for liberals. Lastly, we examined whether comment ambiguity or inferences of the silent company's stance (i.e., liberals inferring company's silence as a conservative stance) accounted for these results. They did not, ruling them out as explanations.

Study 3 used a 4 (company stance: silence vs. silence with reason vs. opposing voting restriction bills vs. supporting voting restriction bills) X continuous (PI) between-subjects design (MTurk, $n=394$). The reason provided in the silence-with-reason condition was that the company had a policy not to comment on socio-political issues. The study procedure was similar to that of Study 2. We replicated the findings of the interactive effect of silence versus taking a stance and PI on brand attitude ($ps < .04$). A notable difference was that here, conservatives' brand attitudes did not differ between silence and their congruent company stance (i.e., supporting voting restriction bills). This provides support to our prediction that conservatives see silence as an appropriate company response. Importantly, we found the expected main effect of silence versus silence-with-reason on brand attitude ($p < .001$). Both liberals and conservatives reacted more positively when the company gave (vs. did not give) a reason for their silence.

We are conducting studies to examine other types of silence as well as the underlying process that differences in beliefs about whether companies should take a stance on socio-political issues account for these effects. In short, we hope to demonstrate that consumers have different reactions to companies' moral stances and silence on socio-political issues.

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Looking at the World Through a New Lens: How Categorization Can Improve Motivation and Well-Being

Chair: Rebecca Chae, Santa Clara University, USA

Paper #1: Categorizing Tasks Around a Break Rumination and Improves Task Performance

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Kaitlin Woolley, Cornell University, USA
Marissa Sharif, University of Pennsylvania, USA

Paper #2: Categorization & Leisure: When Consumers Prefer to Spend Time on Leisure Activities

Siyuan Yin, University of Pennsylvania, USA
Marissa Sharif, University of Pennsylvania, USA

Paper #3: Monetizing Paid Vacation Shifts Employment Preferences

Ashley Whillans, Harvard University, USA
Lauren Howe, University of Zurich, Switzerland

Paper #4: Losing Weight but not Feeling Like Yourself? A Transformation Mindset Facilitates Consumer Authenticity

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SESSION OVERVIEW

Goal pursuit often involves a long process, and burnout has long been a threat. One way for consumers to maintain motivation and enhance their wellbeing during goal pursuit is to take breaks. Even after consumers manage to successfully achieve their goals, how they view themselves can influence their post-attainment wellbeing. Accordingly, the focus of this session is to provide novel insights on how consumers' motivation and wellbeing can be improved, specifically by using categorization.

Consumers often spontaneously categorize objects based on similarity (Medin and Schaffer 1978) or labels (Vallacher and Wegner 1987; Zhang and Schmitt 1998). Categorization influences consumers in a variety of ways, such as influencing their perceptions of geographic borders (Maddox et al. 2008; Mishra and Mishra 2010), task initiation (Tu and Soman 2014), and perceived goal progress (Sharif and Woolley 2020). Adding to this literature, four papers in this session present previously unexplored impacts of categorization on motivation and wellbeing. The first three papers examine how categorization influences consumers' experience of and choices for breaks. The fourth paper examines how categorization influences consumers' wellbeing even after attaining their goals.

First, Chae, Woolley, and Sharif show that categorization influences how people experience a break and perform in a post-break task. Categorizing tasks around a break, such that the break falls in between two tasks rather than in the middle of a single task, reduces rumination during the break, helping consumers detach from the goal during the break. Consequently, it reduces negative affect, improves task evaluations, and increases work performance.

Second, Yin and Sharif show that categorization matters when consumers engage in leisure activities. At the beginning of a categorized time period, consumers are more likely to think about the upcoming work, compared to at the end, such as at the end of a day. As such, consumers not only prefer to engage in, but also enjoy leisure activities more at the end than beginning of a categorized time period.

Next, the third paper focuses on the impact of a categorical label on consumers' preference for non-cash compensation. While the first two papers focus on the impact of categorization on shorter breaks, Whillans and Howe investigate the attractiveness of longer breaks, such as paid vacation days. Adding a categorical label on non-cash compensation by highlighting its cash value enhances the attractiveness of choosing non-cash rewards.

Finally, Song, Brucks, Huang, and Campbell show that how consumers think of self-categories influences their wellbeing after they achieve their goals. When thinking of the post-attainment self as transformed from the past self, compared to focusing on either self-category (i.e., the past self or the new self) individually, consumers feel more authentic.

This session shows that categorization plays an important role in enhancing consumers' motivation and wellbeing. This session should be of interest to a broad audience of researchers with theoretical interests in categorization, goals and motivation, as well as those with a substantive interest in consumer well-being. The consequential nature of the study findings provides insights for consumers, managers and policy makers.

Categorizing Tasks Around a Break Rumination and Improves Task Performance

EXTENDED ABSTRACT

Taking regular breaks from work is important for preventing burnout and maintaining work productivity. Research has highlighted the benefits of breaks outside work (e.g., vacations, weekends, and evenings when one is "out of office;" Fritz et al., 2013; Kühnel et al. 2017), as well as taking smaller breaks during the work day itself (Fritz et al., 2011; Trougakos & Hideg, 2009). Outside of pursuit of professional goals, break have also been found to aid pursuit of fitness goals (Thum et al., 2017). A primary conclusion from this research is that the type of break consumers take matters. We instead ask a different question – holding the break itself constant, can the way consumers construe tasks surrounding their breaks increase motivation?

We propose that the categorization of tasks around a break influences consumers' ability to experience a break as restorative. Research on categorization suggests that category labels can signal differences between options in a set (Mogilner et al., 2008; Redden, 2008), such that the same task can be framed as a single task or as two separate tasks. For example, a consumer considers their break as falling in between two sets of 10-minute exercises will feel more positively about the workout than if they instead considered the break as falling in between a single 20-minute workout. We suggest the reason categorizing tasks makes breaks more restorative is because it reduces rumination about the goal related activity during the break – that is, categorization allows for detachment, which is necessary to reset during restorative breaks.

In studying how categorization affects motivation after a break, this research makes key contributions to the literature on categorization, goal pursuit, motivation, and breaks. We are the first to identify that categorizing tasks surrounding breaks can affect the quality of the break, and post-break motivation. We identify categorization of the task surrounding the break as a key contributor to how restorative breaks are experienced, and thus subsequent motivation, holding the work task and break activity itself constant. In doing so, we connect research on

breaks to the literature on categorization and subgoals (Huang, Jin, and Zhang 2017). Whereas this prior literature focused on how categorizing tasks (vs. not) affects motivation in the absence of breaks, we examine how categorizing tasks affects breaks themselves, and whether breaks are able to effectively restore motivation.

We first tested this prediction in a preregistered pilot study with university students ($n = 195$). We found that framing winter break as falling in between two semesters (categorized) versus in the middle of the academic year (not categorized) increased students' perception that their winter break was restorative ($t(193) = 2.23, p = .027, d = .32$).

Studies 1-3 examined how task categorization affects rumination when taking breaks during work and during exercise. Furthermore, we tested various psychological and behavioral consequences of reduced rumination due to categorizing tasks around a break. For all studies, we held constant break and randomly assigned participants to either categorize the tasks before/after the break or not.

In Study 1 ($n = 398$; pre-registered), participants completed a word search task in which they needed to find 10 words. We framed this as a single word search task (not categorized) or two tasks of finding 5 words (categorized). In the middle of the task, all participants had a break. We found that categorizing tasks around a break (vs. not) reduced participants' stress and anxiety, $t(396) = 4.28, p < .001, d = .43$, which was mediated by reduced rumination during the break, $CI_{95} = [-1.03, -.50]$.

In Study 2 ($n = 289$; pre-registered), participants completed 10 exercises with a break in the middle. Participants either categorized the exercises into two sets of 5 workouts or a single set of 10 workouts. Categorizing exercises around the break (vs. not) improved evaluations of the 10 exercises, $t(287) = 2.34, p = .020, d = .28$, which was mediated by reduced rumination, $CI_{95} = [-5.78, -.19]$.

Study 3 ($n = 395$) utilized a similar word search paradigm from Study 1 and measured consequences for task performance. We found an interaction between task categorization and performance before versus after the break, $F(1, 393) = 7.11, p = .008, \eta_p^2 = .02$. Whereas people performed similarly on the task before the break, $p = .212$, those assigned to categorize their tasks (vs. not) performed better after the break, $F(1, 393) = 11.69, p = .001, \eta_p^2 = .03$. This suggests that their experience during the break affected post-break performance. This was again mediated by reduced rumination during the break, $CI_{95} = [-.14, -.01]$.

Our final study ($n = 760$) provided a causal test of the proposed role of rumination on task performance through moderation. This time, we manipulated task categorization and break restorativeness. We reasoned that categorization would only improve performance when categorizing tasks surrounding a restorative break. In line with this prediction, we found a significant interaction on post-break performance, $F(1, 756) = 6.90, p = .009, \eta_p^2 = .01$. Whereas categorizing tasks around a restorative break (vs. not) improved post-break performance, $F(1, 756) = 6.58, p = .011, \eta_p^2 = .01$, this effect attenuated for a cognitively demanding break that was less restorative, $p = .239$.

In conclusion, these results offer implications for how to structure breaks to maintain motivation at work and during exercise. We show that categorizing tasks surrounding a break is an effective strategy for goal pursuit because it reduces rumination about the task during the break, as people are better able to detach from the goal. This research makes key contributions to the literature on categorization, goals and motivation, and breaks and offers implications for consumers to maximize their break experience.

Categorization & Leisure: When Consumers Prefer to Spend Time on Leisure Activities

EXTENDED ABSTRACT

When are consumers more likely to spend their time on leisure activities? For example, when are consumers more likely to go on social media, watch a show on Netflix, talk with friends, or even take a vacation? This question matters for consumers aiming to mitigate wasteful uses of time but also for marketers of leisure companies aiming to persuade overworking consumers to take a break, mitigating burnout.

Indeed, consumers often seek ways to be more productive and avoid wasteful uses of time. As of 2019 and 2020, the average daily social media usage of internet users amounted to 145 minutes per day (Suciu 2021). To reduce wasteful uses of time, consumers use apps (e.g., RescueTime, Checky, Trackr) to keep track of daily computer use on entertainment, social networking, and news, hoping they can change their computer habits and improve time management.

However, some consumers often over work themselves, failing to take a break, and resulting in burnout (Brenner 2007; Moss 2021). Avoiding burnout has been the top motivation to take a vacation for travel (US Travel Association 2020). Taking breaks outside work, such as vacations and evenings out, is beneficial for consumers' mental and physical health, job performance, and life satisfaction (Fritz and Sonnentag 2006). Leisure companies need to know *when* it is best to target consumers, helping to mitigate consumer burnout.

In this research, we examine when consumers prefer to engage in a leisure activity and why? We find that consumers prefer, and thus are more likely to, engage in leisure activities at the end (vs. beginning) of a categorized time period. This is because consumers anticipate enjoying their time off more when it is at the end (vs. at the beginning) of a categorized time period. Building off of previous research that categorization expands psychological distance (Donnelly and Evers 2019; Issac and Schindler 2014; Mishra and Mishra 2010), we suggest that consumers anticipate that partaking in leisure will be more enjoyable because they will be less likely to think about their upcoming work when it is at the end (vs. beginning) of a categorized time period.

In Study 1, we analyzed the data of 210,586 households with 4,121,283 activities logged in American Time Use Survey from 2003 to 2019. In answering the survey, respondents indicated the types of activities, activity start and stop time, and duration. We assessed the likelihood of partaking in leisure uses of time based on when, relative to each whole hour, respondents started. Respondents were less likely to engage in leisure activities when it was at the start of an hour vs. later in the hour (i.e., hh:01-hh:59) ($N=4,121,283, b_{\text{at the start}} = -.22, p < .001$). The findings remain robust when we predict the likelihood of engaging in leisure activities from relative start time with or without arbitrary divisions, with or without controlling for covariates such as age, gender, race, education, self-employment, and weekdays (vs. weekends).

In Study 2 ($N=567$), participants imagined that they planned to complete two work projects and the first work project took 50 minutes; they were told that they finished their first project at 1:50 pm (in the end of hour condition) or at 2:00 pm (in the start of hour condition). Participants were asked to choose whether they would spend the next 10 minutes on browsing social media and start work 10 minutes later or get started at work now. Participants in the end of hour condition were more likely to spend the next ten minutes browsing social media than those in the start of hour condition ($\%_{\text{end}} = 64.51\%$ vs. $\%_{\text{start}} = 51.46\%$; $b_{\text{end}} = .54, p = .002$).

In Study 3 ($N=547$), we held constant the time interval under consideration across conditions and framed the same time interval either as the start or the end of a categorized time period. Specifically, participants considered taking a three-day mini vacation from the 5th to the

7th, which was framed either as the first weekend of this month or the last three days of the week. Participants were more likely to take the mini vacation at the end of the week than those having the vacation at the start of the month ($M_{\text{end}}=6.79$, $SD=1.99$ vs. $M_{\text{start}}=5.86$, $SD=2.19$; $b_{\text{end}}=.93$, $p<.001$). Also, participants anticipated they would enjoy their mini vacation more ($M_{\text{end}}=7.57$, $SD=1.55$ vs. $M_{\text{start}}=7.02$, $SD=1.77$; $b_{\text{end}}=.55$, $p<.001$) and think less about their work during the vacation ($M_{\text{end}}=4.81$, $SD=2.30$ vs. $M_{\text{start}}=5.43$, $SD=2.38$; $b_{\text{end}}=-.62$, $p=.002$) at the end of the week than those having the vacation at the start of the month. We found evidence of a serial mediation that thinking about upcoming work and anticipated enjoyment significantly mediated the effect of the start vs. the end of a categorized time period on the likelihood of taking the mini vacation ($a_1d_2b_2=.048$, $p=.036$, 95% CI=[.014, .109]).

Study 4 ($N=1583$) tested an important boundary condition: the extent to which consumers think about the next productive activity. Participants were randomly assigned to one of the 2 (framing: the first weekend of the month vs. the end of the week, using the same design as Study 3) \times 2 (thinking about having less work after the vacation vs. control) between-subject conditions. We found a significant framing and thinking about work interaction ($b=-.47$, $p=.009$) such that participants were more likely to take the mini vacation at the end of the week than at the start of the month in the control condition ($M_{\text{end}}=7.00$, $SD=2.93$ vs. $M_{\text{start}}=6.49$, $SD=2.16$; $b=.51$, $p<.001$); however, this effect attenuated in the think about having less work condition ($M_{\text{end}}=7.84$, $SD=1.45$ vs. $M_{\text{start}}=7.79$, $SD=1.38$; $b=.05$, $p=.72$).

Our findings advance research on categorization of resources and time management by demonstrating that categorization of time has an impact on whether consumers are willing to engage in a leisure activity. This research provides marketing and managerial implications for marketers who design marketing campaigns at the right time to target consumers and consumers who want to maintain a balance between work and leisure by mitigating burnout and avoiding excessive consumption of time away from work.

Monetizing Paid Vacation Shifts Employment Preferences

EXTENDED ABSTRACT

Most consumers report that they do not spend sufficient time with friends and family (Carroll, 2008). One reason that consumers feel so much time stress is that they focus too much on earning money vs. having free time (Hur, Lee-Yoon & Whillans, 2021). This is true even though an increasing number of organizations are incorporating additional paid-time off and flex-time policies into their workplace strategy (Braff, 2018). A novel reason consumers might fail to make career decisions that enable them to have more free time is because employers are not convincingly communicating the value of non-cash benefits to their prospective employees.

In qualitative research that we conducted with thirty managers; a critical theme emerged: organizations often failed to highlight the value of non-salary benefits during their initial hiring process. As one Google manager succinctly summarized, "It is a common misperception that Google pays employees generously or above industry average. They do not and in fact, they pay employees approx. 70% of industry average wages for Silicon Valley; however, they make up for the reduced salary through non-cash incentives." This manager argued that it was important to "show the total compensation package, not just the salary, [to] put the cash value on healthcare, childcare, public transportation subsidy, vacation, sick leave, and calculate it for all employees." In that manner, people will understand what they are truly paid."

Building on this insight, we examined whether providing the financial value of non-financial rewards could help employees recognize their value. This work dovetails with two programs of research. First,

having more money shapes happiness less than people expect (Aknin, Dunn & Norton, 2009). Second, non-cash rewards have important benefits for employee satisfaction (Schweyer, Landry & Whillans, 2018). Thus, emphasizing the value of non-salary benefits could help employees make choices that best promote their well-being.

Furthermore, money sends a strong signal of what individuals, organizations, and society values (Vohs, 2015). Listing the value of non-cash benefits could signal to consumers that firms care about their work-life balance and positively improve consumers' perceptions.

Study 1a&b

A critical assumption underlying our experimental studies is that non-cash benefits such as workplace flexibility critically predict job satisfaction, yet consumers underestimate these benefits. In Study 1a, we used large-scale data to examine whether non-cash benefits positively impacted consumers' self-reported job satisfaction. In Study 1b, we conducted a follow-up study to examine whether consumers underappreciated the importance of these non-cash rewards.

Results Study 1a.

We used a data set of job satisfaction and benefits data collected by Glassdoor. Glassdoor is a website where employees and former employees anonymously review their companies and managers. The final sample consisted of $n = 42,721$ respondents ($M_{\text{age}} = 38.36$, $SD = 10.21$, 40% female). In line with prior literature (Miller, 2017), receiving higher than the median annual salary had a significantly positive impact on employee's job satisfaction rating, $B=0.15$, $SE=0.03$, $p < 0.001$, 95%CI [0.09, 0.21]. As expected, non-cash rewards such as flexible work options, $B=0.29$, $SE=0.11$, $p = 0.009$, 95%CI [0.07, 0.50], travel assistance, $B=0.71$, $SE=0.13$, $p < 0.001$, 95%CI [0.46, 0.96], paid leave benefits, $B=0.48$, $SE=0.15$, $p = 0.001$, 95%CI [0.19, 0.77] and on-site social benefits, $B=0.26$, $SE=0.13$, $p = 0.047$, 95%CI [0.003, 0.52] had a significant positive impact on the employee's job satisfaction rating, with each of these coefficients larger than that of receiving higher than the median annual salary.

Receiving compensation, such as performance bonuses, $B=-0.14$, $SE=0.13$, $p = 0.300$, 95%CI [-0.40, 0.12], expense coverage such as employee discounts, $B=-0.03$, $SE=0.13$, $p = 0.813$, 95%CI [-0.28, 0.22], insurance coverage, $B=-0.08$, $SE=0.18$, $p = 0.674$, 95%CI [-0.44, 0.28], paid time-off, $B=-0.04$, $SE=0.12$, $p = 0.737$, 95%CI [-0.28, 0.20], and training opportunities, $B=-0.21$, $SE=0.16$, $p = 0.186$, 95%CI [-0.51, 0.10], did not predict job satisfaction.

Results Study 1b.

Building on these results, we tested whether consumers underestimate the importance of non-cash rewards ($N=402$). Consistent with this idea, consumers perceived non-cash rewards such as flexible work time and on-site social benefits ($M=3.40$, $SD=0.67$) as less important for job satisfaction than receiving an additional \$60K salary ($M=4.24$, $SD=1.00$), $t(401)=16.03$, $p<0.001$, $d=0.99$. The three benefits that consumers most frequently believed would predict greater job satisfaction were financial benefits such as insurance (61.2%), receiving an additional \$60K salary (58.2%), and retirement plans (43.8%). Non-financial benefits such as flexible work options (30.3%), travel assistance (3.0%), paid leave benefits (21.9%) and on-site social benefits (6.0%) were chosen much less frequently.

Studies 2a-4b

Across studies, online participants viewed two hypothetical contracts and choose the job that they preferred. In our first study (Study 2a), in the control condition, consumers were more likely to choose the job with \$100,000 of salary and 14 days of paid time-off (62.40%)

compared to the job with \$90,000 of salary and 21 paid days off (37.60%), $p < 0.05$. In the monetized-benefits condition, an equivalent number of consumers chose the job with \$100,000 of salary and 14 paid days off (50.80%) and the job with \$90,000 of salary and 21 paid days off (49.20%), *ns*. We replicated these studies in the lab using a within-subject experiment with actual job choices (Study 2b; $n = 102$) and using different versions of the contracts (Study 2c-3). Monetization only shaped preferences when the contracts offered high (vs. low) salaries.

We then tested how monetization shifted consumers' perceptions of the organization (Study 4a&b). Meta-analyzing the results of Study 4a&b ($N = 1,004$), when consumers viewed the contracts with monetized benefits, they rated the companies as having greater work life balance, $d = 0.20$, $Z = 3.22$, $p < 0.001$, 95% CI [0.08, 0.33] and caring more about their constituents, $d = 0.22$, $Z = 3.47$, $p < 0.001$, 95% [0.09, 0.34]. This was only true for high (vs. low) income jobs.

Discussion

Our studies complement each other in terms of study design, participant populations, manipulations, and measures. We use a large-scale industry survey, measure, and manipulate the presentation of incentives, and provide causal evidence for our core hypotheses using experiments that examine both hypothetical and actual employment decisions.

Losing Weight but not Feeling Like Yourself? A Transformation Mindset Facilitates Consumer Authenticity

EXTENDED ABSTRACT

Goal pursuit is a long process consisting of multiple phases. Consider the goal of completing a marathon: One has to set a goal, train, and then move from the beginning stage to the halfway point to the advanced stage, to eventually reach the finish line.

Research on motivation and goal pursuit has devoted a lot of attention to examining the determinants and processes underlying the planning, deliberation, initiation, and completion of goals (e.g., Gollwitzer et al. 1990; Locke & Latham 2002; Huang & Zhang 2011; Koo & Fishbach 2008; Scheier & Carver 1998). In contrast to rich findings on the psychologies of consumers before and during goal pursuits, little attention has been paid to what happens *after* a goal is achieved. In this research, we explore how the different ways in which consumers categorize their post-attainment selves after an achieved goal affects their feelings of authenticity and subsequent behaviors.

We posit that there are three possible frames of self-categorization following goal attainment. First, one can focus on their *past-self category* and think of this experience as successfully *moving away* from their past self; second, one can focus on their *new-self category* and think of this experience as successfully *acquiring* the new self; third, one can categorize their post-attainment self as a *fusion of the past and new categories* and think of this experience as a *progression/transformation* from the past self to the new self. While previous research has shown that people who have made a positive change tend to think of their past selves as "different people" (Libby & Eibach 2002) in order to maintain consistency with their new self (e.g., Baumeister 1998; Swann 1985), we argue that by underscoring the continuation/progression from the past self to the new self, consumers can create a more coherent identity post a goal's attainment, hence feeling more authentic about who they are today.

In study 1, we invited participants from an online panel to apply to a fitness challenge by submitting a measurable fitness goal to attain in four weeks. 937 participants enrolled and 193 participants attained their goal at the end of four weeks, constituting our final sample. We

randomly assigned these participants into one of three identity frames. Participants in the "*acquiring new-self*" condition reflected on "the ways in which you may be a new person since attaining your four-week goal," participants in the "*distancing from old-self*" condition reflected on "the ways in which you may no longer be the person you were when you first started pursuing your four-week goal," and participants in the "*transformed-self*" condition reflected on "the ways in which you have changed as a person from when you started four weeks ago to now that you have finished the four weeks." After, participants indicated how authentic this aspect of their identity felt on eight items (e.g., "this doesn't truly represent who I am"). Participants who reflected on their goal attainment as a transformation perceived their post-attainment self to be more authentic ($M = 6.12$) compared to participants who wrote about acquiring a new self or leaving an old self behind ($M_{new} = 5.88$, $M_{old} = 5.56$, $p = .010$).

Study 1 provides evidence that after achieving a fitness goal, people feel the most authentic when they think about themselves as a transformed person that includes both their past and new selves. To examine the generalizability of our findings to more long-term goals, in study 2, we recruited participants who had achieved a significant weight loss goal in the past 6 months ($N = 322$, $M_{weight\ loss} = 27.5$ pounds). As before, participants reflected on their attainment as acquiring a new self, distancing from an old self, or transforming from the old self to the new self, and then indicated how authentic they felt. We again found that participants in the *transformed-self* condition perceived their post-attainment self to be more authentic ($M = 6.09$) compared to the other two conditions ($M_{new} = 5.94$, $M_{old} = 5.79$, $p = .086$). Additional six studies showed that the transformation frame led to significantly lower fragility about the post-attainment self (i.e., the opposite construct of authenticity) compared to the other two frames, further triangulating the robustness of the core effect, $p = .009$.

We next tested the consequences of feeling more authentic about one's new fit self. In study 3, we examined how the increased authenticity engendered by the transformation frame affects information sharing. We recruited participants who attained a weight loss goal in the last 6 months ($N = 297$), administered the same identity manipulation, and measured perceived authenticity. Participants were then given the opportunity to share about their weight loss experience on a website ostensibly aiming to reduce obesity and increase fitness. Replicating past studies, participants in the transformation condition reported higher authenticity ($M = 5.98$) than the other two conditions ($M_{new} = 5.71$, $M_{old} = 5.61$, $p = .011$). Furthermore, we found an indirect effect of identity frames on information sharing (95% CIs: [.12, 4.12]); the transformation condition increased authenticity, which led to more words shared on the website ($p < .001$).

Lastly, in study 4, we examined how increased authenticity engendered by the transformation frame affects goal maintenance motivation. We recruited 173 students from a West Coast university who had just completed a semester-long fitness course (e.g., yoga). We asked them to reflect on who they are now that they have completed the fitness course, administered the same manipulation as before, and measured perceived authenticity. Afterwards, we captured these students' goal maintenance motivation by asking their interest in participating in another fitness course involving the same activities as the course they just completed. As before, participants in the transformation condition reported higher authenticity ($M = 6.13$) than the other two conditions ($M_{new} = 5.89$, $M_{old} = 5.67$, $p = .045$). Furthermore, we found an indirect effect of identity frames on goal maintenance motivation (95% CIs: [.01, .21]); the transformation condition increased authenticity, which led to greater interest in participating in similar fitness courses next semester ($p < .001$).

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Leveraging Unstructured Data for Consumer Insights: Novel Perspectives on Text, Image, and Video Analytics

Chair: Dr. Christian Hildebrand, University of St.Gallen, Switzerland

Paper #1: Should You Really be Creative on Social Media? A Machine Learning Approach to Examine Originality of Video Content from TikTok

Marc Bravin, University of Lucerne, Switzerland
Melanie Clegg, University of Lucerne, Switzerland
Reto Hofstetter, University of Lucerne, Switzerland
Marc Pouly, University of Applied Sciences Lucerne, Switzerland
Jonah A. Berger, The Wharton School, USA

Paper #2: “Love the Shape, But Hate the Weight”: Leveraging Word Embeddings To Identify Product Innovation Opportunities

Francesc Busquet, University of St. Gallen, Switzerland
Anouk Bergner, University of St. Gallen, Switzerland
Christian Hildebrand, University of St. Gallen, Switzerland

Paper #3: Quantifying Imitation in Crowdsourcing: A Contrastive Learning Approach

Reto Hofstetter, University of Lucerne, Switzerland
Harikesh Nair, Stanford University, USA
Sanjog Misra, University of Chicago, USA

Paper #4: Following the rules of AI: A Justice Perspective

Claire Linares, HEC Paris, France
Anne-Laure Sellier, HEC Paris, France
Ran R. Hassin, Hebrew University of Jerusalem, Israel

SESSION OVERVIEW

The objective of this special session is to present recent methodological advances on the processing, use, and novel insights from unstructured data in consumer research. This special session contributes specifically to this year’s conference by showcasing research that uniquely leverages unexplored forms of unstructured data, from image and video data to extracting features from unstructured text. The papers in this session span multiple methodological and substantive fields of research, from recent advancements in natural language processing, vectorized text representations to advanced computational models in computer vision and face perception. We hope that this session ultimately inspires more interdisciplinary research to leverage the methodological advancements outside the field of marketing and consumer research to provide novel and nuanced insights on consumers, brands, and markets.

The first paper, “*Should You Really Be Creative on Social Media? A Machine Learning Approach to Examine Originality of Video Content from TikTok*” provides a novel look at the analysis and feature extraction from video data to predict the originality and popularity of user-generated video content on TikTok. Contrary to common belief, greater originality not necessarily translates into greater popularity.

The second paper, “*Love the Shape, but Hate the Weight: Leveraging Word Embeddings to Identify Product Innovation Opportunities*” employs vectorized text analytics models (word2vec) to deepen our understanding of consumer experiences from unstructured consumer reviews by isolating single product features consumers implicitly talk about and their associated sentiment of these product attributes and features.

The third paper, “*Quantifying Imitation in Crowdsourcing: A Contrastive Learning Approach*” provides a novel methodological approach to quantify imitation behavior on public design crowdsourcing

platforms. The paper also provides substantive insight that copying others’ creations harms the person copying the original idea as managers penalize clustered ideas in crowdsourcing contests.

The fourth paper in the session, “*Reverse Correlation: A Promising Tool for Uncovering Facial Stereotypes in Consumer Psychology*”, introduces a method from face-perception research to consumer behavior and demonstrates the existence of brand–user facial stereotypes, i.e. that consumers possess a shared mental representation of the typical face of a brand’s user (e.g., the face of the BMW driver). This method provides a promising tool for marketing research more broadly.

Together, these four papers shed light on leveraging new forms of data as well as analytical methods to understand consumers, brands, and entire markets. We believe that this special session will attract consumer researchers with an interest in consumer-technology interactions, word-of-mouth, human-computer interaction, to more focused research areas such as product and brand management. Contributing to the conference theme, “Together”, this session provides different theoretical perspectives and methodological approaches to answer both theoretically and managerially important questions. The special session will conclude with an outline of future research for consumer researchers interested in this quickly developing field and to share implementation details on how to get started.

Should You Really be Creative on Social Media? A Machine Learning Approach to Examine Originality of Video Content from TikTok

EXTENDED ABSTRACT

It is often suggested that originality should boost success on social media. Particularly in online contexts, people like to talk about and share novel information as it is considered more surprising, entertaining, and useful (Berger, 2014; Berger & Iyengar, 2013; Berger & Milkman, 2012). Since creative and original things appeal to our natural curiosity (Silvia, 2008), it is widely assumed that originality is valuable in social and business contexts (Hofstetter, Dahl, Aryobsei, & Herrmann, 2021).

But is that actually true? Psychological theories suggest that a lack of originality may actually increase the liking of stimuli in our environment. For instance, seeing the same stimulus several times improves our attitudes toward this stimulus—a mere exposure effect (Zajonc, 1968). In contrast, there is a strong bias against high novelty because it does not meet our expectations and challenges our existing cognitive patterns (Eideman, Crandall, & Pattershall, 2009; Toubia & Netzer, 2017). Indeed, on social media platforms, it is frequently content with a surprising lack of originality that goes viral, as evidenced by the millions of trending TikTok videos featuring the same dancing and lip sync screenplay (e.g., one million for the song “savage love”, Anifto 2020).

Accordingly, we suggest that high originality is not advantageous for social media content. We argue, using fluency theory, that repeated exposure to imitating video content increases the ease with which these videos can be processed, which is a known pleasurable experience (Reber, Schwarz, and Winkielman 2004; Winkielman & Caccioppo 2001). This positive experience should then result in more likes for imitating instead of original content. However, excessive fluency (i.e., after numerous repetitions of the same choreography) can make content bor-

ing and uninteresting (Labroo & Pochetsova 2016), and users become more tolerant of deviations the more a video becomes associated with a trend (Loewenstein & Heath 2009). Accordingly, original videos that are posted later in a trend should be perceived less negatively.

To test these hypotheses, we identify and analyze the downstream effects of two distinct types of originality in TikTok videos: visual and choreography originality. We estimate both measures and incorporate them into statistical models for hypothesis testing using machine learning.

The basis for our analyses is a dataset of 492,914 videos from TikTok, which includes descriptive video information (e.g., hashtags and music played) and content-related statistics (e.g., number of views, likes, and comments).

Our machine learning approach begins with the extraction of meaningful video embeddings. To do so, we apply a self-supervised contrastive learning model inspired by Qian et al. (2020). This allows the extraction of semantic video embeddings for unlabeled datasets. The model is a 3D convolutional neural network trained by simultaneously maximizing the similarity between transformed views of the same video and minimizing the similarity between transformed views of different videos.

Next, we restricted our sample to videos that followed a popular trend to test our hypotheses. A trend on TikTok is defined as dancing videos that share the same music title. To identify these videos, we use the learned video embeddings to train a classifier that can distinguish dancing videos from others. We only keep videos that follow a music title shared by at least 10 videos (i.e., a popular trend). This results in a dataset of 32,689 dance videos from 1,021 different trends.

To estimate the visual originality of a video, we apply the local outlier factor (LOF) algorithm (Breunig, Kriegel, Ng, & Sander, 2000), which computes the local density deviation of a given video embedding with respect to its k neighbors. Less original videos are more likely to end up in a cluster with high density and thus have a lower LOF. To measure the degree of choreography originality, we leverage the pose estimation algorithm from Cao et al. (2018), where we predict 18 key points of all protagonists in each video frame, resulting in a time series of coordinates. We focus on velocity, acceleration, and level of asymmetry, as these are relevant indicators for dance movement perceptions (McCarty et al. 2017). Finally, to estimate the choreography originality, we compute the average Euclidean distance for each video to all videos from the same trend.

We then use these originality measures in five statistical models that vary in terms of the included control variables to explain video liking. In our first model, we control for music fixed effects and find a significant negative effect of both visual and choreography originality on the number of likes. However, there may be several confounds for our effects, for which we control in models 2-5. Model 2 controls for visual and dance quality. We estimate the visual quality using a pre-trained visual quality assessment model (Li et al., 2021) and the choreography quality by training a random forest model on 500 manually labeled videos. Models 3 and 4 control for user-fixed effects and additional video-specific characteristics (duration, days online, and adoption time). Importantly, the negative effects for both originality measures persist across models. Finally, model 5 includes the interaction term of the choreography originality and the video's submission time to test the attenuation effect of later adoption times. In line with our conceptualization, we find a significant interaction between adoption time and originality, showing that the harmful influence of originality is dampened for later adopters.

Overall, our data suggest that more original videos receive fewer likes. The fact that the effect is reduced for later adopters supports a

fluency explanation: the more videos of a trend are produced, the more tolerant we become for disfluency.

These findings are in contrast to prior research promoting the high value of originality of user-generated content (Berger & Milkman, 2012; Hofstetter et al., 2020) and suggest a potential negative mechanism mediated by increased disfluency when viewing highly original content. Our research contributes to the literature on consumer behavior on social media and advises managers to not overestimate the value of highly original content. Methodologically, we contribute to consumer research by developing a self-supervised learning approach that allows systematic investigations of video-based social media content by quantifying its originality.

“Love the Shape, But Hate the Weight”: Leveraging Word Embeddings To Identify Product Innovation Opportunities

EXTENDED ABSTRACT

The proliferation of user-generated content has triggered an explosive growth in unstructured data formats such as consumer product reviews, offering one of the most accessible and abundant sources of information to firms. Coupled with recent technological advances in natural language processing these review postings provide opportunities for marketing managers to gather market intelligence in the form of consumer opinions and competitive information. One of the most prevalent methods to determine consumer sentiment on a given topic are traditional forms of sentiment analysis (Karlgrén et al. 2012). Sentiment Analysis (SA), also known as opinion mining, is the computational study of people's opinions, sentiments, emotions, moods, and attitudes (Liu 2020). However, the majority of prior work refers to it as a narrower task: the study of people's opinions reflective of one's expressed affective states in unstructured text. Sentiment can be extracted through two main approaches: through a lexicon-based approach, which uses a dictionary of sentiment words, in which each word has a sentiment value assigned to it or through a machine learning-based approach in which a model is used to assess the sentiment of a text, resulting in a contextual polarity score for a review text. SA is usually applied at the document or the sentence level, obtaining a sentiment score for the document or a sentiment score for the sentence respectively.

However, document or sentence SA provide very little insight into the underlying factors influencing the review sentiment, thus limiting its applicability to future marketing and product innovation decisions.

Recently, researchers have started investigating more granular forms of sentiment analysis aimed at increasing interpretability by including additional factors to qualify the syntax of the reviews (e.g., readability) or by conducting more fine-grained sentiment analysis on sub-sentences or aspects within the review text (Thet, Na, and Khoo 2010). Consider for example the following review text: “Phone battery and fingerprint reader are great, the problem I have with this phone is how slow it is. The phone's touch screen is horrible”. In this exemplary review, some product aspects are positively evaluated by the consumer while other aspects are negatively evaluated. Yet, traditional sentiment analysis would score the overall sentiment for this text as neutral, thus providing very little insight on how consumers evaluate specific product features.

The current work provides a novel methodological approach to conduct aspect-based sentiment analysis to identify the sentiment linked to different product features mentioned in a text. We leverage traditional text analysis along with word embeddings and prior knowledge to identify the most representative product features and introduce a reusable Python script to easily conduct this analysis. To illustrate our approach, we scraped 1,147 consumer reviews on the Samsung Galaxy A10s from a major online review site (amazon.com). Leveraging LDA

topic modeling coupled with previous knowledge about smartphones, we identified ten relevant aspects of the phone (e.g., software, shape, price, battery life). Next, we extract all nouns from the review text using part-of-speech tagging and determine which nouns in the review texts relate to each of the ten aspects. We do this by converting words and aspects into vector representations and then calculating the cosine similarity between them. To assign a sentiment score to each noun we separate text sentences and compute the sentiment for each sentence in which one of those relevant nouns is found, taking adjectives as sentiment indicators and adverbs as multipliers. Finally, we aggregate the sentiment for each noun belonging to a specific aspect, thus allowing us to calculate a sentiment score for each product aspect. Such an aspect-based sentiment analysis provides a much deeper insight into consumers' likes and dislikes of a specific product. A one-way ANOVA revealed significant differences on sentiment between the different features ($F(9, 151) = 4.69, p < .001$). Follow-up contrasts with Tukey correction revealed that weight had a significantly lower sentiment than any other feature, except connectivity ($M_{\text{Design}} = 0.63, M_{\text{Buttons}} = -0.33, M_{\text{Size}} = 0.14, M_{\text{Weight}} = -1.00, M_{\text{Shape}} = 0.79, M_{\text{Color}} = 0.56, M_{\text{Battery}} = 0.63, M_{\text{Connectivity}} = 0.14, M_{\text{Price}} = 0.67, M_{\text{Software}} = 1.00$; Battery – Weight: $t = 5.17, p < .001$; Color – Weight: $t = 4.02, p < 0.01$; Design – Weight: $t = 3.26, p < 0.05$; Price – Weight: $t = 5.95, p < 0.001$; Connectivity – Weight: $t = 3.13, p = 0.06$; Size – Weight: $t = 3.3, p < 0.05$).

Unlike traditional text-processing and sentiment analyses, the proposed, vectorized text-analytics and multi-method approach provides far-reaching practical applications for marketing managers and product developers, opening up new opportunities to leverage unstructured, user-generated text to gain insight on feature-level product performance and identify unmet consumer needs.

Quantifying Imitation in Crowdsourcing: A Contrastive Learning Approach

EXTENDED ABSTRACT

Firms are increasingly engaging consumers via open innovation and crowdsourcing challenges. Consumers entering such initiatives often face a tension between being original and copying other people's high-quality ideas that have already been shared and are visible to all participants. Although being original is typically seen as desirable, consumers may believe that simply copying others' high-quality ideas is the better strategy to win a prize in such competitions. In this research, we investigate consumers' imitation behavior and if copycatting can really increase winning chances.

Literature on crowdsourcing and innovation has not yet looked into the role of imitation in such challenges. Past research has investigated, for example, how incentives should be designed (Terwiesch and Xu 2008), how receiving prizes or feedback influences consumers (Bayus 2013; Piezunka and Dahlander 2019), or how competition affects crowdsourcing (Gross 2020). Most related to our research is the finding that seeing ideas of others influences creativity (Hofstetter et al. 2021) and research on idea clusters, showing that ideation contests tend to yield groups of similar ideas (Kornish and Ulrich 2011). We extend this literature by 1) showing that such idea clustering is exacerbated by consumers imitating other's designs, yet, 2) imitation does reduce instead of increase winning chances, as 3) managers tend to perceive clustered ideas as less original.

According to contest theory, consumers face uncertainty about the firms' preferences in crowdsourcing contests and imitation can be a means to reduce this uncertainty (Terwiesch and Xu 2008). By imitating other's promising designs (i.e., designs with high ratings), you may increase the perceived preference match between your creation and the firm and in turn increase the likelihood of your design being

chosen as a winner. Therefore, the more you imitate other successful designs the more successful you may become yourself. Managers, too, face uncertainty about how to evaluate ideas as their future success is not clear (Kornish and Ulrich 2011) and may be influenced by how ideas are presented. They typically evaluate each individual idea in the context of a portfolio of all submitted ideas. Seeing many similar versions of the same idea in this portfolio will likely reduce the perceived originality of those ideas. In contrast, ideas that are less clustered may be perceived as more original, increasing their ratings and chances to be picked as winners.

We investigate these predictions using data from over 6,000 crowdsourced public design contests with information from 400,000 design image files. To quantify imitation, we use contrastive learning to train a deep convolutional neural network (Chen et al. 2020). We do not rely on existing networks that are typically trained on labeled images from ImageNet, which consists of typical image categories such as animals, foods, or cars. The feature representations they learn might not be ideal when applied to a different image domain, such as our design data. For this reason, we also evaluate contrastive learning as a powerful unsupervised approach trained purely on our own design data. In contrastive learning, multiple version of an image i are created that are then compared both among themselves and also to multiple augmentations of another image j . The idea is that the augmentations of the same image i should be more similar to each other than to augmentations of another design j . We trained the network on the whole dataset, with 90% for training and 10% for validation. We then use the image embeddings to calculate the cosine similarity between 8,000 unseen image pairs that have already been evaluated by humans. Indeed, our approach performs better compared to alternative pre-trained models and approaches by past research (including PHASH, Google Inception V3, MobilnetV1). Out of the different approaches, we find contrastive learning to be most strongly correlated with the human ratings ($r = .44$). Perceptual hashing PHASH is the least correlated approach with $r = .19$. Our approach represents a 132% improvement over the existing approach used in the crowdsourcing literature, PHASH, and a 16% improvement over the best pre-trained model, MobilnetV1. Therefore, we use this model for all similarity analyses for which it was not feasible to collect ratings from humans directly due to the sheer number of required comparisons (our analyses required millions of image comparisons).

We first use these data and the similarity metric to test if consumers systematically imitate each other. We perform a "difference-in-similarity" regression analysis and find that later designs are significantly more similar to a previous design of a different designer, if this design received a higher rating from the manager. We corroborate this result in a field experiment that shows that designs that randomly received a five star (vs. one star or no rating) are significantly more imitated on.

Secondly, we investigate how managers react when they detect imitating in designs. We first eyeball model-free evidence from the secondary data. The data shows that imitation is negatively correlated with ratings received from the firm suggesting that imitation harms instead of helps designers in these contests. Next, we explicitly manipulate the degree of imitation in a field experiment by randomly submitting an two designs A and B followed by either a design A' or B' to over 200 contests. We hired professional designers who created two separated designs A and B for each of these contests. For each of these designs, they also created highly similar versions A' and B'. We then submitted A and B to the contest followed by one additional design, either A' or B' randomly chosen. We find that managers rated the original design that was submitted only once significantly better than the design that was submitted twice. Finally, a follow-up online experiment

and mediation analysis revealed that managers rated clustered designs lower because they perceive them as less original.

These findings confirm that imitation is common in crowdsourcing and that it has an impact on idea evaluation. Evaluators of submitted design should take imitation into account. In order to limit the possibility of idea clustering, they may also want to avoid encouraging imitation by providing high ratings early in contests.

Reverse Correlation: A Promising Tool for Uncovering Facial Stereotypes in Consumer Psychology

EXTENDED ABSTRACT

This work introduces a new technique to consumer behavior originating from face-perception research—reverse correlation—which we find allows to visualize brand–user facial stereotypes (Dotsch and Todorov 2012; Dotsch, Wigboldus, Langner, and van Knippenberg 2008; Mangini and Biederman 2004). We used this technique in three preregistered studies to show for the first time that brand–user facial stereotypes exist, which means that consumers can have a shared mental representation of the face of a typical brand user. We reveal mugshots for the BMW and the Mercedes-Benz male drivers in Germany. By doing so, we demonstrate empirically, for the first time, that reverse correlation is sensitive enough to produce visualizations of specific brand-related stereotypes, beyond the more general stereotypes shown with this method in past psychology research (e.g., ethnic stereotypes, a trustworthy face; Dotsch and Todorov 2012; Dotsch et al. 2008). The technique appears a promising marketing research tool, as it is a unique combination of quantitative, exploratory, and multidimensional characteristics that complements existing methods examining brand associations, such as focus groups, brand mappings, surveys, mining of user-generated content, and Implicit Association Tests (John, Loken, Kim, and Basu Monga 2006; Karpinski and Hilton 2001; Liu, Dzyabura, and Mizik 2020). Practitioners may use it to visualize the facial stereotypes of their brand user. This tool also presents critical ethical implications. It can serve consumer research more generally, by measuring a dependent variable about differences in broader mental associations (e.g., warmth or trust associations). We are currently conducting research to extend the validity of reverse correlation to other marketing and management contexts.

Overview of Reverse Correlation

Face-perception researchers have used the reverse correlation technique to document relatively clearly shared stereotypes, such as the facial mental representations of different social categories as a function of ingroup/outgroup biases (Dotsch and Todorov 2012; Dotsch et al. 2008; Mangini and Biederman 2004). To illustrate, Dotsch et al. (2008) found that highly prejudiced people had a less trustworthy representation of a Moroccan face than did moderately and low-level prejudiced people.

Practically, the reverse correlation method has two steps. First, pairs of artificial faces are created by adding random noise to a base face image (e.g., an average male face). The random noise patterns, which are composed of grayscale pixels, make the faces in each pair look like different people. Then, a sample of participants is presented with hundreds of these artificial pairs. For each pair, participants pick the face that most closely looks like the social category that researchers are interested in capturing (e.g., the faces that look more trustworthy; Dotsch and Todorov 2012). Once participants have finished, the random noises of the selected faces are averaged, before the resulting noise is again superimposed on the base image to obtain a classification image. This classification image represents their average mental representation of the focal social category (e.g., the stereotypical trustworthy face).

In the second step, an independent sample evaluates the classification image (e.g., how trustworthy it looks, Dotsch and Todorov 2012). This step also confirms that the mental representation obtained in the first step of the procedure is shared.

Studies

Our goal was to examine whether reverse correlation can be used in consumer research to reveal brand–user facial stereotypes (e.g., the face of a BMW driver). Past marketing research has shown that consumers have representations of the users of given brands, for instance the age, profession, or general physical characteristics of these users (e.g., attractiveness; Aaker 1997; Belk 1978; Belk, Bahn, and Mayer 1982). Beyond these abstract and diffuse stereotypes, we investigated whether physical stereotypes of brand users exist at the more specific level of the face.

In Study 1, we first generated 300 pairs of artificial faces (Dotsch et al. 2008; Lundqvist and Litton 1998). Then, a sample of German participants chose for each pair the one they thought belonged to a BMW driver. Next, we averaged their selected faces and superimposed the average noise onto the base image to create an average mugshot of their mental representation of a BMW driver. A second independent sample “recognized” above chance the mugshot as that of a BMW driver rather than that of another premium car brand driver with a similar market share, Mercedes-Benz. The accuracy rate was 68.57% ($SE = 3.19\%$; versus 50%, $t(132) = 5.82$, $p < .001$, $d = .37$), providing initial evidence for the existence of shared brand–user facial stereotypes.

In Study 2, we aimed to control for any intrinsic differences between the brands that might have driven the effect in Study 1. The design of Study 2 was similar to that of Study 1 except that we composed one mugshot for BMW and one for Mercedes-Benz. In the first part, each participant was randomly assigned to one of the two brands. In the BMW group, participants categorized the artificial faces from Study 1 as belonging to someone who has been driving a BMW rather than a Mercedes-Benz for several years. We created the average mugshot of the BMW driver and did the same for Mercedes-Benz. In the second part, an independent sample matched the two mugshots with the corresponding brands with an accuracy significantly above chance at 71.42% ($SE = 2.39\%$; versus 50%, $t(270) = 8.98$, $p < .001$, $d = 0.55$).

Study 3 provided a conceptual replication of Study 2 Part 2, while further exploring the capabilities of reverse correlation for marketing research. Based on the data from Study 2 Part 1, we averaged the faces that participants did *not* select as the drivers of the brand they were assigned to. The resulting images are called anti-classification images and should evoke the opposite brands (Brown-Iannuzzi, Dotsch, Colley, and Payne 2017; Dotsch and Todorov 2012). As expected, the anti-classification image of the BMW driver was identified as a Mercedes-Benz driver, and conversely, above random level (67.52%, $SE = 2.59\%$; versus 50%, $t(249) = 6.76$, $p < .001$, $d = .41$).

We hope to see consumer researchers further investigate how reverse correlation can enhance our understanding of consumer judgment and decision-making.

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Political Ideology and Consumption

Chairs: Pureum Kim, University of Arizona, USA
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Paper #1: Small Donors Political Slacktivism: Buying Political Merchandise Decreases the Likelihood of Other Political Behavior

Pureum Kim, University of Arizona, USA
Gustavo Schneider, Salisbury University, USA
Anastasiya Pocheptsova Ghosh, University of Arizona, USA

Paper #2: Political Ideology and Consumer Activism

Serkan Saka, University of Illinois-Chicago, USA
Adam Duhachek, University of Illinois-Chicago, USA

Paper #3: Political Ideology and Negotiation: Does Political Ideology Affect Negotiation?

Archer Pan, Cornell University, USA
Manoj Thomas, Cornell University, USA

Paper #4: New for the Sake of Status: Political Ideology and Really New Products

Erick Mas, Indiana University-Bloomington, USA
Jesper Nielsen, University of Arizona, USA
Steve Hoeffler, Vanderbilt University, USA

SESSION OVERVIEW

In the recent decade, politics and consumption have become more intertwined. Consumers use their purchase power to influence companies and political campaigns by deliberately purchasing from the entities that align with their political values. Further, politics exerts a more subtle influence on non-political consumption preferences, such as preference between products and willingness to pay based on one's political ideology. Such politically driven consumption behaviors have substantial financial implications and are often amplified through consumers encouraging others to engage in similar behaviors on social media. For instance, liberal consumers boycotted Goya Food after its CEO publicly endorsed Trump. To counteract, conservative consumers called for a boycott of Goya products and boosted the company's sales up to 80% (Kosman 2021). Further, Trump's "Maga" hats sales generated 45 million in revenue in 2016, providing substantial financial support to propel his political campaign (Brennan 2019).

Despite the prevalence of such phenomenon, our understanding of the drivers of political consumption behaviors and consequences of evoking political ideology in marketing campaigns to increase sales is limited. The current session brings together papers that explore different sides of the politics and consumption intersection and provide novel insights into our understanding of the role of politics and political ideology in consumer decision making.

The first two papers of the session explore the factors that drive political consumption behaviors. First, Kim, Schneider, and Ghosh examine how political consumption affects subsequent more substantive political behavior, such as voting. The authors show that when consumers purchase political merchandise (as opposed to making a monetary donation), they are less likely to volunteer, advocate or vote for their preferred party/candidate in the future. Next, Saka and Duhachek investigate political purchase activism, such as boycotts, and critically examine three dimensions of boycotting behaviors: behavioral, social, and emotional. They find that liberals are more likely to participate in a boycott, critique on social media, and express negatively toward a company for its transgressions compared to conservatives.

The next two papers explore the consequences of political ideology on consumption choices. First, Pan and Thomas demonstrate the relationship between political ideology and propensity to negoti-

ate prices when purchasing a product. They find that conservatives' heightened sensitivity to cues of competitive social interactions increases their willingness to negotiate as compared to liberals. Next, Mas, Nielsen, and Hoeffler explore the relationship between political ideology and the consumption of really new products (RNPs). They show that because conservatives want to display their superior status, they are more likely than liberals to purchase RNPs.

Together, the four papers in this special session extend our knowledge of the drivers of political consumption behaviors and the effect of political ideology on consumption choices. The session provides important insights for consumer behavior researchers who are interested in understanding and developing strategies to harness the political purchasing power of consumers.

Small Donors Political Slacktivism: Buying Political Merchandise Decreases the Likelihood of Other Political Behavior

EXTENDED ABSTRACT

Small donor contributions, contributions of individual citizens of less than \$200, have surged in popularity in the past decade, becoming an important part of the political process in the US (Scherer 2019). As a result, small donors are actively courted by political marketing campaigns (Yarvin 2019). Further, small donations decide who is on the stage at debates in the early cycle of the campaign (Overby 2017) and at a later stage affect the candidate's ability to continue campaigning (Yarvin 2019). Despite the importance of this phenomenon, consumer behavior literature has not examined the drivers and consequences of political donations, particularly in the form of the purchase of political merchandise. We address this gap in the literature by examining how different contribution formats lead to consistency vs. licensing in subsequent political engagement (voting, advocating, and volunteering).

Monetary donation and political merchandise are both ways of signaling one's political identity and support to a political candidate, and small donors' choice to make such political contributions should affect subsequent political behavior. Previous research on the drivers of repeated identity-signaling behavior suggests opposing predictions. On the one hand, consumers have a strong drive toward consistency, particularly in the identity-relevant domains (Cialdini et al. 1995; Kessler and Milkman 2018). For instance, if a consumer makes an initial donation to charity, they are more likely to engage in prosocial behavior in the future. On the other hand, there is growing evidence that past prosocial acts can license consumers to do the opposite (Mullen and Monin 2016). One moderating factor identified by prior work is the observability of initial behavior, specifically its public (vs. private) nature. Engaging in a publicly observable act, such as wearing a pin supporting a charity, satisfies an individual's impression-management motives, decreasing people's motivation to engage in future behaviors (Kristofferson et al. 2014; Paler et al. 2018). Our paper argues that purchasing political merchandise is a highly observable way to express one identity (as opposed to monetary donation), leading to *political slacktivism - a lower likelihood to engage in subsequent political behavior*.

First, we investigated consumer lay beliefs about the relationship between merchandise purchase and other political behaviors. Participants (N = 101) read a scenario where they saw two people contributing to a political campaign by monetary donation (Person A)

or purchasing merchandise (Person B). They were asked to indicate whether Person A or B were more likely to advocate, volunteer, or go to future rallies for their favorite candidate. Participants believed Person B, who bought the merchandise, were more likely to advocate ($M = 4.80$; $t(100) = 5.67$, $p < .001$), volunteer ($M = 4.94$; $t(100) = 6.13$, $p < .001$), and go to future rallies ($M = 5.20$; $t(100) = 9.34$, $p < .001$). Thus, in contrast to our predictions, people believe that purchasing political merchandise leads to higher future political engagement. In the next two studies, we examine actual political behavior by small political donors.

Study 1. We analyzed archival data ($N = 50,000$) from the Cooperative Congressional Election Study (CCES) from three (2016, 2018, and 2020) election cycles (Ansolabehere and Shaffner 2017; Shaffner et al. 2019, 2021). The study included a question of whether participants made a monetary donation and whether they put up a political sign before the election. We used these questions as measures of monetary contribution and contribution via political merchandise, correspondingly. Further, the survey asked about voting in each election cycle, which we used as a measure of subsequent political behavior. Across all three election years, controlling for ideology, gender, and age, both ‘money donation’ and ‘putting up a sign’ were positively related to voting. This is consistent with past studies that the identity signaling act would lead to future consistent behavior. Importantly, the effect of merchandise purchase on self-reported voting was significantly smaller compared to the effect of monetary donation (coefficient z -test, Paternoster et al., 1998; 2016: 3.50, $p < .001$; 2018: 2.37, $p = .009$; 2020: 6.09, $p < .001$), indicating evidence of predicted *political slacktivism* effect.

Study 2. We conducted a longitudinal survey in three waves during the 2020 U.S. Presidential Election (August-October). The setup of the study allowed us to (a) examine the effect of different types of political merchandise on subsequent political behavior, (b) test for the moderating role of the monetary cost of contribution (amount donated or price of merchandise). The cost of past political action encourages continued political participation as it is a strong signal of one’s identity as a politically engaged person (Gneezy et al. 2012).

We recruited U.S. residents ($N = 265$) who were eligible to vote and had contributed at least once to one of the top two presidential candidates to complete three surveys, which were spaced out one month apart. In the survey, participants indicated their preferred presidential candidate and answered questions about the contribution amount, contribution format, and the date of their last contribution, in addition to questions about advocating, volunteering, and voting for their candidate. Controlling for ideology, gender, and age, purchasing merchandise (vs. direct monetary donation) subsequently lowered the likelihood of engaging in other political behaviors: voting ($b = -4.71$, $p = .039$), advocating online ($b = -1.92$, $p = .008$), and volunteering for their candidate ($b = -2.56$, $p = .008$), consistent with *political slacktivism*. Further, we found an attenuation of slacktivism effect: participants who spent more money by purchasing merchandise were more likely to engage in other political behaviors than those who spent less money purchasing merchandise (voting $b = .64$, $p = .089$; advocating $b = .64$, $p = .002$; and volunteering $b = .24$, $p < .001$).

Our results show that consumers hold a lay belief that a public show of support by purchasing merchandise leads to more future political engagement. However, analysis of the behavior of real donors suggests the opposite: when people contribute to a candidate by purchasing political merchandise (vs. direct monetary donation), they are less likely to commit to future political behaviors. The current findings help political marketers and campaign managers to better understand how donors’ political behaviors are influenced by the contribution format and the amount.

Political Ideology and Consumer Activism

EXTENDED ABSTRACT

Consumers’ attitudes and purchase behavior towards corporations taking stances on (geo)political endeavors have intensified in the past several years. Concomitantly, the number of corporations taking political stances has also increased in recent years. 60% of U.S. adults pay attention to ethical and political matters related to companies they purchase from and almost one in four have supported a company because of a political stance (Morning Consult 2021). Consumers are increasingly sharing information on corporations that don’t live up to society’s standards and calling on other consumers to boycott. While boycotting remains a predominate way for consumers to show their disdain, there remains other outcomes that have strong implications for managers and researchers. We examine a variety of consumer boycotting behaviors previously unexamined in the literature to develop a more rounded view of boycotting based on an activism perspective.

In this research, we aim to first understand consumer activism by demonstrating support for three dimensions: behavior, social, and emotional. Prior research has mainly examined boycotting as the focal dependent variable (e.g. Sen, Gurhan-Canli, and Morwitz 2001; Klein, Smith, and John 2004) or related constructs such as consumer movements (Kozinets and Handelman 2004) or anti-consumption (Makri et al. 2020). For instance, Sen and co-authors found that consumers’ participation in boycotts is attributed to social influence, the boycott’s likelihood of success, and the costs incurred by boycotting. Other research has focused on predictor variables such as desire to make a difference, the scope for self-enhancement, counterarguments that inhibit boycotting, and the direct costs associated with boycotting (Klein 2004). However, no research to date has examined the full picture of consumer related outcomes that mimic the marketplace today. For example, we include other behavior market-based outcomes (e.g. purchasing a sticker that shows support for the boycott), social behaviors (e.g. posting on social media channels), and emotion measures (e.g. expressing anger towards the company online or to others). Since consumers can experience social benefits from boycotting such purchasing a sticker to validate a new identity (John 2003), a broader examination of activism behavior is warranted.

In addition, we provide support that political ideology predicts consumer activism such that those identified as Liberal are more likely to be Consumer Activists than those identified as Conservative (H1). Ideologies carry certain motivations to keep society at status-quo or progress society into a new direction. People who are drawn to conservative ideologies are hierarchical in nature and support the status quo while those drawn to liberal ideologies challenge institutions, promoting progressive social change and egalitarian ideals (Jost et al. 2008)fall, and resurgence of political ideology as a topic of research in social, personality, and political psychology. For over 200 years, political belief systems have been classified usefully according to a single left–right (or liberal–conservative). Support from Jung and colleagues (2017) work has shown that Liberals are more likely to buy and boycott for political reasons (Jost et al. 2017). However, this work relied on survey data and only considered a single boycotting variable. Similarly, other research provides evidence that both Liberals and Conservatives engage in consumer activism, but for different reasons based on their moral concerns (Fernandes 2020). The current research builds on these findings and examines boycotting in a broader lens. Moreover, we show that beliefs of economic inequality moderate political ideology’s influence on consumer activism such that higher beliefs of income inequality amplify Conservative’s likelihood to become activists but not Liberals (H2). Economic inequality is also associated with concerns of fairness (Hauser and Norton 2017; McCall

et al. 2017; Cojocaru 2014). Thus, we examine how perceptions of inequality motivate consumers to become activists in relation to their political orientation.

Study 1 shows that Liberals are more likely to be consumer activists than Conservatives. Participants from Prolific (N=394) were asked to imagine being in scenarios across different corporate transgressions (and across multiple industries) with consumer advocates calling for a boycott of these companies. Then, they were asked to rate the extent that they believe economic inequality exists. Participants then answered 11 questions that relate to Consumer Activism. The 11 questions from the scale were broken down into 3 composite variables and we analyzed their inter-reliability scores. One dimension that derived was behavior activism ($\alpha = .85$). These questions relate closer to consumer activism and actual participation (or withdrawal) of consumption. For instance, questions such as “How willing would you be to attend a protest in your neighborhood?” were included in this category. Another dimension was social activism ($\alpha = .83$). One question in this scale was “How willing would you be to post something on social media supporting the boycott?” The final dimension that we derived from the set was emotional activism ($\alpha = .87$). This dimension measured “To what extent is your motivation to punish the company?” Finally, participants were asked about their political ideology. Both ideology and economic inequality beliefs were mean-centered. Results from study 1 show support for H1, that Liberals are more likely to partake in behavior activism ($b = -.21, p < .001$), social activism ($b = -.25, p < .001$), and emotional activism ($b = -.29, p < .001$). In addition, an interaction between inequality and ideology significantly predicted behavior activism ($b = .05, p = .020$), social activism ($b = .07, p = .015$), and emotional activism ($b = .10, p < .001$). To put it into context, when Conservatives have perceptions that high economic inequality exist, they are more likely to participate in a boycott, post on social media, and express negative emotions.

Study 2 was designed similarly (N= 300) and replicated support for H1. Specifically, Liberals are more likely to partake in behavior activism ($b = -.25, p < .001$), social activism ($b = -.28, p < .001$), and emotional activism ($b = -.28, p < .001$). Study 2 also examined a different manipulation of social inequality and we did not find support for an economic inequality moderator (H2) in study 2.

Thus, across two studies, we show evidence that ideology influences consumers likelihood to become activists. Given that boycotts specifically are a mechanism for social control of business, they have public policy implications (Klein et al. 2004).

Political Ideology and Negotiation: Does Political Ideology Affect Negotiation?

EXTENDED ABSTRACT

Social science researchers are becoming increasingly mindful that political ideology is an important component of an individual’s psychological identity. People not only can identify their position on the conservative-liberal spectrum but also tend to hold it consistently over time (Pew Research Center 2021). Importantly, a burgeoning body of evidence in recent years suggests that political ideology can impact judgment and decisions beyond the political arena. It can shape economic decisions and marketplace transactions. Political ideology has been found to influence brand preference (Khan, Misra, and Singh 2013), product preference (Goenka and Thomas 2020; Ordabayeva and Fernandes 2018), and financial risk-taking (Han et al. 2019). In this research we extend this body of literature by addressing a novel research question: Do customers’ political ideologies influence their propensity to negotiate over prices?

Building on previous research showing that conservatives and liberals’ social and economic responses are shaped by different psychological underpinnings (for examples, see Duckitt et al. 2002; Graham, Haidt, and Nosek 2009; Jost and Thompson 2000), we explore whether political ideology impacts price negotiation propensity. Across four pre-registered lab studies (N = 3,410) and one archival study (N = 55,763), we find consistent evidence that political conservatism predicts stronger propensity to negotiate prices. This work sheds light on how and why a seemingly unrelated individual difference, political ideology, influences an everyday economic transaction.

Competitive Jungle Worldview. In study 1 (N= 611), we investigate whether political ideology predicts chronic price negotiation propensity and test potential underlying psychological mechanisms. Participants were asked to respond to scales measuring their chronic negotiation propensity, political ideology, competitive jungle worldview, economic system justification, and moral values. Controlling for gender, race, age, income, and education, we found that political ideology was a significant and positive predictor of negotiation propensity ($B = .22, SE = .04, t = 5.57, p < .001$). In a parallel mediation, we found that the competitive jungle worldview (Duckitt et al. 2002), which indexes one’s sensitivity to competitive cues and attitude toward aggression in competitive settings, best explained the effect (PROCESS Model 4, standard IE = .04, 95%CI [.01,.08]). In comparison, moral values (e.g., concern for fairness) or belief about the capitalistic system were not significant mediators of the effect.

Manipulating Competition. In study 2 (N = 1000, between-subjects), we test the underlying mechanism through moderation. We examine whether framing the negotiation as non-competitive (vs. competitive) activity can mitigate the effect of political ideology. In the competitive framing condition, participants read about a situation where they could “negotiate” prices with the seller. In the non-competitive framing condition, they read that they could “request the seller for a lower price.” There was a significant interaction between political ideology and condition ($B = .14, SE = .06, t = 2.18, p < .03$), such that political conservatism was a significant predictor of negotiation propensity in the competitive-framing condition ($B = .16, SE = .04, t = 3.90, p < .001$), but not in the non-competitive condition ($B = -.01, ns$).

Construal of Sellers’ Profit Motives. In study 3 (N = 881, between-subjects), we test whether the effect is driven by different construals of sellers’ profit motives. Participants were randomly assigned to either imagine buying a used car from an ordinary seller or from a professional used car dealer. Political conservatism was, once again, a positive and significant predictor of negotiation propensity ($B = .16, SE = .05, t = 3.36, p < .001$), and participants indicated higher negotiation propensity in the business dealer condition ($B = .64, SE = .06, t = 10.47, p < .001$), but there was no significant interaction between political ideology and condition ($B = -.08, ns$). The results therefore suggest that the effect is not driven by different construals of sellers’ profit motives.

Mistrust of Sellers. In study 4 (N = 918, between-subjects), we test whether the effect is driven by mistrust of sellers. Participants were randomly assigned to either imagine buying a used car from a stranger or from a friend. Political conservatism, once again, was a positive and significant predictor of negotiation propensity ($B = .13, SE = .05, t = 2.90, p < .004$), and participants indicated higher negotiation propensity in the stranger condition ($B = .64, SE = .06, t = 10.38, p < .001$), but there was no significant interaction between political ideology and condition ($B = -.05, ns$). The results therefore suggest that the effect is not driven by mistrust of sellers.

Real Estate Transactions. In study 5 (N =55,763, archival), we combined a 2017 county-level real estate transaction dataset (1205 counties for each of the 52 weeks in 2017), the 2016 county-level

presidential election voting dataset, and the U.S. Census 2016 county-level demographic dataset to see if the effect of political ideology on negotiation propensity replicates in the real world. Controlling for list price, market supply and demand effects, as well as demographics including employment rate, household income, education, and gender, we found that percentage of votes to the Republican candidate significantly predicts sale-to-list ratio ($B = -.11$, $SE = .02$, $t = -5.90$, $p < .001$). The results show that residential properties are sold at a lower price relative to its listing price in more politically conservative counties.

New for the Sake of Status: Political Ideology and Really New Products

EXTENDED ABSTRACT

As consumers become increasingly reliant on technology, marketers and consumer researchers continue to focus on issues associated with the adoption for really new products (RNP). RNPs are products that consumers have difficulty making the adoption decision because they allow consumers to do something they could never do before and thus, they face a great deal of uncertainty when estimating the benefits of the product (Nielsen, Escalas and Hoeffler 2018). Of particular importance to predicting RNP adoption is understanding traits that influence consumers' predisposition to pursue innovation. Research shows that consumers who have experience with tangentially related products (Nielsen et al. 2018), those who are more innovative (Steenkamp and Gielens 2003), and those who enjoy learning about new products (Herzenstein and Hoeffler 2016) are more likely to be early adopters of new technologies. Yet, little research has addressed how the RNP adoption decision is influenced by a particular consumer trait of growing importance in marketing research—political ideology.

Political ideology is a set of values and attitudes with cognitive, affective, and motivational components that explain how society should function to achieve social justice and social order (Nail et al. 2009). The role of political ideology is important to consumer research because of how it shapes consumer judgment and decision-making, and product choice (Jost 2017; Shavitt 2017). Despite robust findings in prior research showing that liberals are generally open to new experiences and conservatives prone to support the status quo and less tolerant of uncertainty (Carney et al. 2008; Jost et al. 2003), suggesting liberals (conservatives) are more (less) likely to adopt RNPs, other political ideology research shows how this consumer trait influences preference for social equity versus hierarchy and status signaling. Specifically, liberals value fairness and equity, while conservatives value social hierarchy and status (Caprara et al. 2006; Graham, Haidt, and Nosek 2009). Ordabayeva and Fernandes (2018) show that, because of their differences in support for social hierarchy, conservatives prefer consumption that allows them to display a superior status, while liberals prefer to stand out as unique but not superior.

Based on the hierarchical motives model of political ideology, we expect that, despite the uncertainty that RNPs bring, conservatives' desire to signal superior status will supersede their intolerance of uncertainty and desire to uphold the status quo. As such, politically conservative consumers will generally prefer RNPs more than will liberals. We posit that this effect is driven by the view that RNPs are inherently useful as status signals because they provide the consumer the opportunity to show that they have access to products not yet widely available for mass consumption. Because of their openness to new experiences, we expect liberals will prefer RNPs that are more accessible but whose consumption yields unique experiences for the user. Three studies test these assumptions.

Study 1. US-based MTurkers ($N = 406$; $M_{age} = 37.00$, $SD = 11.94$; 42.4% female, 57.6% male) were paid to complete an online survey.

First, they reviewed one of two randomly assigned RNPs—a flexible cell phone that rolls into a pen or a robot designed for personal assistance and companionship. Participants then evaluated the RNP (e.g., “I like this product very much” and “What is the likelihood that you use this product?”). After a filler task, they indicated the extent to which they consumed products to signal status (e.g., “I would buy a product just because it has status.”), then reported demographics, including political ideology (1 = very liberal, 100 = very conservative). Two mediation analyses of each RNP, separately, confirmed our hypothesis that conservatives generally prefer RNPs more than liberals. This effect is mediated by status consumption, with significant indirect effects of political ideology on the phone ($b = .01$, 95% CI [.002, .008]) and robot ($b = .004$, 95% CI [.002, .008]).

Study 2. Undergraduate students from a large Midwestern US university ($N = 486$; $M_{age} = 20.60$, $SD = .83$; 32.5% female, 67.5% male) completed a short study for course credit. First, participants reviewed a new Heart Rate Monitor for exercise, framed as either inconspicuous (e.g., “sleek and inconspicuous”) or conspicuous (e.g., “show off your unmistakable style”). This manipulation was intended to affect the RNP's ability to signal status in the inconspicuous condition, as it is not visible to others but still provides the novel experiential benefits.

Participants evaluated the RNP and reported demographics, including political ideology, as in Study 1. They also indicated how often they typically exercise (from 0 to ≥ 5 per week) as exclusion criteria. Participants who indicated that they exercised less than three times a week were excluded from the analysis, as the product would be less relevant to their status. This left a final sample of 286.

Regression analysis testing the interaction of political ideology \times framing condition on RNP evaluation was significant ($p = .004$). Floodlight analysis confirmed that conservatives ($PI \geq 69.23$) preferred the conspicuously (vs. inconspicuously) framed RNP, and liberals ($PI \leq 27.78$) preferred the inconspicuously (vs. conspicuously) framed RNP.

Study 3. US-based MTurkers ($N = 295$; $M_{age} = 43.40$, $SD = 41.00$; 58.6% female, 41.4% male) were paid to complete an online survey designed to conceptually replicate Study 2 with a different RNP (a novel digital picture frame) and an enhanced manipulation. Rather than manipulating RNP in/conspicuousness, in Study 3 we manipulated how easy it was to use as a status signal. The RNP was framed as either simple to signal (e.g., “user-friendly technology for elite beginners”) or difficult to signal (e.g., “high technology [...] for elite tech pros”). Participants evaluated the RNP and reported demographics, including political ideology, as in Study 1.

Replicating the findings of Study 2, regression analysis testing the interaction of political ideology \times framing condition on RNP evaluation was significant ($p = .042$). Floodlight analysis confirmed that conservatives ($PI \geq 95$) preferred the simple (vs. difficult) framed RNP, and liberals ($PI \leq 10$) preferred the difficult (vs. simple) framed RNP.

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Consumer Interactions with Different Types of Languages

Chair: Jessie Rui Du, Baruch College, Marymount Manhattan College, USA

Paper #1: English as a Lingua Franca Promotes Interpersonal Closeness and Sympathy

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Steve Gould, Baruch College, USA

Sankar Sen, Baruch College, USA

Marlone Henderson, the University of Texas at Austin, USA

Paper #2: Local and Global Status Concerns Independently Predict Jargon Use Among Psychologists

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Paper #3: Language Transfer in Word of Mouth -How Genderedness of Native Language Influences Reviews in Foreign Language of a Bilingual Reviewer

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SESSION OVERVIEW

There is a long-standing debate about the relation between language and cognition (Harris 2006). Recent advances in linguistic processing methods allow us to explore relationships between language and thoughts like never before. Then for people who speak more than one language, which language shapes their thoughts more? How do multiple languages shape thoughts in contrasting ways? To answer those questions, this session combines three papers investigating how such different types of languages (e.g. first vs second; gendered vs genderless; jargon vs non-jargon) creates various change in sympathy, status signaling, and positivity of online reviews. Using cross-cultural lab experiments, Survey-software Implicit Association Tests, archival data analysis, and Natural Language Processing, the authors probe into how these language types influence consumer behavior.

The first paper by Du, Gould, Sen, and Henderson proposes an English as a lingua franca effect. Specifically, using English as a lingua franca (nonnative English speakers with different first languages use English as a common communication medium) promotes perceptions of interpersonal closeness. Consequently, increased interpersonal closeness predicts higher sympathy towards strangers. Varieties of first languages do not matter. Native English speakers do not demonstrate the English as a lingua franca effect. English as a global lingua franca enables people to expand moral concerns to strangers.

The second paper by Brown, Anicich, and Galinsky investigates how low status individuals use jargon (e.g. specialized and complex language) to attempt to negotiate status and signal higher standing to others. Through coding a unique dataset of over eight thousand poster titles, Brown et al. argue that status threat and unfavorable social comparison leads authors to use more jargon to compensate for their lower status both globally and locally.

Lastly, using Natural Language Processing methods, Yu-Buck demonstrates how having a gendered (e.g. Spanish has masculine vs feminine nouns) vs genderless native language could influence consumer online reviews when writing in a foreign language. The author found that when writing a positive review in a foreign language, people who have a gendered native language used wording more associated with male related words than did people who have a genderless native language. In contrast, when writing a negative review in a foreign lan-

guage, people who have a gendered native language used wording less associated with male related words, compared to female related words.

Modern time sees millions of people travel, study, or work across continents. How consumers navigate the challenges brought about by the complexity of living in multiple language systems is a question worth answering. Our session provides useful knowledge on how consumers make decisions when responding to different types of languages.

English as a Lingua Franca Promotes Interpersonal Closeness and Sympathy

EXTENDED ABSTRACT

Many individuals and organizations advertise to different populations using multi-languages. English is the most frequently spoken language and is also the most popular second language with 55 countries speaking it as a second language (Holloway 2021). English has been frequently used as a lingua franca among non-native English speakers (House 1999; Mauranen and Ranta 2007; Seidlhofer 2005). However, the role English plays in multi-language advertising is rarely explored.

The term lingua franca defines any lingual medium used by people who speak different first languages (Samarin 1987). A lingua franca doesn't include native speakers. Nonnative users provide the strongest momentum for the development of English as a global lingua franca. Intuitively, people would assume that advertisements delivered in consumers' mother tongue would be more persuasive. Contrarily, using cross-cultural lab experiments and Survey-software Implicit Association Tests (Carpenter et al. 2019), we demonstrate that when an ad is delivered in English, consumers perceive increased interpersonal closeness to strangers and therefore are more sympathetic towards them. This is because English is widely used as a global lingua franca. English functions as a bridge to connect to other people, places, and cultures.

In the current studies, we used calls for donations as our manipulation. We measured our independent variable by randomly assigning bilingual participants to one of the survey language conditions (English vs participants' first language). Interpersonal closeness was measured using the Inclusion of Other in the Self Scale (Aron, Aron, and Smollan 1992). Sympathy was tested using two measures: 1) the sympathy scale (Small et al. 2007); 2) one donation likelihood question. The Pilot study ($N = 129$) used a mixed design with survey language (Spanish = 0 vs English = 1) as the between-subject factor and five different calls for donations as the within factor. After reading the calls for donations delivered in English, bilinguals were more likely to donate than reading the ad in their first language ($p = .015$). Study 1 ($N = 299$) replicated this English as a lingua franca effect on donation ($M_{\text{Spanish}} = 4.43$ vs $M_{\text{English}} = 4.98$; $p = .003$) and ruled out social status indicated by English as an alternative explanation. As English-speaking countries usually have more economic resources as presented in higher GDP (Silver 2022), we speculate whether perceptions of economic resources are the mechanism explaining our effect. To test this assumption, in Study 2a ($N = 313$), we recruited Chinese bilinguals (Mandarin = 0 vs English = 1) as China has comparable GDP to most English-speaking countries. We again found that call for donations delivered in English prompts higher donation likelihood than in the native language $M_{\text{Mandarin}} = 5.50$ vs $M_{\text{English}} = 5.88$; $p = .016$). The findings ruled out the alternative explanation of economic resources. So far,

we've demonstrated an English as a lingua franca effect on donation and this effect is not explained by social status or economic resources indicated by English. Next, in Studies 3 ($N = 120$) and 4 ($N = 353$) (preregistered), we tested Interpersonal Closeness as a mediator of the English as a lingua franca effect (Aron, Aron, and Smollan 1992), because we assume that English as a global communication medium might increase closeness perceptions between strangers. We measured it using the sympathy scale (Small et al. 2007). Again, we found an English as a lingua franca effect on sympathy. Importantly, there is a serial mediation such that English increases donation likelihood through increasing closeness and then sympathy ($b = .05$, $SE = .03$, $CI95 [.00, .11]$). Next, we aimed to find out whether it's an English effect or a more general second language effect, as literature shows that a second language reduces decision biases (Keysar, Hayakawa, and An 2012; Costa et al. 2014). So, in Study 5 ($N = 352$), we recruited native English speakers (English = 0 vs Spanish = 1). ANOVA analysis reveals no group difference between English and Spanish. This way we ruled out the assumption that it is a more general second language effect instead of an English as a lingua franca effect. In Study 6 ($N = 148$), we aimed to test whether participants' variety of first languages matters to the English as a lingua franca effect. Native English speakers vs nonnative English speakers were both given the scenario in English. ANOVA analysis reveals that there is no difference in donation likelihood between native and nonnative English speakers. In other words, when delivering a call for donation to nonnative English speakers in English, English makes nonnative English speakers as prosocial as native English speakers.

This research identifies an English as a lingua franca effect, which sheds light on how to use language as a useful tool to promote advertising persuasion globally.

Local and Global Status Concerns Independently Predict Jargon Use Among Psychologists

EXTENDED ABSTRACT

Why do people use jargon? Why do scientists also use so much jargon? The use of jargon is commonplace across disciplines and industries. In academia, the use of specialized and complex language has been increasing over time and higher status journals are associated with more complex language. Prior work has linked higher jargon use with compensation for low status and status threat (Brown, Anicich, & Galinsky, 2020). Here, we build on these findings by assessing the effects of distinct sources of status threat. Specifically, we use a novel, real world dataset that also addresses a key unanswered question in the status literature: Do local and global status concerns differentially affect behavioral outcomes such as conspicuous status signaling? Local status refers to the respect that individuals have within their social groups; it is based on comparisons with those who are similar and proximate (Anderson et al., 2012). Global status refers to the respect that comes from one's group memberships relative to other group memberships (Wu, Garcia, & Kopelman, 2018), and is related to status differences between groups. Although some researchers have suggested local status has a greater psychological impact (Anderson et al., 2012), others have suggested that both types of status matter depending on whether between-group comparisons or within-group comparisons are more salient (Wu et al., 2018). However, "these two desires are typically studied and theorized independently from one another" (Chang, Chow, & Woolley, 2017, pg. 1) and very few studies have explored their effects simultaneously.

We argue that low-status individuals will use more jargon in response to both global and local forms of status threat. Having low status, regardless of whether it is from close or distant comparisons,

leads individuals to be concerned with signaling high status to others and to see jargon use as a path to achieving higher status.

To test our hypotheses, we collected a unique dataset of over eight thousand academic conference poster titles to test whether lower status predicted greater jargon use. This dataset allowed us to isolate the influence of two different sources of status: global status based on the professional affiliations of the authors, and local status based on status dynamics within the first author's research team. We predicted that because jargon is a status signal associated with professional expertise and affiliation, first authors who came from lower-status schools or had co-authors from a higher-status school would experience status threat and use more jargon to compensate for their lower status.

We analyzed multiple operationalizations of global and local status threat to test our hypotheses. We calculated status through the US News and World Reports ranking systems. We followed past work in operationalizing academic jargon as the average readability of each poster's title (Brown et al., 2020). We controlled for the year in which the conference was held (2013, 2014, 2015, etc.) and the number of authors on each poster team. To control for different research topic areas, we included a series of dummy variables for the primary keywords associated with the session in which a poster was presented. Each poster could have multiple keywords associated with its session. We created 63 binary dummy variables to account for the 63 possible keywords across all included posters in the final dataset.

We predicted lower global status, for both the team and for the first author, would predict more jargon usage. Consistent with this hypothesis, poster titles produced by lower-status author teams contained significantly more academic jargon without control variables ($b = 0.00056$, $SE = 0.00014$, $p < 0.001$, $95\% CI = [0.00028, 0.00085]$, and with control variables ($b = 0.00048$, $SE = 0.00015$, $p = 0.0012$, $95\% CI = [0.00019, 0.00077]$). Likewise, poster titles created by first authors from lower-status schools contained significantly more academic jargon without control variables, $b = 0.00059$, $SE = 0.00014$, $p < 0.001$, $95\% CI = [0.00031, 0.00086]$, and with control variables, $b = 0.00050$, $SE = 0.00014$, $p < 0.001$, $95\% CI = [0.00022, 0.00078]$.

We predicted that having a co-author from a higher-status school would be associated with greater jargon use. Consistent with this prediction, the presence of a higher-status author on the paper positively predicted jargon use without control variables ($b = 0.066$, $SE = 0.031$, $p = .032$, $95\% CI = [0.0055, 0.13]$), and with control variables ($b = 0.070$, $SE = 0.032$, $p = .027$, $95\% CI = [0.0078, 0.13]$).

Additionally, the number of authors who were ranked higher than the first author significantly predicted greater jargon use without control variables ($b = 0.042$, $SE = 0.020$, $p = 0.037$, $95\% CI = [0.0025, 0.082]$, and with control variables ($b = 0.041$, $SE = 0.021$, $p = 0.048$, $95\% CI = [0.00037, 0.082]$). Finally, our measure of status spread, or the distance between the first author and the highest status team member, also marginally predicted increased jargon use without control variables ($b = 0.00064$, $SE = 0.00038$, $p = 0.090$, $95\% CI = [-0.00010, 0.0014]$; but not after adding the control variables: $b = 0.00057$, $SE = 0.00038$, $p = 0.13$, $95\% CI = [-0.00018, 0.0013]$).

Across the six full models of the interaction between our global status measures and one of the local status measures, one was significant, two were marginally significant ($p < .10$), and three were not significant (p values equal to .12, .13, and .16).

The current research makes a key contribution to linguistics and status literatures by revealing effects of both local and global status on communicative choices in a real world setting. Few studies have explored their effects simultaneously as they've mostly been explored independently of one another. The current work illustrates how language and jargon in specific is used for claiming, inferring, and negotiating hierarchy. This social status-related use is independent and

at times in contrast to the use of language to communicate semantic meaning.

Language Transfer in Word of Mouth -How Genderedness of Native Language Influences Reviews in Foreign Language of a Bilingual Reviewer

EXTENDED ABSTRACT

Consumer reviews are crucial resources because people provide their post-purchase experience through those reviews (Sun, Long, Zhu, & Huang, 2009). Other consumers could use consumer reviews to reduce risk and uncertainty (Xie, Zhang, & Zhang, 2014). Meanwhile, firms can gather insights from the consumer reviews to make decisions, such as recommendations (Netzer, Feldman, Goldenberg, & Fresko, 2012). Therefore, it is meaningful to understand what factors could affect review content. This research focuses on the bilingual reviewers and examines whether the language genderedness of reviewers' native languages influences the review contents written in a foreign language. Specifically, we focus on the association between the review contents and gender-specific words.

Language can be gendered or genderless (Prewitt-Freilino, Caswell, & Laakso, 2012). Gendered languages are languages whose nouns or verbs reflect gender (Stahlberg, Braun, Irmen, & Sczesny, 2007). Examples include Spanish and Hindi. Meanwhile, genderless languages do not have gender assigned to nouns, or the pronouns of gender are the same (Stahlberg et al., 2007). Examples could be Chinese and English. Researchers have found that gendered and genderless languages are different in various aspects. For instance, the gender prejudice is stronger in gendered languages than in genderless languages and male words have a stronger association with competence and warm words than female words in gendered languages, but not in genderless languages (DeFranza, Mishra, & Mishra, 2021). As a type of textual information, consumer reviews also reveal gender bias (Mishra, Mishra, & Rathee, 2019). However, the language genderedness might not be the only factor related to reviewers' languages. Some reviews could be written in the reviewers' foreign languages (e.g., providing reviews for a hotel in a foreign country). This raises a question: when using a foreign language to provide consumer reviews, does the gendered-ness of the native language of the reviewer matter?

Prior research has indicated that the language native-ness influences people's choices since the processing of native and foreign languages is not the same (Hayakawa, Costa, Foucart, & Keysar, 2016). In addition, different languages may have different definitions of the concepts and objects across languages (Casasanto, 2008). For example, in English, in the term "A long time", "long" is a distance term. However, Greek speakers use "megalos", which is a spatial term, to describe a long time. However, previous literature also mentions language transfer, a psycholinguistic theory. This transfer is defined as "the influence resulting from the similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired" (Odlin, 1989). The transfer can occur from the native language to a foreign language and vice-versa (Jarvis & Pavlenko, 2008). Therefore, the gender bias of the native language might transfer to the foreign language. This research intends to contribute to this conflicting discussion by examining whether review content written in a foreign language by the reviewers whose native language is gendered is more likely to associate with gender-specific words (e.g., he or she, (Mishra, Mishra, & Rathee, 2019)) than when the reviewer whose native language is genderless.

Methodology

The analysis is conducted with consumer reviews of UK hotels from a travel agency website. All the reviews are in English. Based on the nationality information of the reviewers, we could label which reviews were written by reviewers whose native language is most likely not English. We considered those reviews to be written in a foreign language. The corpus includes 16002 reviews written by reviewers from 130 countries. The number of native languages across these countries is 46, and 17 of these are genderless languages. 8869 of the reviews are positive, and 7133 are negative reviews. Next, we checked whether the native languages of the reviewers' nationality were gendered or not (DeFranza et al., 2021). 2140 reviews were written by reviewers whose native language is genderless.

We used word embedding methods to calculate the data for the dependent variable, which is the association between the review content and gender-specific words (Mishra, Mishra, & Rathee, 2019). The word vectors we used were pre-trained with the *fasttext* algorithm and the Common Crawl corpus. Following the Distributed Dictionary Representations method (Garten et al., 2018), we retrieved the 300-dimension word vector for each word in each review. Then, we calculated the average of those word vectors to generate a single vector to represent each review. Meanwhile, we also retrieved the word vector of each word in the gender word dictionary. After taking the average of those vectors, we have a single vector representing the female-related word dictionary and one for the male-related word dictionary. Next, we calculated the cosine similarity between the word vector of each review and the word vector of two gender dictionaries (S_{female} and S_{male}). These cosines similarity values indicate the association between the review content and the gender-specific words. The last step is to calculate a net similarity ($S_{\text{male}} - S_{\text{female}}$), which is the dependent variable. The larger value is, the stronger the association is between the review content and male related words, relative to female words.

Besides using the gendered-ness of the native language as the independent variable, we also included five control variables. They are the rating given by the reviewer, the length of the review, the average review score for the hotel, how many reviews that reviewer provided, and how many reviews that hotel had received. The results of a linear regression indicated that, when the reviews are negative, reviewers whose native languages are gendered provided review content with weaker associations with male related words, compared to female related words, than reviewers whose native languages are genderless ($\beta = -0.001, p = .035$). However, when the reviews are positive, reviewers whose native languages are gendered provided review content with stronger associations with male related words, compared to female related words, than reviewers whose native languages are genderless ($\beta = 0.001, p = .031$).

Our project contributes to the WOM and linguistic literature by examining how the characteristics of the reviewers' native languages could influence the review content. Future research could validate the findings by using more corpora and methodologies.

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How Language Impacts Communication

Chairs: Demi Oba, Duke University
Jonah Berger, University of Pennsylvania

Paper #1: How Hedging Shapes Persuasion

Demi Oba, Duke University, USA
Jonah Berger, The Wharton School, University of Pennsylvania, USA

Paper #2: How “Want” versus “Need” Framing Influences Responses to Crowdfunding Appeals

Lei Su, Hong Kong Baptist University, Hong Kong
Jaideep Sengupta, Hong Kong University of Science and Technology, Hong Kong
Yiwei Li, Lingnan University, Hong Kong
Fangyuan Chen, Hong Kong Polytechnic University, Hong Kong

Paper #3: I Didn't Have Time: The Language of Goal Failure

Luis Abreu, Duke University, USA
Holly Howe, Duke University, USA
Jordan Etkin, Duke University, USA

Paper #4: Writing in Consumer Research: Villains, Traps, and How to Escape Them

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Caleb Warren, University of Arizona, USA

SESSION OVERVIEW

Language is an integral part of consumer behavior. It's how consumers communicate with one another, brands, and even themselves.

But while it is clear that language is both frequent, and important, there is still much to learn about how language shapes consumer thoughts and actions. How do hedges (e.g., *I think* or *may*) influence persuasion? How does saying one *wants* vs. *needs* help impact the success of crowdfunding campaigns? Could the language one uses for goal failure (i.e., didn't *have* vs. *make* time) shape motivation? And how can we all write more clearly to increase the impact of our work?

This session addresses these and other questions as it integrates a variety of perspectives and research areas to understand language's impact.

First, **Oba and Berger** examine how hedging shapes persuasion. While consumer often hedge, saying things like “I think” something is true or this “might” be right, not all hedges have the same effect. Four experiments identify two key hedge dimensions (i.e., their level of certainty and the degree to which they reference the speaker), highlight their effect on persuasion, and demonstrate the underlying role of perceived speaker confidence.

Second, **Su, Sengupta, Lingnan, and Chen** explore the language of effective crowdfunding appeals. While people often talk about “wanting” or “needing” support, two large-scale field studies and three experiments demonstrate that which appeal type works better depends on the nature of the request. While “want” frames are more effective in reward-based crowdfunding, “need” frames are more effective in donation-based crowdfunding.

Third, **Abreu, Howe, and Etkin** examine how self talk can affect responsibility for goal failure. Four studies show that consumers often explain goal failure by suggesting they didn't “have time” rather than “make time” and that this language allows them to avoid negative feelings by distancing them from goal failure. They also illuminate the downside of this linguistic choice, lower goal persistence.

Fourth, **Kim and Warren** explore what makes good writing. Researchers are often cursed by intimate knowledge of their own work and have competing goals other than writing clarity. These psychologi-

cal “villains” lead to excessive hedging, unnecessary words, phrases, sentences, and paragraphs.

Taken together these papers highlight how subtle shifts in language impact a range of important outcomes including academic writing, donation appeals, self talk, and product reviews. The session also brings together a variety of methodological approaches including experiments, natural language processing, and machine learning. In addition to researchers interested in language or text analysis, this session should attract anyone interested in communication, persuasion, goals and motivation, prosocial behavior, and decision making more generally.

How Hedging Shapes Persuasion

EXTENDED ABSTRACT

When sharing their opinions with others, people often hedge their statements. Consumers talk about how a restaurant is *arguably* the best, service people say *they think* a solution will work, and online reviews talk about how products *might* last.

But while communication often involves hedging, how might hedges impact consumer behavior?

We suggest that hedging's impact depends on two key linguistic factors (i.e., statement certainty and personal perspective), both of which are driven by the same underlying mechanism (i.e., how confident communicators seem about what they are saying).

Different hedging phrases are associated with different levels of certainty or likelihood. If the weather says it will *certainly* rain, for example, that suggests rain is more likely than if the forecast says it *probably* will rain, which suggests rain is more likely than if the forecast says it *might* rain.

Taken to a persuasion context, we suggest that the certainty associated with different hedges will spillover to impact how confident a communicator seems. If someone says a restaurant is *arguably* the best, for example, it suggests they are more confident in their opinion than if they say the restaurant *feels like* or *might* be the best. This perceived confidence, in turn, should impact persuasion (Price and Stone 2004; Karmarkar and Tormala 2010).

Even beyond the specific hedge word, or phrase, though, opinions can be imbued with personal perspective. Rather than saying a restaurant is “arguably” the best, for example, someone can say “I'd argue” that it is the best. The hedge word (i.e., argue) is associated with the same level of probabilistic truth in both cases, but by adding a first-person singular pronoun, the latter suggests that the opinion is the communicator's, in particular, rather than being generally true.

While one could argue that personal perspectives should be less persuasive because they seem more subjective, we suggest the opposite. Specifically, we suggest that because personal perspective signals the communicator's identification with, and commitment to the statement, it may make them seem more confident (not less) which should increase persuasion.

Four experiments test these possibilities.

Study 1 used a stimulus sampling approach to provide a preliminary test of how persuasion is shaped by both statement certainty and personal perspective. Participants (N=20) imagined buying a new barbecue grill and considered how 22 different statements (e.g., “In my opinion this would be a great grill” and “This might be a great grill”) would impact how likely they would be to buy the grill.

The statements varied on two dimensions. Some were personal (e.g., “I feel like this would be a great grill”) while others were not (e.g., “It feels like this would be a great grill”). Further, some used hedges that independent raters had coded more certain (e.g., “Almost certainly, this would be a great grill”) while others were low certainty hedges (e.g., “this *might* be a great grill”).

Another set of participants (N=20) rated the same statements based on how confident they made the speaker seem.

As predicted, regression results revealed a main effect of both statement certainty and personal perspective. Participants were more interested in buying the grill if someone else used a more certain hedge ($b = .27, p = .001$) or personal hedges ($b = .26, p = .048$). Further, both effects were mediated by perceived speaker confidence.

Study 2A tested the causal impact of statement certainty and the underlying process behind the effect. Participants (N=74) imagined considering a new barbecue grill and were given information from another consumer. For half the participants, the statement used a more certain hedge (i.e., “Almost certainly, this would be a great grill”), and for the other half it used a less certain hedge (i.e., “It *feels like* this would be a great grill”). After providing the dependent measures (i.e., how positively they perceived the grill and how likely they would be to purchase it), participants also completed the hypothesized process (i.e., how confident the speaker seemed).

As predicted, the more certain hedge increased persuasion ($F(2,71) = 12.58, p < .001$). Further, this was driven by its effect on perceived speaker confidence. Using a more certain hedge made the speaker seem more confident, which increased persuasion.

Study 2B examined the causal impact of personal perspective and the underlying process behind the effect. Participants (N=105) read the same scenario as in Study 2A. For half the participants, the statement used personal perspective (e.g. “I feel like this would be a great grill”) and for the other half, it used a more general perspective (e.g. “It feels like this would be a great grill”).

As predicted, personal perspective increased persuasion, ($F(1,104) = 3.29, p = .073$). Further, this was driven by its effect on perceived speaker confidence. Using a personal hedge made the speaker seem more confident, which increased persuasion.

Study 3 simultaneously explored both statement certainty and personal perspective using a 2 (personal vs. general) \times 2 (certainty: high vs. low) between-subjects design. Participants (N=154) considered the same barbecue grill scenario. In the general condition, they received someone’s opinion that involved either higher [or lower] statement certainty (i.e. “Looks [Seems] like this is a great grill”). The opinion was the same in the personal condition, except a first-person pronoun was added (i.e., “Looks [Seems] *to me* like this is a great grill”). The dependent variables and process measures were the same as the prior studies.

As predicted, results revealed a main effect of both personal perspective and statement certainty. Further, both effects were driven by how confident they made the communicator seem.

Taken together, these studies demonstrate how hedging shapes persuasion. In particular, rather than hedges being good or bad, their impact depends on statement certainty and personal perspective. Further, both effects are driven by perceived communicator confidence.

The results shed light on the role of language in consumer behavior, deepen understanding of a frequently used linguistic device, and have clear implications for a range of communicators.

How “Want” versus “Need” Framing Influences Responses to Crowdfunding

EXTENDED ABSTRACT

The phenomenon of crowdfunding is of growing interest for marketing scholars. The current study investigates how a subtle difference in semantic framing in crowdfunding descriptions can influence the efficacy of crowdfunding appeals. Specifically, we focus on the differential efficacy of two words that are likely to feature in any type of appeal—“want” and “need.” Testifying to their frequent use, among campaigns on three leading crowdfunding websites, “want” was used in 44% of campaigns (e.g., “We want your help to produce watches”), whereas “need” was used in 60% of campaigns (e.g., “We need your help to save our boys.”).

Merriam-Webster (2021) defines a “want” as something that a person desires or craves, and a “need” as “something that a person must have—something that is needed in order to live, or be happy.” This *must-have* versus *nice-to-have* distinction between needs and wants has important implications. Stating a need implies a restricted and reduced ability to attain minimal requirements; in contrast, “wants” carry a connotation of greater freedom from constraint, because they typically refer to aspirations that go beyond basic necessities (Campbell 1998). We thus argue that the use of need versus want in a request will yield heightened inferences of the requester’s dependency—a state of “restricted ability to do without, relying on someone for support” (Boggatz et al. 2007). Furthermore, we posit that this difference in dependency perceptions affects both reward-based appeals, where funders contribute money in exchange for rewards; and donation-based appeals, where fundraisers depend on funders’ generosity (Belleflamme and Lambert 2014).

In reward-based appeals, the rewards promised to funders are forthcoming only if the project is successfully completed. Therefore, funders should be more willing to contribute to a project when they view the fundraiser as being relatively independent – since independence carries positive connotations of ability and competence. On the other hand, donation-based crowdfunding is driven by perceptions of how badly the fundraiser requires help. Thus, we argue that heightened perceptions of dependency, which is associated with weakness and vulnerability, increases funders’ contribution intention. Stated formally,

Hypothesis 1: For reward-based crowdfunding, funders will have a higher intention to contribute to a crowdfunding appeal that uses a want (vs. a need) frame; the reverse is true for donation-based crowdfunding.

Hypothesis 2: Different levels of perceived dependency of the fundraiser elicited by a want (vs. need) frame mediate both of these effects.

We first test the basic effect in a field study using a large-scale secondary data comprising 137,806 campaigns scraped from two crowdfunding platforms, Kickstarter (reward-based) and GoFundMe (donation-based). The results revealed that a need frame generates greater compliance for crowdfunding projects on Kickstarter, whereas the reverse should hold for those crowdfunding projects on GoFundMe.

Study 2 adopted a 2 (semantic frame: want vs. need) \times 2 (appeal type: reward vs. donation) between-subjects design (N = 565). All participants were presented with a crowdfunding campaign raising funds to make a documentary film of the Antarctic Islands. Four versions of the crowdfunding website were prepared, corresponding to each of the conditions in our 2 \times 2 design. To manipulate semantic frame, the

call-to-action statements included either “want” or “need.” The type of appeal was also manipulated, by indicating whether rewards were offered. As predicted, for the reward appeal, funding amount was higher when the project used a “want” (vs. “need”) frame, and the reverse was true for the donation appeal. More importantly, perceived dependency toward the fundraiser mediated the observed interaction effect.

Study 3 used a moderation approach to test the underlying mechanism. It adopted a 2 (semantic frame: want vs. need) \times 2 (appeal type: reward vs. donation) \times 2 (dependency information: baseline vs. high-dependency) between-subjects design ($N = 1037$). Participants in high-dependency conditions were informed that the crowdfunding requesters were highly dependent on the crowdfunding campaign, whereas they were only presented with general campaign statements in the baseline condition. Next, as in Study 2, participants were presented with one of four crowdfunding posts about a phone app that helped with job-seeking. Results revealed the expected greater (lower) funding intention for a want frame than a need frame given a reward (donation) appeal in the baseline conditions; both effects were attenuated when participants were explicitly informed about the fundraiser’s high dependency.

Our theorizing on the interaction effect of semantic frame and appeal type pivots on funders’ differential goals for the two types of campaign appeals: funders have a profit/returns goal for a reward appeal, but a non-profit/altruistic goal for a donation appeal. Study 4 sought to provide evidence for this perspective by directly manipulating funders’ goals. It adopted a 2 (semantic frame: want vs. need) \times 2 (funder’s goal: for-profit vs. non-profit) between-subjects design ($N = 561$). Participants were first instructed to approach a crowdfunding project with either a for-profit or a non-profit funding goal. They were then presented with a crowdfunding post pertaining to a music album, using either a “want” frame or “need” frame. The results demonstrated that participants primed with a for-profit funding goal reported higher funding intentions when exposed to an appeal that used a “want” (vs. “need”) frame, and the reverse was true for those primed with a non-profit funding goal.

As our final piece of empirical evidence, Study 5 extended the findings of Study 4 to the field, using a large-scale secondary dataset comprised of 100,011 campaigns from Indiegogo, with 62,055 (37,956) for-profit (nonprofit) oriented campaigns. Results showed that a “need” (vs. “want”) frame was more effective in eliciting contributions for for-profit oriented campaigns, and the reverse was true for non-profit oriented campaigns.

Collectively, this research advances theoretical knowledge in various fields, including semantic framing (Packard and Berger 2017; Patrick and Hagtvedt 2012), appeal compliance (Gorbatai and Nelson 2015; Mitra and Gilbert 2014), and dependency effects (Fisher and Ma 2014; Tracy et al. 2018). From an applied perspective, given the increased global popularity of crowdfunding, the current results contain clear managerial implications as well.

I Didn’t Have Time: The Language of Goal Failure

EXTENDED ABSTRACT

When talking about past goal failures, consumers often cite a lack of time. A consumer who intends (but fails) to go to the gym, for example, may say they “did not have time” to exercise, and a consumer who intends (but fails) to clean out the garage may say that they “did not have time” over the weekend. Yet while time constraints certainly play a role in goal failure, often when consumers say they “did not have time” for a given activity, they could have had time if they had planned or prioritized differently (e.g., waking up earlier to exercise before work or playing fewer hours of videogames on Saturday morn-

ing). Why, then, do people say they “did not have time” instead of the perhaps more accurate statement of “I did not make time”?

An emerging field of study suggests that the language consumers use impacts their cognitions, emotions, and behaviors (Daly and Glowacki 2017; Orvell and Kross 2019; Patrick and Hagtvedt 2012). We suggest that saying “I did not have time” vs. “I did not make time” affects consumers’ cognitions about the goal failure. Specifically, it shifts attributions for the failure away from the self (e.g., I mismanaged my time) and towards more external factors (e.g., other things took my time). Shifting the attribution for failure from internal to external alleviates guilt consumers may feel from not achieving their goal (Covington and Omelich 1979; McFarland and Ross 1982)1979. It is therefore not surprising that consumers prefer to say that they did not have time (vs. did not make time) for a goal.

Importantly, however, the protective nature of lack-time language comes at a cost, making consumers less likely to achieve their goal in the future.

Eight studies using diverse methodologies—including textual analysis of secondary data, topic modeling of consumers’ personal recollections, and controlled lab and field experiments—support our predictions, demonstrating the prevalence of lack-time language and its causal effects.

In a pilot study, we examine the prevalence of lack of time language (vs. failure to allocate time) using data from Twitter and a large corpus of text containing over one billion words from written and spoken language (Davis 2008). In Twitter, we collected all tweets within the last seven days with the phrases “I didn’t have time” or “I didn’t make time” and counted the number of occurrences. In the large corpus, we searched for the top verbs that appear immediately before the word “time” (“have” was the most prevalent). In both the Twitter ($N = 5,540$; $z = 73.51$, $p < .001$), and corpus data ($N = 15,132$; $z = 110$, $p < .001$), far more proportion of cases used “have time” (vs. “make time”).

Study 1 provides initial evidence that “didn’t have time” framing facilitates external (vs. internal) attributions for goal failure. Participants ($N = 1,642$) identified a personal goal they didn’t pursue last week and wrote about why they did not “have” vs. “make” time for their goal. We used topic modeling to analyze the semantic content of their responses. Supporting our theory, participants in the “didn’t have time” framing attributed their failure more to external causes (e.g., obligations, school, work, etc.) and less to internal causes (e.g., laziness, lack of motivation, etc.; all $ps < .05$).

Studies 2a and 2b measured causal attributions and tested whether they mediate differences in negative emotions (e.g., guilt). We recruited participants to read 15 minutes every day and retained participants who failed at their goal ($N_{\text{Study-2a}} = 132$; $N_{\text{Study-2b}} = 69$). Participants in study 2a provided an explanation for their failure and we coded for explanations that involved not having time; participants in study 2b were randomly assigned to provide an explanation for their failure about not having time or not making time. In both studies, participants who gave an explanation about not having time rated the cause as more external (all $ps < .05$). This external attribution led to less feelings of guilt.

Studies 3a and 3b explored behavioral consequences of the “didn’t have time” frame. We gave participants a goal to meditate (3a) or to walk 15 minutes (3b) every day, administer the “didn’t have time” (vs. “didn’t make time”) manipulation to those who failed at their goal ($N_{\text{Study-3a}} = 224$; $N_{\text{Study-3b}} = 79$), and followed their performance for the next few days. In both studies, participants who gave an explanation about not having time were less likely to adhere to their goal following the manipulation (all $ps < .10$).

Our final two studies ($N_{\text{Study-4a}} = 500$; $N_{\text{Study-4b}} = 160$) show that, although consumers realize most goal failures would be better characterized as not making (vs. having) time, and in fact believe this linguistic

framing would help them more in the future, they nevertheless prefer to talk about goal failure by saying that they “didn’t have time” (all $ps < .001$).

Writing in Consumer Research: Villains, Traps, and How to Escape Them

EXTENDED ABSTRACT

Consumer researchers can be heroes. Their work can transform the world by contributing the community of knowledge (Deighton, Mela, and Moorman 2021; Mick 2006; Moorman et al. 2019). But creating heroic research is not easy. Most papers gather e-dust rather than make an impact (Pham 2013).

To make an impact, researchers need to translate their ideas (and data) into writing that readers understand (Warren et al. 2021). Unfortunately, three psychological factors (i.e., villains) corrupt academic writing: associative thinking, competing goals, and the curse of knowledge.

Villain 1: Associative Thinking

Brains think in associations, or webs of loosely related concepts (Pinker 1997). Researchers think by jumping from one idea to another, but readers can understand the ideas only if researchers structure them so they can be decoded (Pinker 2014). Structuring ideas is easier when speaking than writing. The back-and-forth of conversation helps speakers and listeners reach a common understanding (Higgins 2019), even if the speaker’s initial utterings are disorganized. Writers do not have this luxury.

Villain 2: Competing Goals

Researchers have competing goals that can prevent them from writing clearly. Their proximal goal is often to impress readers, especially the review team, rather than to inform. Writers attempt to impress readers with abstract theory and fancy words, which tend to be harder to understand (Brown et al. 2020). Researchers pursue other goals that can derail clear writing, including advocating, inspiring, and mobilizing others as well as organizing their thoughts and regulating their emotions (Thomas and Turner 2011).

Villain 3: The Curse of Knowledge

Researchers are familiar with their ideas, methods, data, and results, and this familiarity changes the way that they think and write. Researchers need to be knowledgeable to do good research, but knowledge can make researchers think that their writing is clear even when it is not (Warren et al. 2021).

Writing Traps

These three villains set five traps that researchers need to avoid if they hope to write clearly: incoherence, clutter, technical language, passive writing, and abstraction.

Consider an example from Wikipedia:

Assemblage theory asserts that, within a body, the relationships of component parts are not stable and fixed; rather, they can be displaced and replaced within and among other bodies, thus approaching systems through relations of exteriority.

Writing is *incoherent* when readers have trouble connecting ideas across and within sentences. In the Wikipedia example, it is difficult to see how “within a body” and “approaching systems” relate to the rest of the sentence. Researchers write incoherently because they think in loose associations (villain 1) that they assume readers will be able to connect (villain 3). To escape incoherence, researchers need to use

transitions, parallel structure, and “right-branching” sentences with the subject and verb towards the beginning.

Writing is *cluttered* when it includes words and phrases that bury the core ideas. The example is cluttered in part because it repeats synonymous words: “displaced and replaced”, “within and among.” Researchers clutter writing because brains are programmed for speaking (villain 1), where repetition is necessary, and because researchers want to inoculate their ideas from attack (villain 2), which leads to hedging. To escape clutter, researchers need cut repetition, hedges, adverbs, adjectives, and modifying phrases.

Writing is *technical* when it favors words and phrases used by a specific group but not everyone else. The example is technical because it uses uncommon phrases (e.g., “relations of exteriority”) and meanings (e.g., “body” to mean objects and people rather than flesh and blood). Researchers use technical language because their expertise has made these words familiar to them (villain 3) and because they think it will impress readers (villain 2). To escape technical writing, researchers need to replace jargon with common words and phrases.

Writing is *passive* when it obscures who is doing something or what is being done. The example sentence is passive because it isn’t clear who or what is relating, displacing, or replacing the component parts. Researchers use passive writing because they want to sound objective (villain 2) and forget the readers may not be aware of the missing information (villain 3). To escape passive writing, researchers should use active voice and transform zombie nouns (e.g., exteriority) back into phrases with a verb and a subject.

Writing is *abstract* when it describes concepts using broad, intangible categories rather than concrete behaviors and sensations. The example is abstract because it offers no examples for abstract ideas like relations, component parts, and exteriority. Researchers write abstractly because they think abstractly (villain 1), want to impress readers (villain 2), and don’t realize readers might not understand the abstractions (villain 3). Researchers need to describe general theory, but they can escape the trap of writing abstractly by using examples and metaphors that ground abstract ideas in concrete behaviors and sensations.

Here’s how we might revise the example to avoid these traps:

Assemblage theory states that people and objects influence one another. Adding or replacing a person or object can change how the people and objects interact. For example, a family might spend less time reading books and more time sitting on the couch after buying a TV.

To write clearly, researchers need to know how to detect these traps and emulate papers that have escaped them. We thus created measures for each trap (see Table 1). We use the measures to develop an algorithm that researchers can use to assess their own writing and identify articles published in the *Journal of Consumer Research* that have not let associative thinking, competing goals, and the curse of knowledge lure them towards murky prose.

Researchers have the potential to be heroes, but only if they can evade the villains that trap most academic writing in incoherent, cluttered, technical, passive abstraction. By recognizing these traps, and understanding why they occur, researchers have the potential to make an impact.

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Sex, Lies, and AI: Consumer Beliefs About the “Mental” Representations of Algorithmic Recommendations

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Paper #1: Consumer Reactions to Algorithms: A Meta-Analysis

Meike Zehnle, University of St. Gallen, Switzerland
Christian Hildebrand, University of St. Gallen, Switzerland

Paper #2: How to Overcome Algorithm Aversion: Learning from Mistakes

Taly Reich, Yale University, USA
Sam Maglio, University of Toronto, Canada
Alex Kaju, HEC Montréal, Canada

Paper #3: Mitigating Inequalities Caused by Awareness of Algorithmic Bias

Sang Kyu Park, HKUST
Yang Yang, University of Florida, USA
Shunyuan Zhang, Harvard University, USA

Paper #4: Following the rules of AI: A Justice Perspective

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Ana Valenzuela, Baruch College and ESADE-Ramon Llul, USA

SESSION OVERVIEW

Overall, companies are relying more and more on algorithmic assistance across industries, from the diagnosis of a disease in the healthcare industry to matchmaking in online dating settings, AI has received considerable attention over the past two decades. However, evidence on consumer reactions to algorithmic recommendations is still mixed. While research on algorithm aversion revealed that individuals have a strong preference for human assistance over algorithmic assistance (Dietvorst et al., 2015), recent work provides equal evidence for algorithm appreciation (Logg et al., 2019).

This special session brings together four papers to explore the moderating impact of certain contextual characteristics in consumers' responses to algorithm-driven rules and recommendations. The first paper provides a meta-analysis based on 211 effect sizes of consumer responses to algorithms and examines critical moderators enhancing versus attenuating algorithm aversion. The following three papers investigate a conceptually distinct set of moderating variables that tap into consumers' unique beliefs about how an AI “thinks”. Papers 2, 3 and 4 focus on research that investigates three evaluative dimensions connected to the “mental” process behind Algorithm-driven recommendations: Awareness of bias, belief in the capability of learning, and sense of procedural justice respectively.

We start the session with an opening paper, which provides a comprehensive review and meta-analysis to assess the overall effect size of algorithmic assistance. It tests a variety of moderating effects and finds that the negative effect of algorithmic reliance significantly increased in context in which the human was described as an expert, whereas it was weaker for older participants, for management-related tasks and in more recent publication years.

The second paper investigates whether consumers tend to avoid algorithmic advice on the often-faulty assumption that those algorithms, unlike their human counterparts, cannot learn from mistakes, in turn, offering an inroad by which to reduce algorithm aversion: highlighting their ability to learn

The third paper provides evidence for the underlying mechanism for the adverse effect of awareness about the existence of algo-

gorithmic bias. When consumers do not know whether bias is present in a focal algorithm, they overgeneralize their knowledge of bias and apply it to their evaluations. As a result, the authors design a theory-driven intervention, for firms and for media outlets, to mitigate the adverse effect.

Finally, the fourth paper focuses on AI agents, which may design and implement rules. The paper established that judgments about how fairly the rule is in its application (i.e., procedural justice) and communication (i.e., interactional justice) may affect how people respond to it. In particular, this paper tests whether the fact that an AI agent vs. a human assistant may be administering certain rules influences consumers' perceptions of procedural and interactional justice. Perceptions of justice, in turn, affect individuals' compliance with the rule and subsequent satisfaction with the experience.

Our session contributes to the conference by documenting how the use of different conceptualizations related to how AI thinks, learns or proceeds towards justice may drive distinct consumer responses in connection with algorithmic assistance. We believe this session will appeal to a broad ACR audience who are interested in consumer-technology interactions to further contribute foundational research in this continuously expanding field.

Consumer Reactions to Algorithms: A Meta-Analysis

EXTENDED ABSTRACT

The growing algorithmic assistance across industries, from diagnosing a disease in the healthcare industry to matchmaking in online dating settings, has received considerable attention over the past two decades. Yet, evidence on consumer reactions to algorithmic assistance is mixed. While research on algorithm aversion revealed a strong preference of individuals to favor human over algorithmic assistance (Dietvorst et al., 2015), recent work provides equal evidence for algorithm appreciation (Logg et al., 2019). Earlier reviews synthesizing the current stream of research on consumer reactions to algorithmic assistance is either based on qualitative reviews (e.g., Hasler et al., 2013; Janssen et al., 2019), at the risk to reach different conclusions examining the same stream of literature (Buecker et al., 2021), or more narrowly focusing on specific characteristics such as the extent of anthropomorphism in algorithmic assistance (Blut et al., 2021) or assessing more narrow outcomes such as trust (Schaefer et al., 2016). The current work provides a comprehensive review and meta-analysis to assess the overall effect size of algorithmic assistance across a large number of reported studies (211 effect sizes), testing a variety of moderating effects, and providing guidelines that otherwise lead to an overestimation of algorithm aversion.

We conducted an electronic database search using keywords from earlier work such as “Algorithm Aversion” and “Algorithm Appreciation”. We searched the PsycInfo database to cover publications in the field of Psychology and Marketing, the Business Source Ultimate database to cover publications in Management, the ACM database to cover publications in the field of Information Systems and the Web of Science as a general interest database. To sample relevant work that was published without explicit mention of algorithm aversion or appreciation, we complemented our database search with a backward citation search (i.e., we searched the references of well-known papers in the field) as well as forward search (i.e., we

examined articles that cited articles we had previously included in our meta-analytic database). Articles that were purely theoretical, studies with purely correlational research designs, studies examining contrasts other than between algorithmic and human assistance (e.g., between different types of algorithmic assistance), as well as studies that lacked sufficient statistical information to calculate effect sizes were excluded from our sample.

Our final dataset includes 211 effect sizes on algorithmic versus human assistance from a total of 43 articles ($N = 121,215$) published between 2002 and 2022. Studies were conducted in North America, Europe, Asia, and Australia with a median sample size of 171 participants. The majority of studies were published in information systems, followed by management, psychology, marketing, medicine, transportation, and legal studies. The algorithmic conditions covered a wide range of operationalizations including recommender systems, self-driving vehicles, autonomous robots, and AI-based chatbots.

For each study, we calculated Cohen's d from means and standard deviations or available test statistics (e.g., t , F , or Chi Square). Cohens' d was coded as negative (positive) for algorithm aversion (algorithm appreciation). We tested the average overall effect size specifying a multi-level meta regression model using the metafor package in R (Viechtbauer, 2010). The mean effect size of algorithmic (compared to human) assistance across all 211 effect sizes was estimated at $d = -0.25$ ($p < .001$), supporting a significant prevalence of algorithm aversion on consumers. Subsequent heterogeneity tests revealed that the effect sizes are not homogeneously distributed ($Q(210) = 20928.28$ ($p < .001$), indicating the existence of latent moderating variables. To provide initial model-free evidence, we observed significant differences for the measurement type with generally stronger effects for self-report data versus behavioral outcomes ($t(209) = 2.54$, $p < .05$), stronger effects when human assistance was framed as an "expert" ($t(209) = 3.49$, $p < .001$), weaker overall effects when algorithmic assistance was labelled "Artificial Intelligence" ($t(209) = 2.35$, $p < .05$), and stronger aversion effects in Non-American participant samples ($t(140) = 2.06$, $p < .05$). Given this model-free evidence, we estimated a multi-level random effects meta-regression model including these and other moderator variables. We found that the negative effect of algorithmic assistance indeed significantly increased when the human was described as an expert ($\beta = -0.90$, $p < .001$), increased when the study was conducted with participants from an online recruiting platform ($\beta = -0.71$, $p < .001$), was weaker for older participants ($\beta = 0.03$, $p < .001$), weaker in management-related tasks (e.g., hiring employees or forecasting sales; $\beta = 0.59$, $p < .001$), and was significantly weaker in more recent publication years ($\beta = 0.09$, $p < .001$).

Taken together, this meta-analysis provides one of the most encompassing meta-analyses on consumer reactions to algorithms we are aware of and demonstrates the existence of several unexplored moderators qualifying this relationship. Our findings reveal critical under-researched populations (e.g., the proportion of non-western samples averages to 9%), underutilized research methods (e.g., the proportion of field studies averages to only 6%) and highlights several unexplored avenues for future work to enhance our understanding of the algorithm-consumer relationship.

How to Overcome Algorithm Aversion: Learning from Mistakes

EXTENDED ABSTRACT

In five pre-registered studies ($N = 1,500$), we find that consumers tend to avoid algorithmic advice on the often-faulty assumption that those algorithms, unlike their human counterparts, cannot learn

from mistakes, in turn, offering an inroad by which to reduce algorithm aversion: highlighting their ability to learn. Process evidence, through both mediation and moderation, examines why consumers fail to trust algorithms that err across a variety of prediction domains and how different theory-driven interventions can solve the practical problem of enhancing trust and consequential choice in algorithms.

Study 1 first verifies this assumption, testing whether people perceive algorithms as less capable of learning than humans and whether these perceptions affect trust. To provide evidence of a robust effect across different prediction domains established by prior literature (Castelo et al. 2019), Study 1 documents this tendency for both objective and subjective domains. As predicted, participants thought that a human was more capable of learning while performing a subjective task ($M = 5.54$, $SD = 1.02$) compared to an algorithm ($M = 4.69$, $SD = 1.63$), $t(100) = 4.18$, $p < .001$, 95% CI = [0.45, 1.25]. Participants also thought that a human was more capable of learning while performing an objective task ($M = 5.78$, $SD = 1.04$) compared to an algorithm ($M = 4.60$, $SD = 1.69$), $t(97) = 6.26$, $p < .001$, 95% CI = [0.81, 1.55].

Study 2 moves beyond learning in general to learning from mistakes more specifically by providing prior performance statistics (including successes and failures) for both humans and algorithms in a subjective task. By assessing both perceptions of the ability to learn from mistakes as well as trust, Study 2 tests the mediating role of perceived learning from mistakes on which prediction source - human or algorithm - people trust. Consistent with our theory, compared to the algorithm, the human was perceived as more capable of learning from their mistakes which in turn resulted in increased trust, 95% CI for the indirect effect: [-.3862, -.0170].

Study 3 manipulates not only prediction source type but also the inclusion (or absence) of performance statistics (similar to Study 2) designed to include learning evidence by making prior performance dynamic (i.e., improving over time). Our analysis revealed a main effect of agent and a main effect of learning evidence, which were qualified by a significant interaction between agent and learning evidence, $F(1, 396) = 19.23$, $p < .001$. Participants thought the algorithm was significantly more capable of learning from mistakes when performance data included learning evidence ($M = 5.87$, $SD = 0.90$) compared to when performance data did not include learning evidence ($M = 4.48$, $SD = 1.63$), $F(1, 396) = 65.49$, $p < .001$. Conversely, there was only a marginal difference in perceptions of learning from mistakes when performance data of the human included learning evidence ($M = 6.08$, $SD = 1.04$) compared to when it did not ($M = 5.76$, $SD = 1.19$), $F(1, 396) = 3.48$, $p = .063$.

Moving from trust to actual choice in an incentive-compatible design, Study 4 again uses the same prior performance intervention as Study 3 to provide support for the role of learning evidence in influencing consequential choice of an algorithm over a human. In the algorithm with learning evidence condition, the choice of the algorithm (66.3%) was significantly bigger than the choice of the human (33.7%), $\chi^2(1) = 10.45$, $p = .001$, $d = .69$. In the without learning evidence condition, the choice of the algorithm (50.5%) was not significantly different from the choice of the human (49.5%), $\chi^2(1) = 0.10$, $p = .921$, $d = .02$. Finally, in the control condition, the choice of the algorithm (26.7%) was significantly smaller than the choice of the human (73.3%), $\chi^2(1) = 21.87$, $p < .001$, $d = 1.05$.

Finally, Study 5 introduces a second learning evidence intervention (what the algorithm is called, e.g., machine learning algorithm), simultaneously comparing its trust-related effectiveness to our other learning intervention (learning performance), a traditional algorithm, and human prediction. A one-way ANOVA revealed a significant effect of agent condition on trust, $F(3, 396) = 4.80$, $p = .003$. Planned

contrasts revealed that participants trusted the human agent significantly more than they trusted the traditional analytical algorithm, $p = .003$, $d = .41$, 95% CI = [0.18, 0.87]. There was no difference in trust between the human agent and the machine learning algorithm, $p = .774$, 95% CI = [-0.39, 0.29], or the learning evidence algorithm, $p = .954$, 95% CI = [-0.33, 0.35]. The latter two did not differ from each other, while trust in the traditional analytical algorithm was significantly lower than trust in the machine learning algorithm, $p = .001$, 95% CI = [0.23, 0.92], as well as trust in the learning evidence algorithm, $p = .003$, 95% CI = [0.17, 0.86].

Collectively, the studies test why consumers fail to trust algorithms across a variety of prediction domains as well as how different interventions can enhance trust and consequential choice. All of the studies report all manipulations and measures used, and each study was pre-registered.

Mitigating Inequalities Caused by Awareness of Algorithmic Bias

EXTENDED ABSTRACT

The popularity of algorithms notwithstanding, there are growing concerns about algorithmic bias: algorithms generating unfair outcomes on the basis of sensitive attributes such as gender or race (e.g., Akter et al. 2021; Danks and London 2017; Fu, Huang, and Singh 2021). Algorithmic bias began to enter the public consciousness in 2016, when ProPublica published an article (Angwin et al. 2016) exposing racial bias in a widely used recidivism prediction algorithm. Since then, bias has been detected in many other algorithms: Amazon’s hiring algorithm less-favors females (Dastin 2018), Apple’s credit limit algorithm assigns lower limits to females (Webb and Martinuzzi 2019), and self-driving cars are less likely to notice darker-skinned pedestrians, increasing the threat to their lives (Samuel 2019).

Extensive media coverage has raised public awareness that algorithms, like humans, can be biased. While public awareness of algorithmic bias has many benefits, Zhang and Yang (2021) found that it also has a serious unintended side effect: awareness makes disadvantaged consumers less likely to adopt algorithms in general, including algorithms that are “good” (shown to be unbiased and beneficial) and have not been the subject of negative media coverage. The algorithm aversion caused by mere awareness is a serious problem because it not only exacerbates existing inequalities but also creates a vicious cycle by aggravating the under-representation of disadvantaged groups in datasets, which may lead to greater algorithmic bias in the future (Cowgill and Tucker 2020).

The current research has two objectives. First, we provide evidence for the underlying mechanism for the adverse effect of awareness—when people know about the existence of algorithmic bias but do not know whether bias is present in a focal algorithm, they overgeneralize their knowledge of bias and apply it to the focal algorithm. Second, and more importantly, we design theory-driven interventions, for firms and for media outlets, to mitigate the adverse effect.

Study 1(N=370) tests the overgeneralization account that consumers who are aware (vs. not aware) of the existence of algorithmic bias are more likely to perceive a “good” algorithm as biased against disadvantaged consumers. Participants first learned about Smart Pricing algorithm for hosts on Airbnb, which has been empirically demonstrated to be race-blind and beneficial (Zhang et al. 2021). Participants rated how biased they expected the algorithm to be against Black hosts and predicted how the algorithm would affect the earnings of white hosts and Black hosts. Lastly, we asked par-

ticipants whether they were aware of the fact that algorithms can be biased. The study had a 2(not aware vs. aware) x 2(participant’s race: white vs. Black) between-subjects design. We found that those who were aware of algorithmic bias judged Smart Pricing as more biased against Black hosts than participants who were not aware. Participants also predicted a gap in the expected earnings between Black hosts and white hosts using Smart Pricing, confirming the overgeneralization of algorithmic bias to a “good” algorithm. Those who were not aware did not predict the algorithm to be biased against Black hosts.

Study 2(N=719) tests a mitigation strategy that can be implemented by firms. Specifically, firms that offer unbiased algorithms can curb overgeneralization by providing a cue such as a short message that their algorithms are different from those that are biased. We tested the efficacy of this intervention by raising all participants’ awareness of algorithmic bias through an article and asking participants to judge how Smart Pricing would influence on the earnings of white hosts and Black hosts, either with or without the intervention: 2(no intervention vs. intervention)x2(participant’s race: Black vs. white) between-subjects design. We found that the intervention successfully narrowed the expected racial gap in the algorithm’s effectiveness between Black and white hosts. Critically, the intervention significantly increased the adoption intention of Black participants ($M_{no\ intervention} = 3.36$ vs. $M_{intervention} = 3.92$; $F(1, 715) = 10.53$, $p = .001$) without affecting the adoption intention of white participants ($M_{no\ intervention} = 5.59$ vs. $M_{intervention} = 5.47$; $F(1, 715) = .5$, $p = .479$). Thus, the intervention creates a win-win situation: it encourages disadvantaged consumers to adopt the algorithm without discouraging adoption among advantaged consumers.

Study 3(N=750) extends our findings to gender discrimination and further demonstrates that a decrease in perceived bias mediated the effect of the intervention on the increased adoption intention of female participants (95%CI [-.533, -.234]).

Study 4(N=743) tests an intervention for media outlets, which play a central role in raising the awareness of algorithmic bias. Because media outlets tend to favor negative stories of a topic (e.g., Niven 2001; Sacerdote, Sehgal, and Cook 2020), we propose that media outlets, in addition to exposing the biased algorithm, can also talk about unbiased algorithms as well to help consumers understand that not all algorithms are biased. The study implemented a 2(no intervention vs. intervention)x2(participant’s race: Black vs. white) between-subjects design, where we raised all participants’ awareness of algorithmic bias by providing an excerpt from an article. The main content of the article was identical across conditions, but the article in the intervention condition had an additional section at the end about algorithms that are not racially biased. We then asked participants to evaluate an unbiased healthcare algorithm. We found that the intervention led to an increase in the adoption intention of Black participants ($M_{no\ intervention} = 3.3$ vs. $M_{intervention} = 3.62$; $F(1, 739) = 4.51$, $p = .034$), mediated by a decrease in perceived bias of the algorithm against Black users (90% CI [.001, .203]). The intervention also increased the adoption intention of white participants, but perceived bias did not mediate the increase (90% CI [-.029, .017]).

While prior literature examines how algorithmic bias per se affects consumer welfare and equity, this research extends the scope of this literature by investigating how awareness of algorithmic bias affects consumer welfare and equity. Our research also contributes to the literature on algorithm aversion by documenting awareness of algorithmic bias as another cause of algorithm aversion. Practically, we design cost-efficient and easy to implement interventions, for firms and for media outlets, to mitigate the adverse effect. We also provide insight for policymakers, that they should encourage firms

not only to make their algorithms fair but also to communicate with consumers about the algorithm's fairness.

Following the rules of AI: A Justice Perspective

EXTENDED ABSTRACT

Today, companies are increasingly adopting Artificial Intelligent (AI) agents to provide consumers with instructions and rules to be followed. For example, AI-powered chatbots are adopted to guide consumers through tax or insurance procedures and, in China, AI-powered robots are also used to regulate individuals' access to banks and hospitals.

While research has explored individuals' preferences between AI and human recommenders (Logg et al. 2019; Longoni et al. 2019, Longoni & Cian, 2020), very few studies have analyzed the responses of individuals to decisions rules developed and implemented by an AI agent (Lee, 2018; Yalcin et al., 2022). To that respect, little is known about whether consumers would be willing to comply with rules and instructions delivered by AI agents. In this paper, we investigate how the use of AI agents as 'rule providers' affects consumers' perceptions of justice and consequent behavior (compliance and satisfaction).

When individuals are told to follow a rule, the judgments of how fairly the rule has been made (i.e., procedural justice) and communicated (i.e., interactional justice) may affect how people respond to it (Collie et al., 2002; Acikgoz et al., 2020). We posit that the type of assistant (AI agent vs human) providing such rules influences consumers' perceptions of procedural and interactional justice. Perceptions of justice, in turn, affect individuals' likelihood of compliance with the rule and subsequent satisfaction with the experience. Moreover, we expect the effect to be reversed when the rule violates social norms and to be attenuated when the rule involves high levels of complexity. A set of five studies (N= 1757) test our predictions.

Studies 1A-1B utilize two different settings to examine consumer compliance with rules provided by an AI as compared to a human assistant. In study 1A (N= 402), participants imagined they had business class tickets and were waiting to board a flight. They then learned that the airport assistant decided to board business class passengers at the end. In study 1B (N= 190), participants imagined they had front-row seats to a show in a new venue in the city and they expected to enter first. However, the venue assistant decided to let front row ticket holders enter at the end. In both studies, participants in the AI (human) condition were presented with an image of a robot (human) adapted from previous studies (Mende et al., 2019; Garvey et al., 2022). Results of both studies showed that consumers comply less ($F_s > 3.48$, $p < .01$) and are less satisfied with the overall experience ($F_s > 3.52$, $p < .05$) when the request to comply with a rule is given by an AI versus a human assistant.

Additional three studies provided empirical support for perceptions of procedural and interactional justice as the psychological mechanism driving non-compliant behavior with AI. Study 2 (N= 300) showed that perceptions of procedural and interactional justice mediate the effect on compliance and satisfaction. Participants read the same scenario of study 1A (rules to board a flight). We then measured perceptions of procedural (3-items scale, sample item "The procedures followed by the airline assistant in handling the situation were fair") and interactional justice (3-items scale, sample item "The assistant would treat me with courtesy and respect") adapted from Collie et al., 2002 and Javornik et al., 2020.

Participants perceived less procedural ($F > 11.80$, $p < .001$) and interactional ($F > 88.54$, $p < .001$) justice when the assistant was an AI than a human. They also displayed less compliance ($F > 18.57$, p

$< .001$) and lower satisfaction ($F > 11.07$, $p < .001$), replicating the findings of studies 1A and 1B. Moreover, perceptions of procedural ($\beta = -.20$, $se = .07$, 95%CI [-.36, -.07]) and interactional ($\beta = -.49$, $se = .14$, 95%CI [-.79, -.22]) justice mediated the effect.

Study 3 (N= 400) showed that the negative effect of AI agents on compliance is reversed when the rules/instructions are based on consumer personal information. Participants read the same scenario of study 1B (rules to enter a venue). Then, half of them were told that the venue assistant decided the entry order based on individual personal characteristics such as age/gender/family-single (vs on the seating position). Results revealed a significant interaction between the type of assistant and the basis of the rule ($F_s > 4.76$, $p < .05$) such that when the rule was based on consumer personal characteristics, participants perceived higher levels of procedural and interactional justice if the assistant was an AI agent, which in turn led to higher compliance and satisfaction ($\beta_{inter} = .22$, $se = .10$, 95%CI [.02, .43]; ($\beta_{proc} = .15$, $se = .14$, 95%CI [.10, .45]).

Finally, study 4 (N= 465) showed that the negative effect of AI on compliance is attenuated when the rules/instructions involve high levels of complexity. Participants read the venue-based scenario. We manipulated the level of complexity by describing the event as a very large (very small) event with more than 10000 (100) people expected. When the entry process was presented as a simple decision, similar patterns from previous studies were replicated. However, the negative effect on compliance and satisfaction disappeared when the entry process was presented as a complex decision. A moderated-mediated model showed that the high level of complexity directly increases perceptions of procedural justice, which then leads to higher compliance and satisfaction ($\beta_{proc} = .25$, $se = .11$, 95%CI [.04, .48]).

Taken together our findings demonstrate that when used to provide instructions and implement rules, AI agents may generate non-compliant behavior and decrease overall satisfaction. We show that a decrease in perceptions of procedural and interactional justice is the psychological mechanism driving individual non-compliant behavior; moreover, we identify conditions where such effect is reversed and attenuated. Thus, we offer a new understanding of the impact of AI agents on consumer judgment and decision making, providing an account of the role of justice perceptions. Additionally, our findings offer timely and relevant insights for industry and public services where consumers are guided through processes engineered by AI-powered service agents.

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Working Papers

Teenagers and Brands on Instagram: An Analysis of Brand-related Teenagers' Posts - D7

Mrs. Laurence Dubé-Beaudin, Ipsos, USA
Dr. Amélie Guèvremont, École des Sciences de la Gestion, Université du Québec à Montréal, Canada

This research studies the role of brands in adolescents' self-presentation activities on Instagram. Thirty interviews and a content analysis (90 brand-related photos) were conducted. Results highlight different motivations when teenagers posts' include product (e.g., clothing) compared to experiential brands (e.g., cities), and reveal a form of self-consistency in teenagers' profiles.

Why Switch? The Impact of Visual Boundaries on Variety-Seeking Behavior - G6

Dr. 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.

Function Versus Appearance: The Consequences of How Large-bodied Individuals are Portrayed by Marketers - E7

Ms. Deepika Naidu, Washington State University, USA
Dr. Andrew Perkins, Washington State University, USA
Dr. Elizabeth Howlett, Washington State University, USA

The current research suggests that using *body as a process* (versus *body as an object*) messaging alongside images of large-bodied individuals in health-related advertisements makes consumers feel more human, which in turn increases the likelihood that consumers purchase the advertised health-related product.

Does firms' carbon disclosure increase consumers' recycling willingness - Q6

Dr. Yongchao MA, Huazhong University of Science and Technology, China
Dr. Zhongzhun Deng, Sichuan University, China

With regard to the contemporary dual carbon environment, this paper explores how carbon disclosure behavior influences firms' recycling performance based on a study of consumers' purposive judgments of corporate pro-environmental behaviors. We demonstrate that firms' carbon disclosure behavior increases firms' recycling performance and consumers' recycling willingness.

Taking It Back: How Brands Can Benefit by Reappropriating Insults - D3

Dr. Katherine Du, University of Wisconsin-Milwaukee, USA
Dr. Lingrui Zhou, Duke University, USA
Dr. Keisha Cutright, Duke University, USA

Brands are often on the receiving end of insults. Might they benefit from reappropriating these insults? We find that consumers demonstrate more positive attitudes towards and increased interest in brands that reappropriate rather than reject or ignore an insult, which is driven by perceptions of the brand's mental toughness.

The Influence of Payment Forms on Preferences for Discounts vs. Bonus-Packs - M4

Prof. Yin-Hui Cheng, National Taichung University of Education, Taiwan
Prof. Shih-Chieh Chuang, National Chung Cheng University, Taiwan
Mr. Chao-Feng Lee, National Chung Cheng University, Taiwan

Focusing on the interrelationship of cash vs. credit-card payment, promotion types (discounts vs. bonus-packs), and two types of valuations, this paper's two studies demonstrate that cash buyers prefer price discounts when primed with calculating, while credit-card users tend to choose bonus-packs when primed with feeling.

Effects of Advertisement Racial Composition On Consumer Perceptions and Purchase Intention - E6

Mr. Francisco Wang Yu, Rollins College, USA
Dr. Raghavendra KC, Rollins College, USA

This paper examines whether consumers' perceptions and purchase intentions change based on the racial make-up of the people represented in the ad. Experiment follows 2X3X2 design: advertisement type (product vs. social advocacy), racial composition (All white vs. Diverse mix vs. All Black), and racial priming effects (Racially primed vs. control)

Happiness from Ordinary or Extraordinary Experiences: An Antidote to Loneliness - L6

Dr. Nuoya Chen, Southern University of Science and Technology, China
Prof. Fang-Chi Lu, The University of Melbourne, Australia
Prof. Jinfeng (Jenny) Jiao, Amazon and Binghamton University, USA
Prof. Xiucheng Fan, Fudan University, China

Findings from four studies demonstrate that lonely consumers extract more happiness from extraordinary experiences than from ordinary ones. However, experience type does not affect the downstream happiness for nonlonely consumers.

Music To My Ears: How Music Influences Consumer Product Choice - F6

Dr. Zachary Plunk, DAF, Netherlands
Dr. Blair Kidwell, University of North Texas, USA

We propose a mechanism by which mindsets mediate the relationship between music genres and product choice. Results indicate that Country music invokes a down-to-earth mindset leading to the purchase of sincere products, whereas HipHop music evokes a competitive mindset leading to the purchase of aggressive products.

How much controversy can a brand relationship take? The moderating effect of emotional attachment in the context of brand activism. - R9

Ms. Freya-Lena Blickwedel, Heinrich-Heine-University Düsseldorf, Germany
Prof. Sebastian Uhrich, DSHS Köln, Germany

Today, consumers expect brands advocating for important societal issues. Although brand activism became increasingly popular, brands hesitantly respond to that issue. That is because controversy creates split-opinion, and brands don't want to alienate consumers opposing their stand. We tested experimentally whether emotional attachment could act as buffer in this case.

Black Box Or White Box: Intention To Use Transparent Ai Depends On What Is At Stake For The Consumer - A7

Ms. Nina Sayson, University of Neuchâtel, Switzerland
Prof. Bruno Kocher, University of Neuchâtel, Switzerland

Transparency in AI is touted as the panacea to increase trust and usage intention. Three studies demonstrate that providing an explanation does help increase trust and usage intention. However, when the prediction leads to loss outcome, consumers preferred the black box AI, implying transparency is not a one-size-fits-all solution.

The Consumers' Cognitive Flexibility Scale—Scale Development and Validation - U3

Ms. Nadine Benninger, Technical University of Munich, Germany
Prof. Jutta Roosen, Technical University of Munich, Germany

This study introduces a new scale, the Consumers' Cognitive Flexibility Scale (CCFS). The CCFS was developed and tested with two representative samples (1057 and 696 consumers). We present a reliable and valid CCFS consisting of three factors with 14 items. All three factors help explaining consumers' acceptance of innovative products.

Can social network icons change consumer attitude toward atypical products? The role of consumption visibility - J1

Ms. Eléna G. Potapieff, Peking University HSBC Business School, China
Dr. Jooyoung Park, Peking University HSBC Business School, China

This research investigates the effects of the mere presence of social networks on consumer attitudes toward atypical products. Two studies show that the mere presence of social network icons can decrease the conspicuous value of an atypical product and, in turn, negatively influences consumer attitudes toward it.

Consumer Knowledge Focus and Preference for Recommendation Agents - M7

Ms. Xunchang Fang, University of Hong Kong, Hong Kong
Dr. Tak Huang, University of Hong Kong, Hong Kong
Prof. Sara Kim, University of Hong Kong, Hong Kong

The current research demonstrates that consumers prefer algorithm-based recommendations to human recommendations when they focus more on the breadth (vs. depth) of product knowledge, such as when consumers lack product knowledge, when the number of recommendations is large, or when they are in earlier stage of the purchasing decision.

To Dress up or Not: Political Identity and Pet Owners' Purchase of Dog Apparels - R5

Dr. Lan Xia, Bentley University, USA
Ms. Wenting Zhong, Bentley University, USA
Dr. Joyce (Feng) Wang, Bentley University, USA

We examine how dog owners' political identity affects their purchase of dog apparel. In three studies, we show that political conservatism has a positive effect on the purchase of dog apparel mediated by speciesism (i.e., beliefs of human superiority). The effect is more prominent for recreational than functional dog apparel.

Perceived Consumer Online Manipulation – Definition, Measurement and preliminary Validation - U2

Mr. Janis Witte, Heinrich-Heine-University Düsseldorf, Germany

Being online, consumers increasingly face different kinds of manipulation (e.g. dark patterns). Against this background in this working paper a definition of the construct “perceived consumer online manipulation” is suggested. In addition, in this working paper a measurement scale for the three-dimensional formative construct “perceived consumer online manipulation” is developed.

How to Enhance Consumer Confidence during Uncertain Time? Investigating the Role of Uncertainty Avoidance - - J9

Dr. Bingxuan Guo, Indiana University Kokomo, USA
Dr. Huachao Gao, University of Victoria, Canada
Dr. Yinlong Zhang, University of Texas at San Antonio, USA

This research examines how the cultural orientation of uncertainty avoidance (UA hereafter, whether people like or dislike future uncertainties) impacts consumer confidence and, more importantly, consumers’ spending intention. Using a secondary panel dataset, quasi-field experiment, and laboratory experiments, authors found that UA has a negative effect on consumer confidence.

The Hiring Algorithm Reduces the Fear of Disclosing Invisible Stigmatized Identities - A10

Ms. Afra Koulaei, Inland Norway University of Applied Sciences, Norway

Using hiring algorithms (vs. human agents) as identity safety cues (that do not explicitly signal a supportive climate for a relevant stigmatized identity) reduced the fear of being discriminated due to disclosing an indivisible identity-sexual orientation. The effect was explained by the perceived company’s inclusiveness of individuals with stigmatized identities.

Enacting Van Life: A Practice Theory Perspective - S4

Dr. Philipp K. Wegerer, MCI Management Center Innsbruck, Austria

This study explores how the phenomenon of Van Life from a practice theory perspective. The qualitative case study of camper van owners finds that Van Life is constituted by three distinct, yet interrelated bundles of practices, that together resemble an authentic, and singularizing consumption experience.

Market categories as micro-institutions: How consumer critics enact connoisseurship through market personas - B9

Dr. Anna Hartman, The Australian National University, Australia
Dr. Rohan Venkatraman, University of Birmingham, UK
Dr. Erica Coslor, University of Melbourne, Australia

This paper examines how consumers display their expertise in relation to a particular market category: whisky connoisseurs who write online reviews. We illuminate how consumer critics discursively demonstrate their connoisseurship by drawing on mutually understood role identities to confer status, credibility and legitimacy in relation to market categories and institutions.

Appraising Intrinsic Motivation from Age and Attractiveness - I6

Ms. Lu Fang, The Hong Kong University of Science and Technology, Hong Kong
Prof. Anirban Mukhopadhyay, The Hong Kong University of Science and Technology, Hong Kong

Do people infer motivation from physical appearances? Three studies reveal that when viewing an attractive service provider, people infer higher (vs. lower) intrinsic motivation if the target is old (vs. young). This effect does not exist for unattractive targets. These intrinsic motivational inferences influence hiring intentions and anticipated service quality.

Marketplace Angst in Times of Change: The Case of Console Wars - T5

Ms. Isabella Ciampa, HEC Paris, France
Mrs. Kristine De Valck, HEC Paris, France

This article describes marketplace angst among consumers in times of change. Following the videogame industry up close, we analyze the console war between PlayStation and Xbox, and their evolution from hardware- to service-based. We focus on consumers' reactions and unpack their coping strategies to major changes in the marketplace.

The Backfire Effects of Website Filtering Tools - M6

Ms. Mikyoung Lim, University of South Florida, USA
Dr. Dipayan Biswas, University of South Florida, USA

One of the most significant conveniences that distinguish online shopping from offline shopping is the filtering tool. The current research, however, raises questions about the universal benefits of filtering services. This research discusses how online retailers can tailor their filtering services strategically to maximize both corporate profit and consumer experience.

Follower Size of Online Influencers - C5

Dr. Fine Leung, The Hong Kong Polytechnic University, Hong Kong
Ms. Meng Wang, The Hong Kong Polytechnic University, Hong Kong
Prof. Sara Kim, University of Hong Kong, Hong Kong
Dr. Flora Gu, The Hong Kong Polytechnic University, Hong Kong
Ms. Xunchang Fang, University of Hong Kong, Hong Kong

This research proposes that online influencers' follower size has a nonlinear effect on post performance. It examines two countervailing mechanisms through which follower size affects post performance. The findings are expected to contribute to the influencer marketing literature and offer practical guidance to marketers in their campaign decisions.

Facing Direction and Implied Motion in a Product Image Interact to Influence the Consumer's Response to Advertising - E5

Prof. Jaewoo Park, Chuo University, Japan
Prof. Taku Togawa, Sophia University, Japan
Prof. Hiroaki Ishii, Aoyama Gakuin University, Japan
Prof. Charles Spence, University of Oxford, UK

Across four studies, our research demonstrates that facing direction and motion depiction in a product image in an ad interact to impact the consumers' attitude toward the advertised product. Our study, therefore, adds new academic insights concerning the effect of product layout in advertising.

Effect of density of visual packaging elements on calorie estimations - G5

Ms. Zhuoyi Fan, Tsinghua University, China
Prof. Rong Chen, Tsinghua University, China
Prof. Xiaobing Xu, Hainan University, China

We find that consumers may judge the food as containing more calories when the density of visual elements on packaging is high (vs. low), because higher visual density increases perceived volume. However, this effect disappears when consumers are inclined to cognitive thinking (vs. affective thinking).

Should I Stay or Should I Go? Understanding How Inertia Decreases Consumers' Intention to Switch Video Streaming Services - M8

Mr. Tobias Marx, Heinrich-Heine-University Düsseldorf, Germany
Dr. Alena Bermes, Heinrich-Heine-University Düsseldorf, Germany

Based upon status quo bias theory and migration theory, this research investigates the antecedents of inertia and its effect on consumers' intention to switch between different video streaming service providers. The results show that habit and affective commitment increase inertia, which decreases switching intention.

Food is all around: Why the unhealthy = tasty belief might be an illusory correlation - N8

Ms. Sonja Kunz, University of Vienna, Austria
Dr. Simona Haasova, University of Oxford, UK
Mr. Niklas Pivecka, University of Vienna, Austria
Mr. Justus Schmidt, University of Mannheim, Germany
Prof. Arnd Florack, University of Vienna, Austria

Many consumers think unhealthy food tastes better than healthy food. We propose that this unhealthy = tasty belief might arise from skewed frequencies of healthy and tasty food across different contexts in consumers' environment. This might lead to an illusory correlation between health and taste.

"We are Family!" Why and When Communicating Family Ownership Enhances Consumer Responses - E4

Mr. Philipp Jaufenthaler, University of Innsbruck, Austria
Dr. Roland Schroll, University of Innsbruck, Austria

The current research investigates a novel humanization strategy: communicating family ownership. How communicating family ownership affects marketing-relevant outcomes is not well understood, leaving managers uncertain regarding this communication strategy. Across three studies, we examine to what extent, why, and when communicating family ownership enhances consumer responses.

Inferring Status from High Arousal Emotions - J2

Ms. Yusu Wang, University of Chicago Booth School of Business
Prof. Keith Wilcox, Texas A&M University, Mays Business School

This research demonstrates that individuals infer social status from the expression of emotional arousal, whereby higher arousal is associated with higher perceived social status. We showed that the status inference from arousal holds for both positive and negative emotions, generalizes to both genders, and stems from perceived assertiveness.

Consumers' and Managers' Perceptions and Misperceptions of Support for Firm Actions to Reduce Gun Violence - R11

Dr. Nicholas Light, Portland State University, USA
Dr. Justin Pomerance, University of New Hampshire, USA
Dr. Lawrence Williams, University of Colorado Boulder, USA

Consumers see gun violence as uniquely problematic. Firms could help, but are often hesitant, fearing backlash. We compare consumers' and managers' responses to firm actions with their perceptions of other consumers' and managers' responses, and find that people underestimate consumer and manager support for firm actions on gun violence.

The Signaling Effect of Color Saturation in Pro-Social Communication - E1

Ms. Yiping Li, University of Massachusetts Lowell, USA
Dr. Ann Kronrod, University of Massachusetts, USA

Three field and online studies support the prediction that when advertising objective is engagement (e.g., sharing, likes) low color saturation is more effective because it signals weakness and need. When advertising objective is action (donation, volunteering), high color saturation is more effective because it signals powerfulness and increases self-efficacy.

The More the Merrier? How Review Volume Biases Inferences About an Individual Review - B7

Dr. Ann Kronrod, University of Massachusetts, USA
Dr. Yakov Bart, Northeastern University, USA

Consumers use a variety of cues to assess the value and quality of online product reviews. We explore a seemingly non-diagnostic cue: the number of available reviews on a platform (review volume). Future studies will test predictions regarding possible processes that can explain this phenomenon.

Consumer Beliefs as Costly Possessions - H5

Mr. Suman Saha, University of Wyoming, USA

This conceptual paper advances Abelson's beliefs as possessions theory by integrating disparate literature on belief value, belief-based utility, and formulating the perspective of costs of beliefs into one conceptual space. This paper's contribution lies in identifying and structuring different costs associated with beliefs and describing their relevance to consumer behavior.

Positioning interventions for triggering healthier choice behavior in large food assortments - N7

Ms. Eva Heeremans, Ghent University, Belgium
Dr. Julie Verstraeten, Ghent University, Belgium
Prof. Maggie Geuens, Ghent University, Belgium
Prof. Iris Vermeir, Ghent University, Belgium

Grocery assortments carry over 40,000 items. Prior research revealed that large food assortments increase consumers' vice over virtue choices. We show in two studies that structuring products by placing virtues high(er) and vices low(er) in large food assortments reduces this "assortment size" effect both online and in brick-and-mortar grocery stores.

"Icing on the Cake" or "Stealing the Spotlight": Evidence from Eye-Tracking on How Highlighting Visuals and Presentation Formats Influence Consumers' Attentional Processes - G4

Dr. Yingting Wen, Emlyon Business School, France
Prof. Gilles Laurent, ESSEC Business School, France

This research uses eye-tracking to explore the influence of highlighting visuals and presentation formats on consumers' attention. We find that the effect of highlighting visuals depends on the importance of highlighted attributes. More space between products generates a negative impact on attention and alternative-based boxes lead to central fixation bias.

Sustainable Finance: Can Migration Theory Help to Explain Consumer's Intention for Sustainable Investments? - O7

Prof. Tim Eberhardt, Westfälische Hochschule, Germany
Mrs. Regina Harms, Heinrich-Heine-University Düsseldorf, Germany
Prof. Marco Hubert, Aarhus University, Denmark
Prof. Peter Kenning, Heinrich-Heine-University Düsseldorf, Germany
Dr. Jan Spelsiek, Heinrich-Heine-University Düsseldorf, Germany

As society transforms towards sustainability, "sustainable finance" gains attention. Within this concept consumer's intention to invest in sustainable assets is crucial. This paper investigates whether migration theory (Push-Pull-Mooring-Model) could be applied to sustainable investments. Our empirical study shows that PPM-Model contributes to explain variance in consumer's intention for sustainable investments.

Math Anxiety and Pricing Structures: Do Math-Anxious Consumers Prefer Monthly or Annual Pricing? - K6

Ms. Micayla Downey, Michigan State University, USA
Dr. Jorge Pena Marin, Michigan State University, USA

This research shows that high math anxious consumers prefer a monthly price structure (\$9.99/month) over an annual price (\$99.99/year). This occurs because high versus low math anxious consumers have a greater difficulty processing numbers, and monthly (versus annual) prices are easier to process due to their lower (versus higher) magnitude.

Luxury Brands in Metaverse - D9

Dr. Julia Pueschel, NEOMA Business School, France
Dr. Satadruta Mookherjee, Grenoble Ecole de Management, France

In this research, given the recent spurt of luxury brands featuring their products in the metaverse, we examine if the use of luxury brand items to enhance one's virtual avatar augments the gamer's sense of confidence, empowerment, and actual in-game performance.

Politics and Romance: Decision Making in Romantic Relationships - R3

Mr. Logan Pant, University of North Texas, USA
Dr. Blair Kidwell, University of North Texas, USA

Research is limited on how political ideology can influence decision-making within romantic relationships. Given the highly polarized political landscape, we explore how matched or mismatched ideological couples make consumption decisions. A conceptual framework is developed to understand the resulting choice outcomes and decision tendencies that mediate these effects.

Struggle for a Good Gift? The Impact of Financial Constraints on Quantity-Quality Tradeoffs - K5

Ms. Tianhui Fu, Renmin University of China, China
Ms. Yan Wang, Renmin University of China, China
Dr. Jing Jiang, Renmin University of China, China

To deepen the understanding of quantity-quality tradeoffs prevalent in consumer choices, this research proposes a novel antecedent, demonstrating that financially constrained consumers exhibit a greater choice preference for quantity over quality when purchasing gifts for others. Such effect is driven by their perceived uncertainty pertaining to the gift-giving decision.

Pay for Freebies: Why Consumers Choose to Purchase Product Samples - M3

Ms. Ruye Li, Sun Yat-sen University, China
Dr. Xin Wang, Hohai University, China

Recently, product samples have entered the commodity circulation market as free gifts. We conducted a survey and two experiments to explore why consumers purchase samples. The results show that quality and price of samples relative to formal products significantly impact consumers' purchase intentions.

Identity Distraction: How Stigmatized Consumers Redirect Attention - H8

Dr. Hillary Wiener, University at Albany, USA
Dr. Katherine Du, University of Wisconsin-Milwaukee, USA
Mr. Jiwon Kim, University of Wisconsin-Milwaukee, USA

We introduce the concept of identity distraction to the consumer behavior literature. In three studies we demonstrate that consumers with visible stigmatized characteristics, such as disfigurements or obesity, use identity-relevant products to distract other people's attention away from their stigmatized identity and redirect it to other aspects of their identity.

Interpersonal Touch Observation as a Double-Edged Sword: How Viewing Interpersonal Touch Affects Consumer Perceptions of Service Providers and Service Quality - F5

Ms. Suyeon Jung, University of Wisconsin-Madison, USA
Dr. Joann Peck, University of Wisconsin-Madison, USA

We investigate how observing interpersonal touch of a service provider affects observers' perception of the service. We show that observing (vs. not observing) touch of a service provider has negative effects on perceptions of the service. This effect is moderated by prior trust in the service and loneliness of observers.

Express Yourself: How Identity Categorization Impacts Stigmatized Identity Expression - H7

Dr. Tracy Rank-Christman, University of Wisconsin-Milwaukee, USA
Dr. Katherine Du, University of Wisconsin-Milwaukee, USA

Divulging a stigmatized identity may be difficult for some consumers, yet at times, beneficial. In two studies, we demonstrate that for consumers with stigmatized identities, identity expression is more likely when negational labels, rather than affirmational labels, are accessible. Further, we find that psychological discomfort mediates this effect.

A pitfall of sequential product naming - S9

Mr. Wonsuk Jung, University of Wisconsin-Madison, USA
Dr. Joann Peck, University of Wisconsin-Madison, USA

We investigate product upgrades and address an overlooked factor that affects how consumers perceive upgraded products: how new upgrades are named. We propose that when consumers make an upgrade decision (vs. new purchase decision), an upgrade is received better when it takes a non-sequential name (vs. a sequential name).

The Impact of Cultural Distinctiveness on the Consumption of Culturally-Relevant Products - H6

Ms. Anabella Donnadieu, Washington State University, USA
Dr. Andrew Perkins, Washington State University, USA
Dr. Chadwick Miller, Washington State University, USA

We examine the mechanisms by which immigrants' chronic cultural distinctiveness affects their consumption habits. Specifically, we describe a nuanced understanding of immigrants' preferences for products that are or are not related to their ethnic-cultural background and identify links between cultural distinctiveness, inauthenticity, desire for familiarity, and product preferences.

Predicting consumer readiness for immersive virtual experiences: the role of presence - U7

Ms. Thi Diem My Ta, University of South-eastern Norway, Norway
Prof. luk warlop, BI Norwegian Business School, Norway
Dr. Karen Stendal, University of South-eastern Norway, Norway
Prof. Marit Engeset, University of South-eastern Norway, Norway

Our study aims to develop and validate a cross-media research instrument - a pretest questionnaire - that predict individual differences in presence tendency. We will identify the profiles of potential consumers of immersive technology and identify nuances of the individual differences in different types of media.

Children's Susceptibility to Advertising: the (un)controllability of evaluative conditioning effects. - E3

Dr. Serena D'Hooge, Rotterdam School of Management, Erasmus University, Netherlands
Prof. Steven Sweldens, Erasmus University, Netherlands
Prof. Mandy Hütter, University of Tuebingen, Germany

Two experimental studies demonstrate the presence of both controllable and uncontrollable evaluative conditioning (EC) effects in childhood. This suggests that children are susceptible to such advertising effects and that they are, only to some degree, able to exert control.

Promoting Innovation in Homelessness and Mental Health Service Design - S8

Ms. Chloe Spence, University of Liverpool, UK
Prof. Philippa Hunter-Jones, University of Liverpool, UK
Prof. Lynn Sudbury-Riley, University of Liverpool, UK
Prof. Judy Zolkiewski, University of Manchester, UK
Mr. Steve Flatt, Working Conversations Group CIC, UK

This research seeks to advance knowledge on service design and transformative value creation in contexts of vulnerability, looking specifically at the context of integrated homelessness and mental health services. Rich pictures were used to elicit in-depth narrative accounts of customer journeys, illuminating processes of value cocreation and opportunities for innovation.

An Analysis of eWOM emotionality throughout the COVID-19 Crisis - B6

Dr. Maximilian Gerrath, University of Leeds, UK
Dr. Alexander Mafael, Stockholm School of Economics, Sweden
Dr. Aulona Ulqinaku, University of Leeds, UK
Dr. Alessandro Biraglia, University of Leeds, UK

With people spending more time online during the COVID-19 pandemic and many services being disrupted, the importance of listening to consumers on social media has increased. This research examines consumers' emotional states by analyzing 327,205 tweets directed at brands throughout the first year of the pandemic.

Zooming for an Ideal Self: How Video Conferencing Promotes Desires for Self-Enhancing Products - H4

Dr. Li Huang, Hofstra University, USA
Dr. Laura Pricer, University of North Georgia, USA

Across three studies, we find that video-conferencing can trigger greater interest in and a higher purchase likelihood for self-enhancement products due to heightened self-appearance anxiety. This effect is attenuated when the web camera is off (lower self-appearance anxiety) and is more pronounced among consumers who do not have self-affirmation.

What helps a fashion retailer – disclosing supplier names or supplier sustainability conditions? - Q8

Mr. Abdullah Althenayyan, Georgetown University, USA
Dr. Shiliang Cui, Georgetown University, USA
Ms. Caprice Catalano, Georgetown University, USA

Does the type of transparency information (supplier versus sustainability) affect consumers' purchasing behavior? Results from pre-registered incentivized experiments show that, when a product's quality is unknown or high, sustainability information increases purchase price. However, when a product's quality is low, there is no significant difference in purchase price.

How Breaking Record Frames Influence Sustainable Consumer Behavior: Evidence from Two Randomized Field Experiments - Q5

Mr. Lukas Maier, FAU Erlangen-Nürnberg, Germany
Dr. Johanna Palcu, WU Vienna, Austria
Prof. Martin Schreier, WU Vienna, Austria
Dr. Christian Baccarella, FAU Erlangen-Nürnberg, Germany
Prof. Kai-Ingo Voigt, FAU Erlangen-Nürnberg, Germany

This research provides empirical field evidence that breaking record frames increase sustainable behavior. Two large-scale randomized field experiments (N = 216,379), show that consumers were more likely to make their bus trip carbon neutral in a breaking record frame condition compared to a baseline condition and a social norm condition.

Using Mobile Ethnography as A Research Tool in Launching A New Social Media App - U5

Dr. Sweta Thota, USF, USA
Ms. Joanna Jones, InterQ, USA

This paper offers *Mobile Ethnography (ME)* as a research tool and discusses the importance of this method and importance for future researchers and managers. Through a conceptual discussion and viewpoints, this timely research makes theoretical and methodological contributions. This scholarly research sheds light on using ME during app testing.

No Goal-Gradient Effect for Group-Level Goals - I3

Dr. Olya Bryksina, The University of Winnipeg, Canada

This research shows that the goal-gradient effect--a motivational increase that occurs when a person approaches goal attainment--does not exist for group level goals. This happens because approaching goal attainment increases the perceived likelihood of free-riding, which puts downward pressure on motivation leading to an overall null effect.

Brand Sustainability: Conceptualization, Scale Development and Validation - Q4

Prof. Eric Harvey, Purdue University (Fort Wayne), USA
Dr. Jennifer Hutchins, Kennesaw State University, USA
Dr. Swati Panda, Kennesaw State University, USA
Dr. Patrick van Esch, Kennesaw State University, USA

What makes a brand sustainable over time? A cohesive measure of brand sustainability eludes marketers, yet it is a critical element to ensure the longevity of a brand. This research defines brand sustainability, with the goal of creating a measure of the same, positioned as an underlying causal mechanism.

From the ‘ghetto’ to the ‘stars’: how streetwear conquered the luxury fashion system - T7

Mr. Gabriele Murtas, Università degli Studi di Bergamo, Italy
Dr. Giuseppe Pedeliento, Università degli Studi di Bergamo, Italy

Born as a subcultural clothing style in the American ghettos of the 1970s, streetwear started an unexpected status reconfiguration process that allowed it to enter the once conservative luxury realm. We draw on the market system dynamics perspective to analyze the changes that favored this process of vertical extension.

Try Something New for your Periods! The Impact of Need for Uniqueness on the Adoption of Innovative Menstrual Products - S6

Ms. Yunlu Zhao, University of Leeds, UK
Ms. Honghan Qi, University of Leeds, UK
Dr. Shankha Basu, University of Leeds, UK

Innovative menstrual products have experienced low adoption despite their long availability in the market. Four studies found that consumers' higher need for uniqueness predicted greater intention to try such products. More importantly, self-affirmation led consumers with low need for uniqueness to also indicate greater intention to try these products.

Need for Uniqueness Increases Preference for Uncertainty : The Mediating Role of Cognitive Flexibility - K4

Prof. Allen Ding Tian, Shanghai University of Finance and Economics, China
Dr. Yuting Yuan, Shanghai University of Finance and Economics, China

This research examines the role of consumers' need for uniqueness in boosting preference for uncertainty in consumption settings. Across five studies, we demonstrate that consumers with high- (versus low-) need for uniqueness exhibit a greater preference for uncertainty via enhanced cognitive flexibility.

Stop the Spread: The Detection and Classification of False Claims in Partially True Stories - B2

Mr. Vaidyanathan VS, Temple University, USA
Dr. Nicole Henninger, Temple University, USA
Dr. Vinod Venkatraman, Temple University, USA

Real-world news stories may often contain embedded false claims. Yet how people process partially true news stories is under-researched. We show that whether people label a story as fake news determines the perceived accuracy and sharing intentions of constituent claims regardless of objective truth, providing insights into spread of misinformation.

Smaller But More Hedonic? How Gift Card Face Value Influences Hedonic Consumption - L1

Ms. Yating DONG, The Chinese University of Hong Kong, Hong Kong
Dr. Suntong QI, Lingnan University, Hong Kong

Current research examines consumers' hedonic consumption of gift cards with the same remaining value but different face values. We found that consumers will choose more hedonically with the remaining balance of a smaller face value gift card than that with a larger face value due to a greater windfall perception.

The Influence of Individual Differences in Sensory Processing on Consumption Experiences - L5

Ms. Melanie Paul Austin, Baruch College/CUNY, USA
Dr. Diogo Hildebrand, Baruch College/CUNY, USA

While much is known about individual and contextual factors shaping consumers' enjoyment of experiences, little is known about drivers of the stability of experience enjoyment. Across three studies, we find that sensation seeking, a common individual trait, increases the stability of experience enjoyment, especially in highly stimulating and distracting environments.

Donate to Get Along or Ahead: Persuading Messages for Private Information Donation - P6

Ms. Trang Mai-McManus, University of Manitoba, Canada
Prof. Kelley Main, University of Manitoba, Canada

This research demonstrates the impact of exposure to communal salience appeals on consumers' willingness to donate private information for the public good via the mediating effect of heuristic information processing. The outcomes of this research will enrich the literature on data donation and provide practical recommendations.

Farm to Chef's Table: Labors in the Building of the Pyramid of Taste

Ms. İrem TAŞTAN, Graduate Student
Prof. Ebru Uzunoglu, Professor

This study aims at understanding the merits of labors that are contributing to the emergence of upper-scale gastronomical brand experience, by observing the branding practices which are co-created with the consumers of the fine-dining restaurants. Making of taste is highlighted, as the collective presumption of gastronomical value is conceptualized.

"You Will See an Ad": Prompting Online Ads to Make Them Less Interruptive - E2

Mr. Sangmin Kim, University of Minnesota, USA
Prof. William Hedgcock, University of Minnesota, USA

We investigated whether reducing consumers' surprise response by prompting them about upcoming ads improved their attitudes toward the ads. Due to the nature of surprising events, prompting ads can have mixed impacts on attitudes depending on how much consumers were engaged in watching the content interrupted by the ad.

Forecasting consumer brand perception using large-scale text analysis - D6

Mr. Vincent Chen, UC Berkeley
Dr. Ming Hsu, University of California, Berkeley
Dr. Zhihao Zhang, University of California

This study tests the idea of using longitudinal text corpora to trace how consumer perception evolves over time. Specifically, we show that recently developed diachronic natural language processing (NLP) approaches can be used to characterize the evolution of consumer perception, and forecast how consumer brand associations change over time.

When the Irrelevant Becomes Relevant: The Power of Theme-Irrelevant Talk in Game Livestreaming - C3

Prof. Tingting Fan, Hong Kong University, Hong Kong
Prof. Leilei Gao, The Chinese University of Hong Kong, Hong Kong
Prof. Yael Steinhart, Tel-Aviv University, Israel

The increasing popularity of online streaming has become a global phenomenon. While livestreamers typically focus their broadcasts on specific themes, they may also include theme-irrelevant talk. Analyzing field data from the world's largest game-streaming platform, Twitch, we discover an inverted U-shape relationship between theme-irrelevant talk and streamers' popularity.

Giving a Fish or Teaching How to Fish? The influence of different donation appeals on donors' charitable choices - P4

Mr. Jihao Hu, CUHK Business School, The Chinese University of Hong Kong, Hong Kong
Mr. Tongmao Li, Ivey Business School, Western University, Canada
Prof. Zhimin Zhou, College of Management, Shenzhen University, China

We propose that donors in face with positive (negative) charitable appeal are inclined to conduct developmental-helping (survival-helping) behavior and promotion (prevention) hope mediates the effect. The donation appeal effect will occur (disappear) when donors are driven by moral (impact) goal. Four studies were conducted to testify our theory.

Subjective Scales Can Enhance Consumer Expectations and Lower Product Evaluations - U1

Prof. Claudiu Dimofte, San Diego State University, USA

The Shifting Standards Effect states that stimuli engendering low stereotypical expectations are judged less stringently on subjective than on objective measures. We find that in a marketing context the effect is symmetric (i.e., brands of high expectations are judged more stringently on subjective measures) for certain respondent and stimulus types.

Consumer preferences under conflicting information of varying credibility - K2

Mr. Jonathan Inglis, Melbourne Business School, Australia
Dr. Pat Auger, Melbourne Business School, Australia

This study examines how exposure to conflicting product information from sources of varying credibility influences consumer product preferences. We find that consumers selectively discount conflicting information from a low credibility source while paradoxically overweighting confirmatory information from the same low credibility source, evidence of irrational consumer behavior.

Will Consumers Buy a Product after Missing a Time-Limited Promotion? Evidence from Amazon's Lightning Deals - M2

Ms. Bingyang Fang, Binghamton University, USA
Prof. Yilong Zheng, Merrimack College, USA
Dr. Subimal Chatterjee, Binghamton University, USA
Prof. Chang Hee Park, Binghamton University, USA

We analyze online-sales data and find selective evidence of a post-promotion dip for deeply-discounted products that sell well during the promotion period. Psychologically speaking, this suggests that consumers like to imitate others as the promotion runs, and regret missing out on a good deal after the promotion ends.

How Does Video Playback Speed Change Consumer's Mindset? Faster Playback Leads to Preference for Desirability Instead of Feasibility - C4

Ms. Huimin Li, Renmin University of China, China
Dr. Jingyi LI, Zhejiang A&F University, China

This research explores the effect of **fast-speed playback** on **abstract thinking** in Marketing. We find that **watching video faster** (vs. normal-speed) led participants to focus on **abstract construals** and consequently increased the **preferences** for the choice option with **high desirability** compared to the choice option with high feasibility.

Development and Validation of a Measure of Construct Construal - U6

Dr. Jolie Gutentag, Pepperdine University, USA
Prof. Cristel Russell, Pepperdine University, USA

This research contributes methodologically to construal level theory (CLT) by establishing and validating the Construct Construal Scale. This new instrument captures the degree to which an individual construes a construct as abstract / concrete. Having the ability to reliably measure a construct construal could be extremely relevant to CLT researchers.

The George Banks Effect: Consumers prefer dominated options to avoid booking losses on their mental accounts - K1

Mx. Tyler MacDonald, Questrom School of Business, Boston University, USA
Dr. Jesse Walker, The Ohio State University, USA

Increasing a product's size and decreasing its price ought to have a positive effect its attractiveness. However, we find that, paradoxically, doing so can have the opposite effect due to consumer mental accounting processes. Thus, the George Banks effect: consumers prefer dominated options to avoid booking losses from routine purchases.

Facts vs. Story? Narrative Communications Help Skeptical consumers Decrease Negativity Bias During Information Search - B3

Ms. Honghan Qi, University of Leeds, UK
Dr. Yeyi Liu, University of Leeds, UK
Dr. Shankha Basu, University of Leeds, UK
Dr. Aristeidis Theotokis, University of Leeds, UK

Skeptical consumers respond negatively to marketing persuasions. They behave biased in information preferences and show lower purchase intentions. Three studies found that narrative communications not only can mitigate skeptical consumers' negativity bias in information search but also can increase their purchasing intention of the product.

NFTs for Conspicuous Consumption - J3

Mr. Eric Park, Columbia Business School, USA
Dr. Kristen Lane, Columbia Business School, USA
Dr. Silvia Bellezza, Columbia Business School, USA

NFTs are taking the luxury industry by storm, but there is a lack of understanding in what NFTs do for conspicuous consumption. The authors show counterintuitive evidence that when luxury products are associated with NFT (vs. no NFTs), the perceived status of the products increases when exclusivity is diluted.

The role of consumers' web browsing data in assessing their personal values - A8

Mrs. Zohar Sender, Technion, Israel Institute of Technology, Israel
Prof. Liat Levontin, Technion, Israel Institute of Technology, Israel
Dr. Elad Yom Tov, Technion, Israel Institute of Technology, Israel

Consumers' values are important to marketers but are hidden from them. We propose an innovative and implicit method to assess consumers' values based on their web browsing history. We further explored the values-related variations in consumers' willingness to disclose their web browsing history.

Customization of an Avatar and Impact on Product Ownership - S1

Ms. Tanishka Jain, University of Wisconsin-Madison, USA
Dr. Joann Peck, University of Wisconsin-Madison, USA

We examine the impact of customization (vs none) of an avatar on product ownership and find that people customize their avatars closer to their ideal self. Utilizing a customized avatar to shop increases ownership of a product that the ideal avatar interacts with compared to shopping with a non-customized avatar.

Towards Academic Activism in Consumer Research - R7

Dr. Alexei Gloukhovtsev, Aalto University School of Business, Finland
Ms. Petra Paasonen, Aalto University School of Business, Finland

Drawing on rich traditions of activist scholarship outside consumer research and on interviews with activist academics, we suggest best practices for maximizing societal impact through integrating activism into consumer scholarship. We hope to encourage more consumer researchers to engage in academic activism, both through research and other work in academia.

Community-driven local market shaping: a practice theory analysis of the Chilean streetwear fashion community - T6

Mr. Javi Contreras, University of Birmingham, UK
Dr. Flavia Cardoso, Universidad del Desarrollo, Facultad de Economía y Negocios, Chile

This article reflects on how community members in emerging economies develop local practices that foster community growth and allow the local market to thrive. Global trends often influence local practices, but these are adapted, translated, and appropriated, becoming critical drivers for regional market growth.

How Social Brand Positioning Affects Consumer Evaluations of Product Performance - D5

Ms. Megan Trillo, Duke University, USA
Dr. Lingrui Zhou, Duke University, USA
Dr. Keisha Cutright, Duke University, USA

Should brands incorporate social issues into their marketing strategies? We find that incorporating social messaging, whether congruent or incongruent with a brand's product category, decreases consumers' opinions of how well a brand's product will perform.

Finding Meaning Beyond Oneself: Meaning-seeking Boosts Charitable Behaviors - P8

Mr. Yuqi Guo, Tilburg University, Netherlands
Dr. Robert Smith, Tilburg University, Netherlands
Dr. Anna Paley, Tilburg University, Netherlands

Across four studies (n=1317), We show that the pursuit of meaning does not drive prosocial behaviors uniformly; among six prosocial behaviors, meaning-seeking only promotes volunteering. This effect is driven by the belief that volunteering provides more meaning, and it is robust for both volunteering intention and real behavior.

Cheap Talk or Walk the Walk: Impact of Relevance on Consumer Perceptions of Social Media Activism - R10

Ms. Jacqueline Pan, Duke University, USA
Mr. Demi Oba, Duke University, USA
Dr. Gavan J. Fitzsimons, Duke University, USA

Despite social media activism's increasing ubiquity, it remains unclear whether it helps or harms social movements. Five studies find that the relevance of an activism message increases observing consumers' attitudinal and behavioral support for a charity because it signals whether an activism message was posted with altruistic or impression-management reasons.

Warm glow fades away: How long-term enjoyment focus leads to ethical product aversion - Q3

Mr. Yuqi Guo, Tilburg University, Netherlands
Ms. Ceren Sahin, Tilburg University, Netherlands
Dr. Anna Paley, Tilburg University, Netherlands
Dr. Robert Smith, Tilburg University, Netherlands

We demonstrate a barrier to the consumption of ethical products. When consumers (n=1227) consider their long-term enjoyment, they are less likely to choose ethical products and are willing to pay less for them (vs. more high-performing products). This effect is mitigated when the ethical benefit at each use is highlighted.

The Effect of Visual Cues on Consumer Persuasion: How the Shape of a Textbox Influences Consumer Attitude Strength - F7

Dr. Dongeun Kim, University of Wisconsin, Eau Claire, USA
Dr. Dhananjay Nayakankuppam, University of Iowa, USA
Dr. Cathy Cole, University of Iowa, USA

We examine whether the elongation bias in size perception extends to word estimates in advertisements. We find that the shape of a text message affects attitude strength, especially under the low elaboration condition. This research contributes to the literature on elongation bias and consumer attitude.

Service Recovery Expectations as a Function of Social Class - H11

Mr. Kaan Canayaz, Florida International University, USA
Mr. Shivam Agarwal, Florida International University, USA
Mr. Todd Haderlie, Florida International University, USA
Dr. Jaehoon Lee, Florida International University, USA

We provide insight into how social class affects perceptions of service failure and recovery. When failure occurs, levels of recovery expectations are higher for consumers from lower (vs. upper) class especially when the failure is perceived as severe. This is explained by class differences in the perceived severity.

8 in 10 or 800 in 1,000? Numerical Framing Effects on Norm Compliance - K3

Ms. Kun Wang, Rutgers University, USA
Dr. Gabriela Tonietto, Rutgers University, USA

The present research examines the effect of presenting descriptive norms with larger (800 in 1,000) versus smaller numbers (8 in 10). Four studies examining real and hypothetical behavior document that using larger numbers to describe the same proportional value increases the perceived strength of the norm, thereby increasing norm compliance.

Human vs. Algorithm: How Online Shopping Recommendation Subjects Affect Consumer Satisfaction - A6

Dr. Di Jiang, Nanjing University, China
Dr. Xin Wang, Hohai University, China
Dr. Chunqu Xiao, Shaoxing University, China
Mr. Haoyuan Wang, State University of New York at Buffalo, USA
Dr. Zhijun Li, Nanjing University, China
Prof. Hong Zhu, Nanjing University, China

This paper explored the influence of recommendation subjects (human vs. algorithm) on consumers' satisfaction. Compared with algorithm recommendation, consumers believed that human recommendation can better meet their unique needs, and then improved their satisfaction. This effect is moderated by product type, opportunity to feedback and consumers' need for uniqueness.

We Do This All the Time: The Effectiveness of Repeated Donation Solicitations - P7

Mr. Shih-Chun Chin, University of Illinois at Urbana-Champaign, USA
Prof. Ming-Shen (Cony) Ho, Clemson University, USA

Charities ask for either one-time or repeated donations from potential donors. Through two studies, we find preliminary evidence that donors are more willing to contribute to the cause when charities request donations repeatedly (vs. one-time). This effect is driven by consumers' perception of personal impact.

How Assortment Size of Add-up Items Influences Consumers' Willingness to Obtain Conditional Promotions: The Moderating Role of Distance-to-Threshold - M1

Dr. Jie Wang, Renmin University of China, China

This research explores how assortment of add-on items affects consumers' willingness to avail conditional promotions. We find that when distance-to-threshold close, larger assortment increases willingness; when distance-to-threshold far, smaller assortment increases willingness.

The research was supported by the Outstanding Innovative Talents Cultivation Funded Programs 2021 of Renmin University of China.

Scavenger Hoppers & Apex Shoppers: Personification of Consumer Vulnerability in Retail - M10

Ms. Kirby Cook, University of Illinois at Urbana-Champaign, USA
Dr. Michelle Nelson, University of Illinois at Urbana-Champaign, USA

Through 20 interviews, we examine consumer experiences among heterosexual males and females, and LGBTQ+ individuals. When asked to personify their shopping traits, participants shared a variety of animals known for their scavenger behaviors, selective attention, and speed. Animal personas reflected participants' personal styles, identities, and perceived vulnerability in the marketplace.

Temporal Analogies Increase Motivation - K4

Ms. Kun Wang, Rutgers University, USA
Dr. Gabriela Tonietto, Rutgers University, USA

The present research examines temporal analogies, where the time spent on a target behavior is compared to an activity of similar duration. Two studies demonstrate that consumers are more likely to engage in a target behavior when given a temporal analogy – whether the analogous activity is positive or negative.

The Good Side of Stress: The Effect of Stress on Compliance with Healthcare Advertisements - N6

Dr. Sheng Bi, Beijing Institute of Technology, China
Ms. MengLin li, Renmin University of China, China
Dr. Huan Chen, China National Petroleum Corporation Managers Training Institute, China
Dr. Yuan Wen, University of Illinois Springfield, USA

This research proposes a positive impact of stress on consumers' compliance with healthcare advertisements. We hypothesize that consumers under stress comply with healthcare advertisements more and this effect is mediated by people's tendency to avoid risks. We further suggest that perceived economic mobility and self-efficacy moderate the focal effect.

Morality, emotions and relationship marketing - H1

Dr. Vivian Pontes, The University of Queensland, Australia
Dr. Nicolas Pontes, The University of Queensland, Australia
Dr. Dominique A. Greer, Queensland University of Technology, Australia

Across two studies, this paper establishes that, depending upon how moral identity is central to an individual's self-identity, preferential treatment might trigger the emotion of shame, as opposed to gratitude. As negative emotions influence consumers' service experiences detrimentally, it diminishes favorable attitudes toward service providers.

The role of British brands in reshaping Romanian immigrants' identity - H3

Dr. Carmen Mal, The Open University Business School, UK
Dr. Tana Cristina Licsandru, Queen Mary University of London, School of Business and Management, UK

This research explores how British brands adopt culturally relevant elements in their brand communications/campaigns, and how such brand communications reshape Romanian immigrants' identity formation, as a representative group of EU immigrants in the UK. Preliminary findings show how and why British brands are culturally relevant to EU immigrant consumer groups.

Exploring Consumer Performances as Territorial Negotiations - T8

Dr. Rohan Venkatraman, University of Birmingham, UK

Through an ethnography of drag performances, and drawing on Goffman's (1971) *territories of the self*, I examine how consumer performances rely on consumers being able to defend sociospatial domains. I theorise consumer performances as emerging from the negotiations between the body, private and social meanings, and levels of space.

Products that Stay with Us: Physical Mobility Leads to Stronger Preference for Durable Products - J6

Ms. Hanife Armut, Koc University, Turkey

Dr. Gunes Biliciler, Koc University, Turkey

We demonstrate that mobile (vs. stable) people exhibit stronger preference for durable products. Moreover, mobile people perceive time as more fragmented, and this is predicted to underlie effect of mobility on product preferences. Because most products targeted at mobile people are designed to be impermanent, these findings have important implications.

Can Artificial Intelligence Persuade You To “Do Good” Better Than A Human? An Examination Into the Role Of AI as Persuasion Agents - A5

Ms. Nina Sayson, University of Neuchâtel, Switzerland

Dr. Michael Puntiroli, University of Neuchâtel, Switzerland

Prof. Bruno Kocher, University of Neuchâtel, Switzerland

Prof. Valéry Bezencon, University of Neuchâtel, Switzerland

This research investigates the effectiveness of AI as persuasion agents in inducing pro-social behaviors. Initial findings show that while participants detected more motive and persuasive intent from AI agents, these agents were more effective in persuading participants to order plant-based dishes compared to human agents, highlighting AI's persuasion potential.

Mental Contrasting Increases Savings for High-Efficacy Individuals: Evidence from a Field Experiment - O6

Ms. Nurit Nobel, Stockholm School of Economics, Sweden

Mental contrasting (MC) is a cognitive strategy where positive future outcomes are contrasted with present barriers to promote goal attainment. This field experiment tests MC's efficacy in increasing financial savings, and in line with theory finds that MC increases savings for high-efficacy individuals both short- and long-term.

A deep dive into healthcare consumers' actual advance care planning processes: Identifying factors that drive advance care planning for end-of-life decisions over time - N5

Dr. Svenja Diegelmann, University of Klagenfurt, Austria

Prof. Ralf Terlutter, University of Klagenfurt, Austria

This research contributes to our understanding of what drives healthcare consumers to make decisions about advance care planning. Our qualitative study demonstrates how personal experiences and stories of others related to illnesses, medical treatments, and end-of-life triggered healthcare consumers' reflection processes over time; and, in turn, advance care planning actions.

How Implicit Mindset Influences Consumers' Adoption of Next Generation Products - S5

Ms. Nan (Iris) Xue, The Chinese University of Hong Kong, Hong Kong
Mr. Jihao Hu, The Chinese University of Hong Kong, Hong Kong
Prof. Lisa C. Wan, The Chinese University of Hong Kong, Hong Kong

Consumers with an incremental (vs. entity) mindset display a higher interest in next generation products because they infer more effort from the upgrading process. But when such products are superlative- (vs. comparative-) framed in the advertisement, entity theorists tend to show a higher interest in purchasing them.

The Morality of Marketing Placebo Effects - Q7

Ms. Camilla Zallot, Rotterdam School of Management, Erasmus University
Prof. Jonathan Berman, London Business School

To what extent do consumers believe that marketing actions that change consumers' product experiences *while having no material impact on product quality itself* are unethical? We find that this depends on the action involved.

The Efficacy of Pain Promotion: How Need for Closure Shapes Positive and Negative Inferences of Pain in Self-Improvement Products - E9

Mr. Alberto Barchetti, University of Cincinnati, USA
Dr. Joshua Clarkson, University of Cincinnati, USA
Dr. Ashley Otto, Baylor University, USA

The research explores how consumers' perceptions of painful self-improvement products vary as a function of need for closure. Results suggest that using pain to promote self-improvement products enhances the products' credibility and persuasiveness for consumers high in need for closure. This effect reverses for consumers low in need for closure.

Experiencing Culture Shock: How Political Ideology Shapes Consumer Openness to Cultural Immersion - R4

Mr. Alberto Barchetti, University of Cincinnati, USA
Dr. Joshua Clarkson, University of Cincinnati, USA
Dr. Bryan Buechner, Xavier University, USA
Ms. Yujin Lee, University of Cincinnati, USA
Dr. Ashley Otto, Baylor University, USA

The research explores how the experience of culture shock varies as a function of consumers' cognitive styles embodied in their political ideology. Findings suggest that conservatives (vs. liberals) are more susceptible to cultural shock and explores the mediating role of cognitive flexibility, cosmopolitanism, and cultural identity.

The Impact of Cause-related Marketing on Preference for Visual Saliency - P1

Dr. Grace Chae, The Hong Kong Polytechnic University, Hong Kong
Ms. Jie (Jane) Wang, The Hong Kong Polytechnic University, Hong Kong
Prof. Yuwei Jiang, The Hong Kong Polytechnic University, Hong Kong

Cause-Related Marketing (CRM) refers to the marketing practice of donating proceeds from product sales to designated charitable causes (Varadarajan & Menon, 1988). This research shows that cause-related marketing (CRM) leads to an increased preference for visually salient products.

Anti-consumption and Regenerative Market Forces: The Case of Digital Detoxers - T4

Mrs. Quynh Hoang Ngoc, Lancaster University, UK

Drawing upon the context of “digital detoxing”, I explore how anti-consumption may function as “*regenerative market forces*” within networks of desire under semiocapitalism. I show the dynamic market-mediated processes in which (anti-)consumers’ consumption desire is perpetually reformulated into substitute forms that largely sustain these networks and the broader semiocapitalist system.

COVID-19 Vaccine Brand Preference and Political Orientation: the Insightful Case of Argentina - R12

Dr. Elena Fumagalli, Universidad Torcuato Di Tella, Argentina
Ms. Marina Belén Dolmatzian, Universidad Torcuato Di Tella, Argentina
Ms. Candelaria Belén Krick, Universidad Torcuato Di Tella, Argentina
Ms. Julieta Edith Del Negro, Universidad Torcuato Di Tella, Argentina
Dr. Joaquín Navajas, Universidad Torcuato Di Tella, Argentina

Consumers choose products that are congruent with their self-concept, which includes their political affiliation. A survey in Argentina revealed that political orientation affects preferences for COVID-19 vaccine brands, depending on the country in which they have been produced (western or eastern) and whether their political party talks favorably about them.

How Do We Treat AI? Understanding Consumer Fairness to Artificial Intelligence - A4

Ms. Xuying Leo, Korea Advanced Institute of Science and Technology
Mr. Ilyung Cheong, KAIST, South Korea
Dr. Young Eun Huh, KAIST, South Korea

We investigated people’s fairness perception toward AI using the ultimatum games. The results show that as a proposer, people allocate less amount to an AI (vs. human) counterpart. But as a responder, the counterpart type does not influence offer acceptance decision; instead, the allocation amount is the deciding factor.

Behind the dining party: How and why joint consumption for food engenders overconsumption and waste - I9

Ms. Zhang Yunhan, Zhongnan University of Economics and Law, China
Mrs. Ran Yaxuan, Zhongnan University of Economics and Law, China

In this research we investigate food waste behavior under the circumstances of dining out together (with costs shared) or alone. Five studies showed that joint (vs. individual) consumption would encourage food overconsumption and food waste behavior as a result of heightened self-presentational concern and responsibility disparity.

Bad Donations: When and Why Consumers Donate Subpar Goods - I10

Ms. Hyebin Kim, Washington University in St. Louis, USA
Prof. Cynthia Cryder, Washington University in St. Louis, USA
Prof. Robyn LeBoeuf, Washington University in St. Louis, USA

Consumers often donate subpar goods. We find that such donations are driven in part by the salient counterfactual of discarding these goods. We further find that consumers more often make subpar donations when giving indirectly (e.g., when donations are sold via Goodwill) than when giving directly to those in need.

Understanding difficult anti-consumer transitions: a study of triggers - T3

Mr. CAIO VICTOR, Universidade Estadual do Ceará, Brazil
Dr. Verónica Peñaloza, Universidade Estadual do Ceará, Brazil
Mr. Luiz Cruz Neto, Universidade Estadual do Ceará, Brazil
Mr. Thiago De Paula, Universidade Estadual do Ceará, Brazil

This study explores and categorizes anti-consumer triggers. Through the netnographic method, we categorized anti-consumer reports in Facebook groups. We evidenced that triggers help members to complete the transition phase more quickly, avoiding permanent liminality. In addition, more intense triggers provide greater chances of success in the transition of anti-consumers.

COVID-19 And The Decline of Social Media Engagement - C7

Mr. Maxwell Poole, Saint Mary's University, USA
Dr. Ethan Pancer, Saint Mary's University, USA
Dr. Matthew Philp, Ryerson University, Canada

While people spent more time online during the pandemic, evidence from three studies reveals that users engaged less with popular social media accounts, shared less news content, and commented less on discussion boards. We suggest that mortality salience triggered by COVID-19 might influence behavior beyond physical environments, permeating digital behaviors.

Social Media Platform Use Predicts NFT Success - C9

Mr. Maxwell Poole, Saint Mary's University, USA
Dr. Ethan Pancer, Saint Mary's University, USA

We examined 958 of the most popular Art & Collectibles NFT projects on OpenSea, the world's largest NFT marketplace along with their associated social media platform links. The use of Discord was a significant predictor of Average Price (ETH), while using other social media platforms (e.g., Twitter, Instagram) was not.

Zero-Sum Beliefs in Autonomy Hinder Consumer Adoption of New Technologies - S7

Mr. Jonas Görden, University of St.Gallen, Switzerland
Prof. Greg Nyilasy, University of Melbourne, Australia
Prof. Emanuel de Bellis, University of St.Gallen, Switzerland

This research suggests consumers construe their relationships with new technologies as zero-sum in terms of autonomy: consumers believe an increase in product autonomy comes at the expense of their own autonomy, leading to technology rejection. A large field study with an industry partner and a cross-sectional survey support this theorizing.

Awesome Analogies Enhance Consumer Response to Large-Scale Sustainability Initiatives - Q2

Dr. Craig L Anderson, Washington University in St. Louis, USA
Prof. Cynthia Cryder, Washington University in St. Louis, USA

The current work examines how using analogies to help consumers understand the scale of vast sustainability initiatives (e.g., replanting a 27,000 acre forest) makes the initiatives more awe-inspiring, which in turn increases willingness to pay for sustainable products and leads to more favorable brand attitude.

To Live Long or to Have a Better Quality: How Do the Reasons to be Healthy Affect Healthy Choices? - N4

Ms. Lijun (Shirley) Zhang, Nanyang Technological University, Singapore
Dr. Anne-Kathrin Klesse, Rotterdam School of Management, Erasmus University, Netherlands
Dr. Elaine Chan, Nanyang Technological University, Singapore

Whereas prior research assumes that people generally want to be healthy, we show that they want so for different reasons: to live longer (longevity theorists) or to have a better quality of life (quality theorists). Reasons further impact food and exercise choices so that quality theorists make less healthy choices.

Movement means life: Mortality salience influences preference for dynamic brand logos - F4

Prof. Alexander Jakubanecc, Western Norway University of Applied Sciences, Norway
Prof. Antonios Stamatogiannakis, IE University, Spain
Dr. Polina Landgraf, University of Virginia, USA
Prof. Alexander Fedorikhin, Kelley School of Business, Indiana University, USA

We propose that mortality salience attunes consumers to visual signals of life. In three experiments, we demonstrate that the sense of movement created by dynamic logos is such a signal. Hence, under mortality salience consumers tend to prefer dynamic brand logos.

Marketing Mental Health: Overestimating the Social Costs of Mental Health, and Preference for Privacy - N11

Dr. Justin Pomerance, University of New Hampshire, USA

Mental health has a marketing problem. We demonstrate that consumers think others stigmatize mental illness more than the self does, driving a preference for privacy when deciding between alternatives for improving mental health. Future research will further investigate stigma's causes, and its consequences for consumption of mental health services.

Understanding Consumer Attitudes toward Artists with Disabilities - J5

Mr. Adrien Simonnot-Lanciaux, HEC Montréal, Canada
Dr. Ali Tezer, HEC Montréal, Canada
Dr. Danilo Dantas, HEC Montréal, Canada
Dr. Marie-Agnes Parmentier, HEC Montréal, Canada

Contrary to past research documenting ample evidence for a stigma toward people with a physical disability, this research demonstrates more favorable attitudes toward the work of an artist with (vs. without) a physical disability and that this effect is mediated by inspiration.

Changing Dynamics of Consumer-Influencer Relationship in the Post-Pandemic Era - C8

Mrs. Ceyda Sinag, School of Business, Bogazici University, Turkey
Dr. Ceren Hayran, School of Business, Ozyegin University, Turkey
Prof. Ayşegül Toker, School of Business, Bogazici University, Turkey

This research explores how consumers' relationships with social media influencers (SMIs) have been changing during the post-pandemic era from the lens of the social exchange theory. While consumers engage more with SMIs, they question the deservingness of SMIs' earnings and expect them to be more sensitive to social issues.

Materialism in preschool children: the construction and validation of a new pictorial measure - U4

Dr. Agata Trzecińska, Faculty of Psychology, University of Warsaw, Poland
Dr. Katarzyna Sekścińska, Faculty of Psychology, University of Warsaw, Poland
Dr. Joanna Rudzińska-Wojciechowska, Department of Economic Psychology, Kozminski University, Warsaw, Poland
Ms. Karolina Kubicka, Faculty of Psychology, University of Warsaw, Poland

There are no standardized measures of materialism appropriate for preschool children. The purpose of this project was to develop a new pictorial materialism test for 4-6 year old children. The new measure was evaluated for its psychometric properties. Results have confirmed satisfactory reliability and stability. Factor analyses are also presented.

Nostalgia, Reassurance and Support: How eWOM Can Enhance the Social Well-Being of Older Adults - B8

Dr. Carolyn Wilson-Nash, University of Stirling, UK
Dr. Ismini Pavlopoulou, University of Stirling, UK

Online community usage is increasing amongst older consumers, within which large quantities of electronic word-of-mouth (eWOM) are created and absorbed. We find that social well-being is enhanced by different eWOM behaviours, such as, nostalgic eWOM, seeking advice to reduce concerns, and responding to eWOM by reassuring, supporting, and easing worries.

Service Employees as Consumers: From the Passion to Consume to the Passion for Work - L8

Ms. Ramona Riehle, University of Innsbruck, Austria
Mrs. Verena E. Wieser, University of Innsbruck, Austria
Prof. Andrea Hemetsberger, University of Innsbruck, Austria

Passionate service employees are eager to create extraordinary consumer experiences. However, research on service employee passion has so far neglected the productive power of consumer passion. Drawing on ethnographic data gathered in the context of adventure guiding we explore how collective consumer passion fuels, revives, and maintains employees' work passion.

Consumer Perceptions and Consequences of (Brand) Rivalry - D4

Prof. Reinhard Grohs, Seeburg Castle University, Austria
Prof. Christof Backhaus, Edinburgh Napier University, UK
Prof. Oliver Koll, University of Innsbruck, Austria
Prof. David Woisetschläger, TU Braunschweig, Germany

This study explores effects of brand rivalry on the rival out-group brand. After showing positive effects in a sport (soccer) context, a follow-up project is planned to test the findings in non-sport contexts to understand when, why, and how being a rival may be beneficial.

The Power of Linguistic Similarity in Q&A Communities - B5

Ms. Hui Cai, Zhongnan University of Economics and Law, China
Mrs. Ran Yaxuan, Zhongnan University of Economics and Law, China
Ms. Jiani Liu, Zhongnan University of Economics and Law, China
Mr. Zhiqiang Li, Zhongnan University of Economics and Law, China

Using a dataset from the Stack Exchange Q&A community, we found divergent effects of linguistic similarity between question-answer pairs, such that discourse and attribution similarities are positively associated with answers' performance, while sentiment similarity is negatively related. Question type moderates these effects.

Can Self-Focus create the Greatest Good for the World? Study of Self-Compassion on Helping Behavior - P5

Ms. Mrudul Nilangekar, University of Central Florida, USA
Dr. David Luna, University of Central Florida, USA

This paper examines the influence of self- and other-compassion on prosocial behavior. Across five studies, we find that self-compassion leads to greater and longer-lasting prosocial behavior than other-compassion. We demonstrate that self-compassion reduces the felt distance between self and other, which mediates the effect of self-compassion on prosocial behavior.

Consumer Helplessness vs. Hopelessness in Uncertainty: Messaging Strategy for Alleviation - N10

Dr. Amit Singh, Southern Connecticut State University, USA
Dr. Vasu Unnava, University of California, Davis, USA
Dr. H. Rao Unnava, University of California, Davis, USA

Felt helplessness and hopelessness are associated with mental depression and are detrimental to consumers as well as a nation's well-being. This research identifies the type of messaging strategy that could help alleviate feelings of helplessness among consumers when faced with negative events external to their control.

Service Ecosystem Mapping: Visualizing the Digitalization of Mental Health Services - T1

Dr. Alisa Minina Jeunemaître, EMLYON Business School, France
Dr. Carlos Diaz Ruiz, Hanken School of Economics, Finland

This investigation extends the conceptualization of service ecosystems through a mapping approach. Drawing from both services research and contemporary cartography, this study provides an overview of relevant market actors and their value propositions. Empirically, the study draws a "map" of the digitalization of mental health services.

Alone Together: Experiences of People as Consumers in Unrecognized States - R6

Dr. Cagri Yalkin, Middle East Technical University, Northern Cyprus Campus, Turkey
Prof. Finola Kerrigan, Birmingham Business School, University of Birmingham, UK

The usual assumption in marketing and consumer behavior is that of a set of nation-states that are connected by cultural, social, and economic globalization. Our working paper seeks to challenge this assumption by illustrating certain aspects of unrecognized states as they pertain to marketing, consumption, and consumers.

A meta-analysis of when and how value co-creation practices work on consumer adherence - S2

Mr. Jiancai Liao, Aalto University School of Business, Finland
Ms. Petra Paasonen, Aalto University School of Business, Finland
Dr. Alexei Gloukhovtsev, Aalto University School of Business, Finland
Prof. Sanna Katriina.asikainen, Aalto University School of Business, Finland
Dr. Tomas Falk, Aalto University School of Business, Finland

To address consumer non-adherence, value co-creation has been identified as an important antecedent in shaping adherence. However, little is known about what types of co-creation practices are superior predictors of adherence and under what conditions different types are relatively better. Therefore, we turn to meta-analysis to test a comprehensive model.

Matte Premium Effect: The Role of Glossiness of Product Surface in Brand Premiumness - F3

Dr. Xuejiao Lin, Renmin University of China, China

In this paper, we propose an association between matte surface and brand premiumness (expensive, high-quality, valuable, unique and status). Compared with glossy surface, products with matte surface are perceived more premium. We also elucidate the downstream retailing implications of such association.

The effect of voluntary incentive transparency on sales performance - J7

Mrs. Itir Bozkurt Umur, University of Lucerne, Switzerland
Prof. Leif Brandes, University of Lucerne, Switzerland
Prof. Sascha Alavi, Ruhr-University-Bochum, Germany

Consumers are known to distrust salespeople who work on commission. We hypothesize that salespeople can boost consumer trust and purchase intention if they voluntarily, and proactively, disclose their commission during the sales encounter. Three experimental studies, one in the field, and two online studies, provide support for this prediction.

What You See is (Not) What You Get: Adverse Effects of Augmented Reality on Persuasion - G8

Mr. David Finken, University of Lucerne, Switzerland
Mr. Thomas Scheurer, University of Lucerne, Switzerland
Prof. Leif Brandes, University of Lucerne, Switzerland
Prof. Reto Hofstetter, University of Lucerne, Switzerland

We demonstrate that augmented reality (AR) can lead to inferior consumer decision-making. We hypothesize that AR increases psychological ownership and self-affirmation which increases purchase intention for functionally inferior products. A multimethod approach consisting of one descriptive study, several consumer interviews and two controlled online experiments provide evidence for our expectations.

Designing Vulnerable Conversational AI: The Impact of Trembling Vocal Cues on Empathic Concern and Prosocial Behavior - A9

Mr. Fotis Efthymiou, University of St. Gallen, Switzerland
Dr. Christian Hildebrand, University of St. Gallen, Switzerland

This work examines the effect of trembling vocal cues of a conversational AI on consumers' perceptions, affective state and subsequent prosocial behavior. We show that the trembling voice of a conversational agent increases perceived psychological vulnerability, empathic concern and ultimately boosts advertising effectiveness in a large-scale field setting.

Skip the Line: How Social Comparison Impacts the Mobile App Ordering Experience - M9

Dr. Ryann Reynolds-McInay, Oregon State University, USA
Dr. Jessica Keech, Franklin & Marshall College, USA

The benefits and challenges of mobile app ordering are examined to help marketers understand its nuances. Mobile app ordering provides customers with time savings and the opportunity to engage in downward social comparison (DSC) benefit occurs when order queues are longer and for high social comparison orientation (SCO) consumers.

Consuming for “The Curse”: Menstrual Stigma and Assertive Consumption - H10

Dr. Mycah Harrold, Washington State University
Dr. Elizabeth Howlett, Washington State University

Prior research suggests that stigmatized consumers behave nonassertively in public circumstances. In four studies, we demonstrate that when perceived menstrual stigmatization is high (versus low), consumers are less likely to engage in both public and private assertive consumption behaviors.

Moving Together Into Web 3.0: Global Brand Use and Consumer Knowledge and Perceptions of Brand Non-Fungible Tokens and the Metaverse - D8

Mr. Dongchan Lee, University of Illinois at Urbana-Champaign, USA
Ms. Anna Liu, University of Illinois at Urbana-Champaign, USA
Ms. Veranika Paltaratskaya, University of Illinois at Urbana-Champaign, USA
Mr. Se Il Park, University of Illinois at Urbana-Champaign, USA
Mr. Junqi Shao, University of Illinois at Urbana-Champaign, USA
Ms. Prativa Subedi, University of Illinois at Urbana-Champaign, USA
Dr. Michelle Nelson, University of Illinois at Urbana-Champaign, USA

We found that less than 25% of the top 100 global brands have non-fungible tokens (NFTs) or are in the Metaverse. Findings from interviews show (1) little knowledge, but some promise for the interactivity and creativity imagined in the Metaverse; (2) barriers to brand NFTs (technical, value of digital goods).

The transformative makeup effect: Transformative makeup disrupts social norms - H2

Dr. Irene Consiglio, Nova School of Business and Economics, Portugal
Dr. Natalie Truong, Nova School of Business and Economics, Portugal
Dr. Jennifer Argo, Alberta School of Business, University of Alberta, Canada

We document a novel effect of makeup, such that transformative makeup which significantly alters one’s natural features (versus natural makeup) increases the tendency of the wearer to violate social norms. We propose that this happens because transformative makeup reduces individuals’ perception that their actions are diagnostic of their self.

Lock Your Windows, Close Your Doors: Illuminating Consumer Safeguarding - J8

Dr. Robert Arias, Loyola University Chicago, USA
Dr. Madhubalan Viswanathan, Loyola Marymount University, USA

As retailers understand shoppers may steal products and invest in resources to prevent shoplifting, individuals engage in similar activities. In this research, we examine and illuminate consumer safeguarding, or, consumption activities individuals employ to protect themselves and those in their relational circles from harm.

An Unhealthy Propensity for Risk Aversion: How Consumers Gamble on Monetary Losses but Hedge against Medical Experiences - O5

Mr. Christoph Hueller, University of Arizona, USA
Dr. Martin Reimann, University of Arizona, USA

Six experiments (N = 3,423) demonstrate that when choosing between negative medical experiences, consumers exhibit risk aversion, representing a departure from their risk seeking for negative monetary gambles predicted by prior work—an effect that is qualified by consumers’ propensity for risk aversion and the norms in their social circles.

Social Functioning Ability and Consumers' Word of Mouth Behavior - B1

Ms. Shiyun Chen, Univeristy of Iowa, USA
Prof. Gary Gaeth, Univeristy of Iowa, USA
Dr. Dhananjay Nayakankuppam, University of Iowa, USA

In this research, we study how social functioning ability, an individual difference based on people's social competence, impacts people's WoM behavior. We test if interpersonal closeness mediates this relationship. We present two studies that test the hypothesized relationships based on paragraphs describing a consumption experience and reported WoM activity.

Exploring the Influence of Long-Term Orientation on Compulsive Buying Behavior: A Cross-Cultural Study - I8

Dr. Pei Wang, Florida State University, USA
Ms. Yuqing Zhai, Yunnan University, China

This cross-cultural study proposes a model to understand the wider impacts of cultural value on consumers' compulsive shopping behavior. This study considers the long-term orientation as extended antecedents to explore the moderating role of materialism value and money attitude on compulsive buying behavior in different cultures (the US and China).

The Fast and the Autonomous: Political Orientation and Need for Closure Predict Likelihood of Using Autonomous Vehicles - A3

Dr. Andrew Perkins, Washington State University, USA
Dr. Pavan Munaganti, San José State University, USA
Dr. T.J. Weber, California Polytechnic State University, USA
Ms. Deepika Naidu, Washington State University, USA
Ms. Anabella Donnadieu, Washington State University, USA

Autonomous vehicles (AVs) are becoming more integrated into modern society. We posit that political orientation is a strong predictor of consumer acceptance of autonomous vehicle technology. Our findings suggest that conservative political orientation predicts greater need for closure, which in turn leads to lower likelihood of autonomous vehicle usage.

“Alexa, Which One Should I Buy?” The Impact of Voice Control Device Recommendations on Consumer Post-Purchase Regret - A2

Ms. Ksenia Sergueeva, Drexel University, USA
Dr. Chen Wang, Drexel University, USA

We investigate whether, how, and why shopping using a voice control device alleviates consumers' post-purchase regret. We show that consumer regret is lower when the product is purchased through a voice control device (vs. web browser), and such effect is mediated by the amount of reasoning in the decision process.

Person or Product? K-Pop Celebrities as Products - C6

Ms. Chananan Dechadilok, Universidade Nova de Lisboa, Nova School of Business and Economics (NOVA SBE), Portugal
Dr. Luis F. Martinez, Universidade Nova de Lisboa, Nova School of Business and Economics (NOVA SBE), Portugal
Dr. Natalie Truong, Universidade Nova de Lisboa, Nova School of Business and Economics (NOVA SBE), Portugal

Fans perceive K-Pop celebrities as a person and a product simultaneously due to several manipulating strategies. Accordingly, even if firms clearly present that celebrities are “made-to-order”, the audiences still like them. This study contributes to literature on customer-centric approach and objectification, which generates a positive outcome for the objectified person.

Food descriptions with a taste and suggestion component increase purchase intention -and behavior - F2

Mr. Nicky Coucke, Ghent University, Belgium
Prof. Hendrik Slabbinck, Ghent University, Belgium
Prof. Iris Vermeir, Ghent University, Belgium
Prof. Anneleen Van Kerckhove, Ghent University, Belgium
Prof. Maggie Geuens, Ghent University, Belgium

Having knowledge on how to prepare unprocessed ingredients and being able to assess its quality can facilitate food choices of these unprocessed ingredients. We demonstrate that food descriptions containing procedural information combined with a taste element affect product choice, especially for lesser known products.

You Can't See My Face. I Will Bet More! The Impact of Mask Wearing on Risk-Taking - O4

Mr. Youngdai Won, Drexel University, USA
Dr. Chen Wang, Drexel University, USA

This research examines the influence of mask-wearing on risk-taking behaviors. We hypothesize that consumers have higher intentions to take risks when wearing (vs. not wearing) masks. This occurs because mask wearing enhances perceived anonymity. Three studies from real-world data, student participants, and MTurk participants offer converging evidence for our hypothesis.

The Detrimental Effect of Hard Earning on Investing and Possible Interventions - O3

Ms. Samina Lutfeali, Stanford, USA
Dr. Christopher Bechler, Notre Dame, USA
Dr. Szu-chi Huang, Stanford, USA
Dr. Joshua Morris, Stanford, USA

Investing is critical to accumulating wealth, but many consumers do not invest. Three incentive-aligned studies show that as consumers exert greater effort to earn, they perceive their earning as more "valuable" and thus more painful to lose, which decreases investing even when investment leads to positive expected returns.

How Bystander Brands Can Win the Free Agent Game Following Brand Activism - R8

Dr. Katharine Howie, The University of Southern Mississippi, USA
Dr. Jessica Vredenburg, Auckland University of Technology, New Zealand
Dr. Rhiannon MacDonnell Mesler, University of Lethbridge, Canada

Brand activism allows bystander brands to earn support from offended consumers. We examine how these consumers choose new brands (study 1), finding conservatives place greater importance on supporting brand rivals (study 2) and respond more favorably to rivalry-themed ads (study 3). Our research provides guidance for competitors leveraging brand activism.

FCK, We're Sorry: Self-Construal, Interpersonal Closeness, and Swearwords in Brand Communications - D2

Mr. Gurinder Singh Grewal, University of Lethbridge, Canada
Dr. Katherine Lafreniere, Alberta School of Business, University of Alberta, Canada

When can brands use swearwords? The direction of the swearing effect depends on the audience's self-construal. When a swearword is present (vs. absent) in advertising, independents felt closer to the brand. The effect on interdependents depended on licensing: interdependents felt more distant unless they perceive a positive reaction from others.

From Minimalist Consumers to Healthy Eaters: A Self-Control Halo - N3

Ms. Stephanie Flout, The Ohio State University, Fisher College of Business, USA
Dr. Xiaoyan Deng, The Ohio State University, Fisher College of Business, USA
Dr. Yunhui Huang, The Ohio State University, Fisher College of Business, USA

We examine the effect of a self-control halo on perceptions of minimalist consumers. Individuals view minimalism as a form of self-control, inferring that consumers good at this form of self-control excel in other domains of self-control as well, such as making healthy eating and lifestyle choices.

Behaving Socially Responsibly as a Driver of Overconsumption - P9

Ms. Maria J. Ortiz, Concordia University, USA

Imagine you recently bought a printer with sustainable ink and bought more paper than usual. This research proposes that socially responsible consumption causes overconsumption of non-socially responsible products, driven by perceptions of effort and guilt. This research identifies a novel contributor to overconsumption and an unexpected consequence of prosocial behavior.

Authenticity's Impact on the Effectiveness of CSR as a Proactive Service Recovery Tool - Q9

Dr. Gizem Atav, James Madison University, USA
Dr. Subimal Chatterjee, Binghamton University, USA
Ms. Basak Kuru, Marmara University, Turkey

We explore how the perceived authenticity of a company's CSR activities can help mitigate the negative consequences of service failures. Three experiments show that authentic (vs. inauthentic) CSR increases the likelihood of consumer attributions of the failure as a one-time error, leading to less anger and more positive post-failure attitudes.

The Elevation Effect: Do Rituals Perceptually Transform Products into Experiences? - L4

Mr. Samuel Park, University of Oregon, USA
Dr. Ashley Angulo, University of Oregon, USA

We explore how rituals (operationalized as repeating vs. non-repeating gestures) shape how consumers perceive products – elevating them to experiences beyond their material components. In three studies, we find rituals change how consumers perceive a product and shape their preferences for an experiential purchase over its material equivalent.

Subjective Socioeconomic Status and Compulsive Buying: A Dual-process Model - I7

Ms. Dandan Fang, Concordia University, USA
Prof. Bianca Grohmann, Concordia University, USA

Independent from objective socioeconomic status, subjective socioeconomic status (SSES) is proposed to either exacerbate or buffer compulsive buying. To elucidate such opposing effects, a dual-process model is proposed. Meanwhile, the deteriorating effect worsens in more materialistic consumers while its buffering effect strengthens as one's sense of power increases.

Motivating consumers for health and fitness apps. The role of Self-determination theory derived app features - N2

Dr. Violeta Stancu, Aarhus University, Denmark
Dr. Darius-Aurel Frank, Aarhus University, Denmark
Prof. Liisa Lähteenmäki, Aarhus University, Denmark
Prof. Klaus Grunert, Aarhus University, Denmark

Smartphone apps support consumer value creation. This study analysed consumer preferences for health and fitness app features drawing on Self-Determination theory. A survey among 720 Spanish and German respondents revealed people's preferences. Consumers preferred the app with features that support the satisfaction of the basic needs for autonomy and competence.

Yes, W(om)e(n) Can! The Impact of Perceived Femvertising on Customer Loyalty and Purchase Intention - E8

Mrs. Regina Harms, Heinrich-Heine-University Düsseldorf, Germany
Mrs. Sonja Schwarz, Heinrich-Heine-University Düsseldorf, Germany
Ms. Simone Holderbaum, Heinrich-Heine-University Düsseldorf, Germany
Prof. Peter Kenning, Heinrich-Heine-University Düsseldorf, Germany

Companies increasingly address gender equality through "femvertising", a new form of CSR-communication. This empirical study investigates how femvertising affects customer loyalty and purchase intention. First, we developed and tested a "perceived femvertising"-scale. Results show that femvertising potentially creates a positive corporate image and increases customer satisfaction, loyalty and purchase intention.

The Impact of Visual Content Entropy on Perceived Brand Status - G3

Mr. Zitian Qiu, HEC Lausanne, Switzerland
Ms. Chunyu Jin, University College London, UK

By analyzing 70,549 online images by beauty brands, the authors find that the entropy of visual content (its degree of disorder) is inversely related to brand status. The authors propose that low-entropy images cause people to perceive a brand as being more self-controlled, thus leading to inferences of high status.

Do past date labels displayed on food items trigger disgust? - M5

Dr. Jan André Koch, University of Vienna, Austria
Dr. Jan Willem Bolderdijk, University of Groningen, Netherlands
Prof. Koert van Ittersum, University of Groningen, Netherlands

One unintended side effect of date labels displayed on food is their effect on consumers' perception of what is normal behavior. Eating expired food is abnormal and, as a result thereof, elicits disgust. Disgust consequently prevents consumers from trusting their senses and thus contributes to food waste. Implications are discussed.

What makes virtual influencers engaging? - C2

Dr. Hongjun Ye, Reh School of Business, Clarkson University, USA
Ms. Wenting Zhong, Bentley University, USA
Mr. Tianwen Du, Wuhan University, China
Dr. Lan Xia, Bentley University, USA

Should virtual influencers post images that only feature themselves or images that feature themselves with real humans? We scraped over 800 posts from Instagram, used object detection to label images, and employed topic modeling to recover themes from 227,733 comments. Results suggest that the latter approach may be more engaging.

Emotional Arousal Markers in Review Titles and their Impact on Perceived Review Helpfulness - B4

Dr. Tim Ozcan, James Madison University, USA
Dr. Gizem Atav, James Madison University, USA

We explore how expressed arousal in online review titles influence perceived helpfulness of the review. A field study using Amazon.com data shows that exclamation marks and capitalized words increase emotion extremity, thereby improving perceived review helpfulness for positive (but not negative) reviews.

Want to hear something interesting? People underestimate the negative reputational consequences of gossiping

Mr. Andrew Choi, University of California, Berkeley, USA
Ms. Sonya Mishra, University of California, Berkeley, USA
Dr. Juliana Schroeder, University of California, Berkeley, USA

Why do people gossip if gossip is typically widely disliked? Four studies find that gossipers overestimate recipients' appreciation of their gossip, and underestimate how much recipients degrade their status and morality when they gossip. Gossipers appear not to recognize the negative reputational consequences of their behavior.

Bucket Lists and Experience Collecting: The Role of Social Norms in Experiential Goal Pursuit - L9

Dr. Anna Vredeveld, Berry College, USA
Dr. Jeffrey Carlson, University of Richmond, USA

Bucket lists reflect long-term goal pursuit and intention-based experiential consumption. This research examines how consumers collect and display their experiences through bucket lists and how social norms and the characteristics of the bucket list goal influence popularity and likelihood of goal completion.

Past or Present: Temporal Categorisation of Completion and Task Re-engagement - I1

Ms. YoungJin Chun, Erasmus University, Netherlands
Dr. Sam Maglio, University of Toronto, Canada

Can temporally categorising the task completion as of the past or the present influence task re-engagement? In three studies, we find that categorising a completed task (e.g., a workout from 'today') as part of the past increases task re-engagement despite people's tendency to categorise it as the present.

Doing Good Feels Good: Social Media Influencer Promotion of Prosocial Behavior - P3

Dr. Ashley Hass, University of Portland, USA
Dr. Rebecca Rabino, Texas Tech University, USA
Dr. Debra Laverie, Texas Tech University, USA
Mr. Chu-Yen Pai, Texas Tech University, USA

Social media influencers frequently engage in prosocial behavior such as promoting charities or causes on their platforms. This study investigates how consumers perceive influencer prosocial posting behavior. We find evidence that perceptions of influencer authenticity drive consumers' intention to donate to related charities, mediated by perceived influencer empathy and altruism.

How Initial Preference Elicitations Influence Subsequent Decisions - K7

Mr. Matthew Healey, Washington University in St Louis, USA
Dr. Stephen Nowlis, Washington University in St Louis, USA

We examine how eliciting preferences from consumers in a first stage decision also influences their decisions in a second stage. We find that when consumers are asked their preference between two products, they are subsequently more likely to use a coupon that offers these two products together at a discount.

Not Under Our Watch! The Effect of Global-Local Identity on Consumers' Tendency to Take Part in Boycotts - H9

Mr. Shashi Minchael, University of Texas at Arlington, USA
Dr. Ritesh Saini, University of Texas at Arlington, USA

Using data from global panel of over 50,000 respondents, we find that people with stronger global (local) identity are more likely to engage in boycotts. We replicate this relationship in two controlled experiments and propose that belief in collection action efficacy mediates the relationship between global identity and boycott tendency.

Feels Like Touch: The Effect of Imagery Generated by Haptic Images on Consumer Responses - F1

Mrs. Anuja Bhattacharjya, FGV EAESP, Brazil
Prof. Delane Botelho, FGV EAESP, Brazil

Consumers value products more when they can touch them, but this is not possible in online purchases. To explore whether images can elicit similar consumer responses online, we present two studies examining the imagery generated from haptic images and text, and its impact on perceived ownership of the product.

How Visual Aids of Quantity Presentation Increase Preference for Larger Packs over Smaller Packs - G2

Ms. Wanyi Zheng, The University of Hong Kong, Hong Kong
Dr. He (Michael) Jia, The University of Hong Kong, Hong Kong
Prof. Echo Wen Wan, The University of Hong Kong, Hong Kong

Consumers often make quantity-based purchase decisions in online grocery shopping. This research demonstrates that visual aids of quantity presentation can shift consumers' preference from a smaller pack toward a larger pack, due to an increase in the perceived quantitative difference between two packs.

The Implications of Employee Wellness Benefits on Perceptions of Innovation and Customer Loyalty - N9

Ms. Autumn Jilek, University of Alabama, USA
Dr. Michelle Daniels, University of Alabama, USA

We find that a company's internal treatment of employees influences consumers' perceptions of the company. The results show that marketing employee wellness benefits (e.g., leisure stipends) impacts consumers' perceptions of the company. Specifically, consumers view these companies as more innovative, which ultimately increases purchase intentions, loyalty intentions, and quality perceptions.

Zero-Sum Thinking Impedes Women's Support for Women-Owned Businesses - T2

Ms. Mackenzie Volk, University of South Carolina, USA
Dr. Linyun Yang, University of South Carolina, USA

Businesses highlighting their women-owned status often assume this will increase support among female shoppers. However, across three studies, we find that at a default, women view the marketplace as zero-sum. Importantly, we show that informing women that supporting women-owned businesses doesn't hurt men-owned businesses increases women's support for women-owned businesses.

Addressing health disparities: Implications of empowerment and habit formation reward in Veggie Rx program - N1

Dr. Ada Leung, Pennsylvania State University Berks, USA
Ms. Lisa Weaver, Pennsylvania State University Berks, USA

The paper describes the theoretical framework of how the Veggie Rx program improves health outcomes by empowering patients with nutritional knowledge comprehension and rewarding their (new) habit formation with fruit/produce vouchers. The model hypothesizes that the program improves patients' health outcomes both in terms of biometric data and subjective well-being.

Technology Made Beauty: How Beauty Filters Influence Consumer Behaviours in Live-streaming Commerce - C1

Ms. Angdi Gong, University of Warwick, UK

Salespeople use beauty filters in live-streaming commerce. However, this transient and spurious beauty may violate the perceived authenticity. It's unknown if the filter usage would earn beauty premiums. Therefore, this working paper aims to uncover how salespeople that utilise beauty filters would affect consumers' purchasing, subscribing, liking and sharing behaviours.

The influence of culture on happiness derived from Material vs. Experiential purchases - L3

Dr. Jorge Jacob, IESEG School of Management, France

In a study with 600 consumers in three countries (China, US and France), we show that culture moderates the effect of type of purchase on consumers' happiness. Contrary to stereotypical perceptions, we show that Chinese consumers derive more happiness from material purchases than American and French consumers.

The role of metaphors in brand memory and persuasion - D1

Ms. Elizabeth Beard, Temple University, USA
Ms. Eve Matthew, Temple University, USA
Ms. Amanda Yu, Temple University, USA
Dr. Vinod Venkatraman, Temple University, USA

Metaphors in advertising, such as Carvana's vending machines, have become increasingly popular in communicating brand attributes to consumers. We examine how metaphor influences advertising success across two studies. While metaphors are more memorable, they are not necessarily more persuasive than rational or emotional advertisements.

The Effect of Smartphone Addiction and Loneliness on Psychological Well-Being - I11

Dr. Jing (Alice) Wang, University of Iowa, USA
Prof. Ying Zhu, The University of British Columbia, Canada
Prof. Rui Zhu, Cheung Kong Graduate School of Business (CKGSB), China
Prof. Luqiong Tong, Beijing Normal University, China

Smartphones have become an essential part of daily life. Two studies employing different methodologies and different samples show that loneliness moderates the effect of smartphone addiction on well-being. Whereas smartphone addiction negatively impacts the well-being of connected people, it has a positive impact on the well-being of lonely people.

Think Twice Before Tidying Up: Physical Orderliness Leads to Judging People as More Evil - J4

Dr. Gunes Biliciler, Koc University, Turkey
Dr. Raj Raghunathan, University of Texas at Austin, USA

We demonstrate that people in an orderly (vs. disorderly) environment are perceived as more competent than warm. Further, we show that orderly (vs. disorderly) environments lead to judging a person as more likely to be evil. Considering the prevalence of orderliness and minimalism in marketing, these findings have important implications.

Strategies to Encourage Consumers to Manage Product Disposition - Q1

Dr. Hu Bingyan, Mississippi State University, USA
Dr. Jing (Alice) Wang, University of Iowa, USA
Dr. Cathy Cole, University of Iowa, USA

In three experiments, we examine how loneliness, attachment, and construal level affect consumer disposition of used products. We find that when people think abstractly, loneliness reduced disposition intention by increasing attachment but not when they think concretely.

It's Not About You: The Backfire Effect of Customization on Products that Signal Collective Goals - S3

Mr. Sid Mookerjee, Sauder School of Business University of British Columbia, Canada
Dr. Yann Cornil, University of British Columbia, Canada
Dr. Darren Dahl, Sauder School of Business University of British Columbia, Canada

Despite the popularity of mass customized products, we show a novel downside of offering customization to consumers. We find that offering customization opportunities for products that signal collective goals (i.e. sustainable products, facemasks) can backfire, as collective goals conflict with the individualistic goals associated with customization.

How Reward Uncertainty Influences Consumer Motivation: The Moderating Role of Goal Progress - I2

Dr. Jie Wang, Renmin University of China, China
Dr. Xiadan Zhang, Renmin University of China, China
Dr. Jing Jiang, Renmin University of China, China

This research explores how reward uncertainty influences consumers' motivation in goal pursuit. We find that with low goal progress, certain reward increases motivation, whereas with high goal progress, uncertain reward increases motivation.

The research was supported by the Outstanding Innovative Talents Cultivation Funded Programs 2021 of Renmin University of China.

Consumer Reactions to Brand Political Activism: The Immunizing Effect of Brand Anthropomorphism - R1

Ms. Meike Fens, The University of Sydney, Australia
Prof. Donnel Briley, University of Sydney, Australia
Prof. Jodie Conduit, The University of Adelaide, Australia

With more consumers expecting brands to take a stand on political issues, brand activism research represents an important, emerging literature, which offers little guidance for how to reduce the negative impact on brands following disagreement. This research investigates the role of brand anthropomorphism in reducing negative impacts on the brand.

Negative Experience Temporal Location and the Overall Evaluation: Moderation of self-construal - I5

Ms. Yu Yu, Sun Yet-sen University, China
Dr. Liang Jianping, Sun Yet-sen University, China
Ms. Cui Ranran, Sun Yet-sen University, China

Although past research has investigated the importance of start and end, findings are mixed. This research examines the moderation of cultural mindsets and reveals that independent consumers respond more negatively to when negative experiences occur in the end (vs. at the start), and this effect is attenuated for interdependent tourists.

Do These Heels Make Me Look Less Confident? The Negative Impact of High Heels on Self-Confidence - J10

Mrs. Elissa Shults, University of Alabama, USA
Dr. Stacey Robinson, University of Alabama, USA

We examine the impact of high heels on shopper behavior and demonstrate that wearing high heels negatively impacts a consumer's self-confidence. Specifically, high-heeled consumers, compared to their flat-shoed counterparts, are less likely to say no to a salesperson or to speak up when experiencing problems while shopping.

Investigating the Givers' Anxiety and Its Dynamics in Gift-Selection Experience - L7

Ms. Ruiqi Guan, University of Manitoba, Canada
Dr. Fang Wan, University of Manitoba, Canada
Dr. Hamed Aghakhani, Dalhousie University, Canada
Prof. Yuwei Jiang, The Hong Kong Polytechnic University, Hong Kong
Dr. Na Xiao, Laurentian University, Canada

This research found that gift-giver with interdependent (vs independent) self-construal are more likely to experience gifting anxiety; relational complexity mediates this effect. Moreover, interdependents with higher anxiety indicated a higher willingness to defer their choice and seek approvals. However, having a second chance and receiving approval cannot decrease their anxiety.

Many hands make light work: Group donation increases consumer preference for distant beneficiary - P2

Ms. Yixin Niu, Zhongnan University of Economics and Law, China
Mrs. Ran Yaxuan, Zhongnan University of Economics and Law, China
Dr. Yanfen You, University of Massachusetts Amherst, USA

Prior research has not considered the increasingly salient phenomenon of consumer group donation. We demonstrated that group donation leads consumer to have a stronger perceived donation efficacy. This biased perception can increase consumer's preference and donation to distant (e.g., unidentifiable, physically faraway) beneficiaries. Perceived group cohesiveness moderates the main effect.

How do negative experiences affect the time preferences of investors? - O2

Ms. Qi Zhang, University of Manitoba, Canada
Dr. Xiaomeng Lu, Southwestern University of Finance and Economics, China
Ms. Ruiqi Guan, University of Manitoba, Canada
Dr. Fang Wan, University of Manitoba, Canada
Dr. Gady Jacoby, College Of Management Academic Studies, Israel

This paper finds that investors are more willing to trade stocks for short-term speculation after they experienced trauma because they show lower self-control, a higher willingness to follow trends and tend to practice risk-seeking behaviour. This effect is less pronounced for older people and married people.

Of happy larks and unhappy owls: How experiential vs material purchase influences happiness among morning (vs. evening) chronotypes - L2

Mr. Pramit Banerjee, Oklahoma State University, USA
Mr. Shashi Minchael, University of Texas at Arlington, USA

Do morning people and evening people derive different levels of happiness from their experiential vs. material purchases? We find that evening (morning) types derive less (more) happiness from their experiential (material) purchases. We surmise this is because of lower ontological security in evening types. Three studies establish this interaction effect.

Deliberating in the dark: Ambient Lighting on Decision Quality - G1

Ms. Khue (Kylie) Vo, University of North Texas, USA
Dr. Blair Kidwell, University of North Texas, USA

Through a field experiment and a lab experiment that looked at a consequential outcome, this research suggests a novel finding that ambient darkness induced deliberative processing mode, which in turn, helps consumers make higher quality decisions.

The Impact of Cultural Orientation on Consumer Responses to Service Failure as a Function of Humans Versus Robots - A1

Mr. Todd Haderlie, Florida International University, USA
Mr. Shivam Agarwal, Florida International University, USA
Mr. Kaan Canayaz, Florida International University, USA
Dr. Jaehoon Lee, Florida International University, USA

We aim to explore the possibility that consumers may react to service failure differently as a function of human service providers versus robotic service providers (including online chatbots). We also introduce highlight collectivism as a moderator to the effect of agent type on service failure tolerance.

News Images of Natural Disaster and Their Role in Recovery - G7

Dr. Katherine Sredl, Loyola University Chicago, USA

Rebuilding post-natural disaster is a socio-cultural process. It can create a socially just new normal if consumers are represented, or reproduce inequalities if not. This research explores how news images of natural disaster tell consumer stories during the rebuilding process, with implications for understanding vulnerability, coping and attribution of blame.

Self-Other Discrepancies and Risky Choice - O1

Mr. Arslan Javed, ESSEC Business School, France
Dr. Ayse Onculer, ESSEC Business School, France

Making decisions on behalf of others is common in practice but past findings are inconclusive. Three experiments show that, when their identity is revealed, individuals make similar risk-averse choices for themselves and familiar others compared to strangers. However, under anonymity, their decisions are risk-seeking for familiar others, compared to themselves.

Film Festival 2022

Encounters of Nothingness: Dilemmas of the Uncanny Self

Dr. Stephen R. O'Sullivan, University College Cork, CUBS, Ireland

This film explores the existential confrontation brought about by the COVID-19 pandemic. It preserves a phenomenological account of 'experiencing the experience' of the pandemic. It documents the 'derepresentation' process, the encounters of nothingness, and dilemmas of self central to the uncanny lockdown.

Wild Culture: The Travelling Playground

Dr. Stephen R. O'Sullivan, University College Cork, CUBS, Ireland

This film introduce audiences to new possibilities with the natural world. Using inter-species play as a methodology, the film explores the potential of a meaningful relationship with local wild crows.

Consuming Authenticity: Eating and Drinking Local

Dr. Benjamin Garner, University of Central Arkansas, USA

This film examines consumers across 4 different documentary films in the food and tourism space to analyze why people shop for local foods. These contexts include the farmers' market, a local dairy farm, and wine tourism. The film uses the master values of sustainability, localism, and authenticity explore consumption.

Beautiful places, beauty-filled people: an immersive assimilation experience of beauty

Dr. Virginie Bregeon, Associate Professor at Ferrandi Paris, France

Prof. Christine Petr, University Bretagne Sud, France

Following Consumer Culture Theory, this research describes what defines beauty when at a coastal urban promenade, and how enjoy, or to cope with this beauty ; for instance to avoid feeling the Stendhal syndrome (i.e., the risk of being overwhelmed, even drowned, by aesthetic emotions).

Recharge coliving camp

Mr. Máté Bencze, Corvinus University of Budapest, Hungary

This research presents how to capture networking in a coliving space. My goal was to examine how the space design and the expertise of the management support the interactions between the participants. The result of several days of filming is a depiction of an intangible phenomenon.

A Tale of Two MMOs: Examining Cross-Cultural Differences in Japanese & US Game Developers

Dr. Jacob Hiler, Ohio University, USA

Dr. Moumita Gyomlai, Ohio University, USA

Dr. Adam Hepworth, Ohio University, USA

This film focuses on examining the communication styles & customer relationship building across Japanese and American game developers. The film explores cross-cultural differences which inform why one developer has built a healthy consumer relationship with their player-base and the other has seen their player base turn against them.

The Green Force: Voices of Generation Z

Dr. Iris Mohr, St. John's University, USA

This film takes us on Journey, an adventure around the globe, to learn about an emerging sub-group of Generation Z, climate activists. In this film, you will hear the voices of youth activists worldwide, with the goal of furthering our understanding of this youth segment

Hip Hop Don't Stop at the Classroom Door

Dr. Mark Peterson, University of Wyoming, USA

What if university students created rap music as part of their learning? This film addresses this question by including an overview done in rap, along with three other raps created in marketing courses. Finally, the film presents two videos representing another future for marketing projects that feature melody and lyrics.

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