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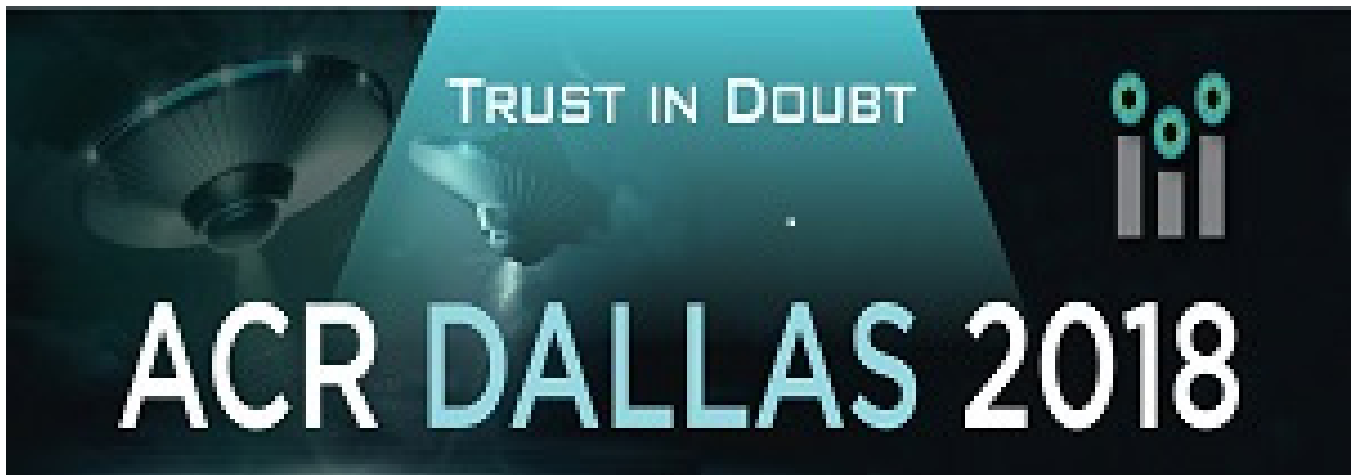
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**Volume XLVI  
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## **Advances in Consumer Research, Volume 46**

Andrew Gershoff, Robert Kozinets, Tiffany White

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# Preface

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The 49th Annual Conference of the Association for Consumer Research (ACR) was held at the Hilton Anatole Hotel in Dallas Texas from October 11-14, 2018. Our conference theme was “Trust in Doubt: Consuming in a Post-Truth World” and this theme flowed through sessions, events, a forum track, a bundled videography session, and in the conference’s visual and conceptual theming. In addition, for the first time, the conference theme was linked to an upcoming issue of the Journal of the Association for Consumer Research (JACR). This conference also introduced a new conference management software system to help streamline the conference and proceedings process. This volume reports the presentations made in the conference’s special sessions, competitive paper sessions, working paper sessions, invited sessions, forums, and the videography track.

The conference attracted over 1100 participants and had a total of 587 acceptances, which included 116 special session (52% accepted), 242 competitive papers (54% accepted), 267 working papers (72% accepted), 7 forums (78% accepted) and 9 videographies (75% accepted).

We thank our generous sponsors: Journal of the Association for Consumer Research, Journal of Consumer Research, Journal of Consumer Psychology, SAGE Publishing, Stukent, Inc., Palgrave Macmillan, and the University of Chicago Press.

Many wonderful people worked tirelessly to help us make this conference possible. We thank our Program Committee, Competitive Paper Reviewers, Working Paper Reviewers, and Videography Reviewers (who are all listed by name inside these proceedings). We especially wish to thank Fleura Bardhi and Ravi Mehta (Working Paper Chairs), Stephen Spiller, Ashlee Humphreys, and Tonya Bradford (Forum Chairs), Ingeborg Kleppe and Alain Decrop (Videography Chairs), and Donna Hoffman and Tom Novak (Doctoral Symposium Chairs). Many thanks also go to our excellent Associate Editors: Frederic Brunel, Keisha Cutright, Angelika Dimoka, Rosie Ferraro, Peter McGraw, Page Moreau, Stefano Puntoni, Americus Reed, Aric Rindfleisch, and Yael Steinhart.

Special gratitude goes to ACR Executive Director Rajiv Vaidyanathan, who was always willing to patiently and thoroughly help us and answer our questions, and to Paula Rigling, Jiyoung Lee, the platform support staff at All Academic, and the ACR Executive Assistant Brenda Monahan.

Last but not least, we wish to sincerely thank Stacy Wood, ACR President 2018, for gifting us with the opportunity to organize the ACR conference and for her help, wisdom, and support in guiding us through the many steps toward the event.

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# 2018 ACR Presidential Address

## True Story

Stacy Wood, North Carolina State University, USA

So, beloved. Some of you I've never met and some of you are the most important people in my life. I can't tell you how much this organization has meant to me over the course of my career and how much it's given me in my life. But let me try.

I want to tell you a story today and it's a *true* story. I know because I was there. And this story's gotta have a soundtrack because there's always a song playing in my head. And so, while I was putting the slides for this talk together, I thought I'd put some of the lyrics on the slides. I won't mention them. They're very random. I'm a 45-year-old woman from North Florida, so they're not in particularly good taste. It's not like you're going to be impressed with my musical breadth. That's ok.

Now I believe in how the stories we tell shape the culture we have. I hope that some part of my story resonates with you today. I was shocked to be elected president of ACR. I mean *really* surprised. I was shocked and *then* I realized... about half a breath later... that I would have to give this talk! Drive this large automobile! Impossible! I put it off as an unbelievable thing.

But about two weeks later, my husband and I went on a weekend trip to D.C. The first thing that we did was to go see the MLK Memorial, which I had not seen before. If you've been there, you know the power of the place. Because there is the man... with the mountain that he moved. In stone. Larger than life. But the really impressive thing is that surrounding him are all the *words*. All the things he said that we remember. I wandered through and I read the words and I thought about them and I was silent and I maybe cried a little bit, but that's no shame in that. After that Carl and I wandered over to the Lincoln Memorial, which I had seen before, but this time I read the wall that no one ever reads. I was the only person in the large crowd over at the wall on the right, which is Lincoln's *second* inaugural address. It only took him six minutes to deliver! Lincoln! Who was not known for his brevity! A six minutes speech. And yet in that speech are some of the words that resonate through our history. Ah, I was just blown away by the stark truthfulness of it! The honest lovingness of it. Pulling no punches. To say things the way they are...yet always with hope and charity and malice toward none.

Okay, keep in mind MLK Jr., Lincoln, and *then*... that night we went to a U2 concert! So now I'm listening to Bono! Oh, come on! All the songs that inspire...Okay, it wasn't the younger Bono in this picture, but he's still cool. He's still awesome. And his words still resonate. As we're driving home at midnight in the D.C. traffic (as an aside, I do wonder at a place that has traffic at midnight) Carl and I are talking about the power of words and how we've been just *washed* with words all day and just the amazingness of it all. And I said "Gosh, I wish I used words that way, I wish I had a forum. Should I get a Twitter thing?" And Carl said no. Then he said, "But aren't you giving the big speech at ACR?" Oh, yeah, I am. And I got a little nervous.

So, I spent the rest of the year thinking about ACR and what I could say to you that might have impact. I thinking a lot about what I loved about ACR *and* what I *didn't* love about ACR. Both what we are and what we can be. And you might say to yourself, "Okay, who are you, Stacy Wood, to be telling us who we can be?" I am not a professor at a top-10 school, not even a top-50 school. I am not a journal editor. I was an AE once, but haven't been for a long time. And I'm

just *not* the illustrious legend of our field that you might want to take advice from. I am surprisingly old, this being my 24th ACR. I used to be teased for being too young! But I'm not done either. I'm about halfway through my career. I'm going to work until I'm 85. Just be prepared. Someday I'll be the one standing at lunch in that more than 40-year group that Rajiv announces. So, I'm young, but I'm not that young. I have the experience to know what I know. This is important because what I will tell you today is an *intervention*...of sorts.

I see ACR at something of a crossroads. We are this amazing collection of people. But we've gotten larger and larger, and we've wondered what's the meaning of that? And we've seen groups fracture and spin off, sometimes staying within the umbrella of ACR, sometimes going off. And it seems like there's a lot of passion and energy in those smaller groups. So, then, what is the purpose of our larger collection of being? Why should we all come together? I get it.

And yet, every time I hear someone say they're not going to ACR this year, it hurts because *I'm* coming. The only time I didn't come was when I had a baby...and I actually registered for that conference! Even though the conference was two weeks after my due date! It took Gavan Fitzsimons tell me "That is crazy." And, as it turned out, he was right and I couldn't come. But think about ACR. It's where we *meet*... where we meet *diversely* to consider our many perspectives and approaches. That matters.

The other thing that I've seen recently that's really surprised me is (now that I'm invited occasionally to speak at the Doctor Consortium) how *stressed out* our doctoral students and our rookie professors are. I mean, *really* stressed out. I remember being stressed out in my early days, but this still worries me. I see a rise in cynicism. People think that publishing is just a game. They call it a reviewer roulette. You know, I just have to check the boxes, jump through the hoops. It's like it's some kind of Academic American Gladiators to get through to the publishing finish line. And then we have this whole *other* issue that is plaguing us (and other fields) of data integrity and the replication crisis. What trust have we in other people's work? And what trust have we in our own work? Then, as if that weren't enough, we're plagued by the very *label* of marketing. I gave a talk a couple weeks ago to a bunch of surgeons, and at the end of my talk, one particularly well-read surgeon said, "This marketing idea is interesting, but I don't really understand how this is any different from behavioral economics." Whew! I said, "Oh, buddy, you don't even know what you just said!" We were first. We need to use the term marketing proudly...but, in truth, I don't know that I always have. And, *finally*, I worry that some of our bright minds feel shut out and feel shut down. And if you look around, I mean honestly, *look around*. Look at the people around you. Look how smart they are. Look how cool they are. Look how awesome they are. We should not waste the brain power in this room. That would be truly awful.

So, I want to start with what I think is the first problem that we face. And I'm borrowing this from Chimamanda Aditi, who talks about the danger of the Single Story. The danger of the Single Story is the idea that sometimes when you tell one story over and over again, you create a stereotype that de-legitimizes—actually *blocks*—other stories and other paths. Chimamanda Aditi grew up in Nigeria, and when she went to the U.S. for college, she met her American

## 2 / True Story

roommate. Her American roommate said, “You’re from Nigeria. How cool! I’d love to listen to some of your favorite music.” So, she said okay and she pulled out her CD of Mariah Carey! Her roommate was stunned and said, “Oh, I thought you were going to give me some kind of tribal music!” Aditi was surprised even though it wasn’t that that kind of music doesn’t exist. But she realized that people in the U.S. only heard *one* story about living in Africa, and so they didn’t realize that there were *many* stories about living in Africa. We do the same thing with ACR. In some ways, we have created an invisible hegemony whereby we have one clear path of success. One day somebody’s a doctoral student, and then someday that somebody’s a “legend,” getting the big award. And in the 10 years in the middle of that time is promotion at a top school and being on ERBs and research awards. But I think that that’s just *one* story of success in our field. I think there are really *many* stories.

What I’d like to do today is to tell you my story, because my story is *not* the stereotypical story of success. It’s a bit of a roller coaster, frankly. There have been times where I have thought “I can’t even believe how lucky I am to have this job! I can’t even believe that they pay me to do this!” (And I don’t want you to tell my dean that because I always ask for raises too.) But I couldn’t believe I’d be so lucky. But, then, there have been other times where I’ve really thought about dropping out...either to go work for oodles of money in industry, or to be a beach-bum on Sanibel Island in Florida. Rollercoaster.

You have to know that my story started with these two unbelievably amazing people. My parents, Wade Wood and Marcia Vandervliet. Look at how adorable they are! Have you ever seen cuter people in your life? They don’t just look good. Their goodness is all the way through. They met at Hope College--appropriately named--in Michigan. My mom grew up in a very conservative Dutch family—one that didn’t believe in women working outside the house. She was actually disowned by her family when she left to go to college. My father was the first to go to college in his blue-collar Michigan family. They have had an incredible life together. My mom became a nurse. She wanted to be a doctor, but her two options were a nurse or a teacher. My dad became an engineer. And the thing about my parents that has privileged my whole life is that they had a wider perspective than their upbringing. They traveled the world. Their belated honeymoon was to Japan. (You can see by these photos that they spent a lot of time taking pictures of each other looking fantastic.) They had friends of every race and nationality. When my dad hired lawyers or accountants, he always hired female lawyers and accountants with the understanding that, at some point, they would go out to lunch with my sister and me and tell us about their jobs. I didn’t really understand that sexism existed until I was about 11 or 12 because my dad had made me think that there was no difference. There was no difference to him. Now they’re still unbelievable people and kind of hard to live up to. They’re larger than life. Here’s my mom—in this photo, she’s on a “girl’s trip” to camp in the desert that lies between India and Pakistan. Here’s my dad last year, running a half-marathon that involves a bridge at both the beginning and the end of it. He is 76. Sometimes people say to me, “Oh, you’ve done very well for yourself.” I say “You should meet my parents! They’re amazing!”

They did decide to have kids. So, here’s me as a baby. I don’t know that I was that impressed with the world, at first (as you can see by my constantly suspicious look), but I had a really nice childhood. I had a childhood maybe much like yours. I had a little sister who bugged me and made me play with her when all I want to do was read. My dad used to drive me around his engineering construction site when I was little and point out things to me and tell me what they were. My first word was *dragline*. True story! And this photo...

when I asked my mom what her favorite picture of me was, she gave me this one of me crossing an obstacle course in the red bathing suit because she said she always liked that her girls were stronger than anyone else’s. That’s a little bit of pressure, but it’s okay. We were an American family. Very typical. We drank Tab. We ate burritos. We played board games. And if I look back at my pictures, I see that I actually had a really early interest in science. There were a *lot* of photographs of my science projects. There’s one on doing cultures of common objects. I grew germs. And then how light helps a camera. But when I was looking through all these pictures, I see that there is one overarching theme to my entire life, and that is...that I would rather be reading by myself. And I’m a little frustrated with anybody who interrupts my reading for any purpose. I love all of you. And yet I would give this all up in a heartbeat to go read somewhere quietly with a bag of Doritos.

I emerged from high school with my personality formed for better or worse. Someone once told me that I was a perfect example of my Zodiac sign of Cancer. It was in that kind of embryonic state that I headed off to the great world of Gainesville, Florida. It was a magical place! If you’ve not been, it’s truly wonderful. Some of the old places...Burrito Brothers, Leonardo’s. It was a lot of fun. And in my senior year at Florida, as Rich mentioned yesterday, I finally took a marketing course. But I was a Finance and Russian double-major. I thought kids who took marketing were the slower kids, and so I was not a marketing major. But I *had* to take *one* marketing class to graduate and I put it off to my senior year. And then I took Principles of Marketing taught by Rich Lutz. 800 students! Not all in one big room. There were TV replays of the class! I watched Rich Lutz drill a hole in a textbook--that happened. Every time Rich talked, though, about the “principles” of marketing, he would talk about the *research*. He talked so much about research! And while I sat there as a kid, I thought to myself, that research study is so...*wrong*! That may work with some people, but it surely doesn’t work with other people! Or it may work in one place but doesn’t work in another place! It was so interesting, and I had so many counter-theories and I wanted to go talk to Rich all the time. About that time, I had been talking to an Econ professor who was trying to recruit me into a PhD program in economics. So, I went to Rich’s office and I said to him—and remember I’m one of 800 students. I’m a kid at Florida. The kids there, they’re all dressed in tank tops and boxer short bottoms and flip flops—so I walk in in *my* flip flops and tank top, and I say, “You have a PhD program in marketing here? I might be interested.” How *lovely* that he didn’t laugh at me! How lovely that he asked me, “Why are you interested?” And I said, “I really like the research you’re talking about,” and he talked to me and he took me seriously and he said, “I’ll help you. Here are the steps to apply.” My parents were living in India at the time and (this being before cell-phones) we talked infrequently. At our next monthly call, I said, “Guess what? I entered a PhD program in marketing!” My dad, the engineer, said, “What? Marketing?! I thought you were my smart one!” I’ve always fought to explain marketing to my engineering family.

And so, this photo is me going off to a PhD program. I bought a car with a loan from my parents. It was a Pontiac Firebird. (My mom told me she thought I was going to come back with a Honda Accord. I’m like, “Don’t you know me at all?”) I went off in all my bright glory to Florida. These are the people I ran into. These are the people who taught me marketing. It was awesome, but it was tough love. I was no longer the smartest kid in the room. Not by a long shot. I had to work really hard, it took me a bit to get on. Stijn wanted me to tell you the story about how I almost got kicked out of the program for the “Shimp et al paper” story...which I will tell you at a reception somewhere with a drink in my hand. But I remember going to Chris

Janiszewski's office one day with a list of 25 research ideas. Chris told me these 24 are idiotic, but this last one might have some merit. Go think about it for a while. Off I went to think and I came back an hour later and said OK, I thought about it. He said, "No, Stacy! Think for longer than an hour! Come back next week!" Or the time when I went to play basketball. John Lynch and Americus Reed and Kevin Bradford and some other people had a weekly basketball group. I said I played basketball in high school. I'd like to come play with you. And I went. I played. And I was not great. John looked at me kindly and said, "Come back when you can dribble with both hands." Tough love. No pulling punches.

Now I did have *this* amazing pack of people around me. These were my cohort, my colleagues, people who were a year above, and in my year, and a year below. They're all so smart and they had so many different life experiences. It was *amazing*. I think we all realized at the time that this thing called marketing was amazing, but I know that I personally saw through the glass dimly and I spoke as a child and I reasoned as a child... and I'm afraid that I stressed as a child, too. My whole worry was, "Am I doing good enough? What's good? Am I doing good enough? And does everyone else think I'm doing good? Am I good? Is it good?" It was all a bit tricky. Some people may remember if you knew me back in the day, that a lot of people thought that I didn't drink alcohol as a philosophical thing. But the fact of the matter is that for most of my PhD program, I was on some pretty heavy anti-depressants that didn't mix well with alcohol. I struggled not being the smartest anymore and not knowing if I was good enough. To give you a sense of that, this is a photo of me before I started the PhD program. And that's me after... that was year four. Look at that sad pallid person in the gray sweatshirt on a beach!

Now the thing is, is that it wasn't all bad times. There were wonderful times, great times. One of the most impactful things was that Joe Alba, John Lynch, Bart Weitz, Chris Janiszewski, Rich Lutz and Alan Sawyer let me be on a project with them where we talked about what the future of electronic commerce could mean. If we had just called it the Internet, we would have been superstars. There were these high points. And there were these low points. I wasn't selected to be the doctoral consortium candidate for my school. I felt *very* sad, like my career was over and who would ever love me now? I think that sometimes when we're older we forget that when you're in that place, it seems so important. I did get a job and I went to South Carolina and South Carolina was great. I had a paycheck! That was fantastic! But the hard part was that I was no longer around my loving group of fellow students. We weren't like puppies in a little cozy kennel anymore. I was alone and it was a lonely time. So, I put my head down and I worked hard and I got my dissertation published. That was an awesome, awesome moment. It's only looking back that I look at it and I say, "Here's what I wrote: Remote purchase environments: The influence of return policy leniency on two-stage decision processes." Now, I don't know if that's *that* interesting. Was I the queen of return policies? Did I want to become the queen of return policies? No. I never thought about return policies ever again. I was sick of return policies. I was done with return policies. The paper was in *Journal of Marketing*. Box checked, but to what purpose?

Then life got good because I found my community again. Until then, I only had my once-annual trip to ACR. But then Kristin Diehl and Dave Crockett came to South Carolina. And, man, I hope you have your Kristin Diehl and your Dave Crockett because having some friends at your school who have your back is amazing. We threw *so* many parties. This is a picture from a party we called the Idle Rich Party. This party was called Iron Bartender. We went to horse races, as one does in South Carolina. It was a magical time of togetherness and hard work. Here are some of my papers from

that time. Look. "Prior knowledge and complacency in new product learning"—this is actually a more interesting paper, but again, it's not sold very well. You'd think that maybe I could get some help from somebody in marketing! This paper's even worse: "Psychological indicators of innovation adoption: Cross classifications based on need for cognition and need for change." Again, a really interesting idea completely hidden under a bushel of jargon. But I did get tenure, and suddenly, after tenure, I realized that a lot of my earlier anxiety had been for naught. It hadn't even been that close. I wasn't on a precipice of danger. It was fine. I was doing fine. The work was fine.

And so, things progressed onward for me—a kind of progress. I did my thing and I got involved in as many different ways as I could in the field. And as always, I loved ACR. But I *did* start to get a little bored with my work. I *did* find that I was embarrassed to say that I was a marketing professor. I *did* start to entertain the thought of "Am I wasting my life my whole life on this?" But, you know, other things were going on in my life, my real life, at the same time. I met this guy and married him. He's not just the cute guy you see in this photo. He is very intellectually-oriented and has two master's degrees! We thought about starting a family and things like that. We struggled with infertility, which was a big part of my life for five years. In that time, we moved to North Carolina for Carl's job and I commuted for four years to USC. If you've ever commuted for any long time in your career, you know it's not fun. But it was what it was. And eventually these two came along. Here you see I have a three-year-old, Ariella, and a six-year-old, Amalia. They are the cutest kids *ever born*. They are amazing. I don't know what else to say about them other than that they're so crazy and we're so sleep deprived and so consumed with love for them. However, to keep it real, I do feel like I need to show you two pictures from last week. Last week I let my older daughter Amalia, know that it hurt my feelings for her to call me Poop-butt Stacy. So, she wrote me this apology note. Notice she still addressed me as Poop-butt Stacy in the apology note, but she was trying, I think. And this is the face of my youngest last week, after I spent \$26 to take her to one of those special pumpkin patches where you ride the tractor out into the field to choose your pumpkin. And when my daughter understood that she could only take *one* pumpkin home, it became the Worst Day of Her Life. I wish that tractor ride had been free. Sigh.

So, what am I doing? I'm in North Carolina. I'm doing normal things. I'm a professor. I've got a husband. I've got kids. I've got tenure. Auto-pilot. But, something happened at that point that saved my mental life. And I didn't even write it up on this slide because I'm a little afraid even to say it. It's not on the slide - there'll be no evidence. The thing that saved my life was *teaching*. Teaching! The thing that I had grudgingly agreed to do in order to be allowed to do research. When I moved to North Carolina, NC State had no doctoral program, so I had no more PhD students. That was hard. To try to fill the void, I took MBA students who I thought were really bright, and I taught them how to do academic research. All kinds of academic research—experiments, qualitative, conjoint analysis, you name it. We did all kinds of research and I taught them to do it at a level that could be published academically. But we did it for companies. We'd go into a company and say, "What's the biggest consumer problem you're facing? Something that boggles you and you don't have the bandwidth to address it?" And then we tackle it for them and spend a semester studying it. And what I learned is that companies have really big issues and our theories are pure magic. They almost always work! And these companies were so grateful for the things we did for them! We went to big places, and the executives at these places would say, "That was literally the most insightful presentation I've ever seen." I wasn't making the presentation. My *students*



were. It was them making the presentations, using the theories, (I taught them how to do lit reviews!) and they were amazing and they became advocates for marketing research. And if you want to talk to people who are passionate about consumer behavior, I can introduce you to any number of the alumni from this program who love it. In fact, two of my MBA students formed what they call the Syllabus Club, and what they do is they go online and they get the PhD Consumer Behavior seminar syllabi from the most famous scholars in the world. And then they read the papers together and discuss them over coffee. They started with Jim Bettman's class. Can you even imagine an MBA student like that? They are awesome. The jobs they get, the work they do--they're amazing. And we ended up doing all these really neat presentations where we were like, "No, we don't want just do any old presentation. Let's go to a high-tech creativity room where we make a 360-degree curation—it's like a gallery walk of findings. We will take you on a tour around this room and tell you interesting things!" I just really loved it.

And then Teaching Explosion #2 is that I (for the money!) agreed to teach a seminar at the Duke School of Medicine in a program on clinical informatics. My students were doctors and nurses and hospital administrators. When I walked in and I said that I was teaching them marketing every single one of them expected it to be the worst class ever. But by that point, I'd worked with enough companies to know that what we know in marketing is magic, so that I walked in with all the confidence in the world. And I said, "You are going to *love* marketing." And all of the doctors and nurses and hospital administrators rolled their eyes. Yeah, that was Day 1. By the end of the program, they gave me the teaching award—not because of me, but because of the *material*. Talking to them about the issues that they faced and the impact of patient decision making on healthcare was so enlightening that I felt like I had been given a trampoline. I felt like I could jump anywhere. There are just some things where, if it's working, it's frictionless. I started getting lots of invitations to go talk to hospitals. I started having lots of doctors call me up and say, I'd like to work on a project. I didn't even work hard. I wasn't working hard like I always did before to prove how good I was. It was just happening, and it was happening because of the power of our theories. They *work*. So, this photo is me presenting a grand-rounds lecture at UNC's School of Medicine. The couple of people who had heard me before were excited. Every other doctor in that room thought it was a joke. In fact, they sit by seniority at these presentations and the most senior doctors are in the front row. And as I was waiting there to present, three of the doctors were having a purposefully loud conversation about what a stupid thing it was for them to come hear about the "McDonald's of Medicine" from some marketer. But at the end, they felt differently! Again, not because of me, but because of what we *know*. Our marketing knowledge. I wasn't just talking about my work. I was telling them about *all* of our work and they were amazed. They didn't know that this knowledge is out there.

This has started me on a track and it started me thinking about what makes something interesting and important. I realized that one of the real problems with our stress and our cynicism is that, because we have this one path—this Single-Story bias—we feel pressured to stay on it. And so, what I want to suggest is that there are lots of paths. So many paths! And there are lots of purposes. So many purposes! Don't feel like you can't step onto a different path! And *one* of the ways to study things in a way that you feel like you have purpose is to start with the phenomenon, not the theory. I hesitate to say this. I'm wondering if I'm going to have my Florida PhD revoked. But, I think you should sometimes start with the phenomenon and think later about theory. When we love a theory and then we look

around for something that fits the theory, we tend to smooch circular pegs in the square holes. I think if we're truly curious about a phenomenon, we watch it and we wonder about it—carefully, deeply. We've all been trained to know lots of theories. If we have theoretical knowledge and then we watch a phenomenon, we can see what applies. So, this, to me, feels very revolutionary. I know now that the best work that I'm going to do is *in the future*, not in the past. And I know it because of this personal revolution—in fact, I think that this is not that radical of an idea. William Blake, who I absolutely love, said "he who would do good must do it in minute particulars for art and science *cannot exist* but in minutely organized particulars." I don't want us to be "all applied" and forget about theory. I want our applications to make our theories *better*. I want our scholarship to be better because it's linked to something we care about. I want all our work to be a *labor of love*, and that means that when you first start, you gotta *watch* and *think* and *watch* and *think*. And *then* you gotta talk and listen and talk and listen. For an introvert like me, that is actually kind of daunting. And then, finally, you get to read the literature and then go repeat that process. And *only then* you can even think about doing a study.

And so, in my story, I met a doctor, Kevin Schulman, from Stanford, and we started a project in which we looked at how people chose in end-of-life decision making, especially in heroic efforts at last-ditch treatments in cancer. It started because Kevin was interested—he's in cardiology, but he would talk to his friends who are oncologists and they would describe the epic lengths that people (terminal cancer patients) would go to to try one more thing and one more treatment and one more procedure and then a maybe a clinical trial. Whereas he, as a cardiologist, would often say to people, "You know, we could insert this pacemaker and it would give you a year and better quality of life," and they'd be like, "Nah, I've had a good run." Why *is* that? We talked about the language scheme is surrounding different disease states and how cancer has a schema of heroism about it, right? People are *warriors*. They're fighting a *battle* and if you remember Stuart Scott, the ESPN commentator? When he died from cancer, he said, "Don't say I *lost my battle*." I think that's really telling because that "battling" can make you feel strong in the treatment. And it can help raise money. But suddenly there's a bit of a wicked backlash when you come to deciding about hospice. This is very different in many ways from how we can talk about heart disease. Look at this slide with heart disease messaging. Be aware. Take care. It's interesting how the language impacts us. Kevin and I were talking about this and we're planning our studies...and then this...this is my very wonderful friend, Melayne. She was one of our cohort at USC. An economist, but we didn't hold that against her. She was in the thick of every party. She is also a JCR author. She and I and David Norton published this paper. She was diagnosed with breast cancer, triple negative, and she did *everything*. She *fought hard*. She did it all, and I was driving to see her in Colombia a lot because I was living in North Carolina. She had recently stopped doing a treatment at Vanderbilt, a trial that wasn't working. And as I was driving down, I called her to say, "Just letting you know, I'll be there in about 45 minutes." And she said, "Okay, just letting you know. I called in hospice today." I was like, cool. She said, "They're going to bring in a hospital bed this afternoon." I promised to help set it up. So, I got there and we set up the bed. And we tested it out. And she asked me to proof-read the letters that she had written to her daughter, who was 11. And we talked about what kinds of things she'd want me to say at her service. And at the end of the visit, she said, "Thank you so much for not treating this like it's weird." I said of course it's not weird and she goes, "Yeah, but when I told some other people about hospice, they said don't do it, *keep fighting*."

You're *so strong...*" And she said, "I feel a little guilty." And I said, "Don't." But that's the real cost of a language schema.

That moves us to this third problem, the integrity of our data. I mean, there are lots of problems here. Faulty statistics, over-engineered protocols, dubious incentive systems, messy domains. I think that we all know that there is real dishonesty that happens. But there is also a lot of honest error, and often we only have one method, one methodological hammer, and so we don't triangulate on things. But what I really wonder is, do we believe in our studies that *there's a right answer* or we just trying to show it was a "slam dunk" appropriate for a top journal? And if we *do* believe there's a right answer, do we *care* enough to unearth it? Because if we care enough to unearth it, then we will welcome the criticism! We won't want to put a bad answer out there. We will want to talk to anyone who raises their hand and says I don't know that I agree with what you say. Good, good. Sit down with me, show me what to do. Let's work together. You'll *want* to do lots of studies. You *want* to really be the first to examine your work with a critical eye. Because there's a right answer and it matters that it's out there! You will. You're so smart. And a lot of this involves getting out there in running our own studies and observing what happens. This can be hard! Back to my own story of how my work has taken this epic turn. Dr. Julian Yang from Duke approached me and said, I would like to work with you on crafting the decision environment for families who are having to make a decision about "Do Not Resuscitate" or DNR. Because right now it's completely all over the board, and it's really kind of crazy. And I said, Sure, absolutely. We talked about what happens and it sounds just awful. They often take place late in the afternoon because that's when doctors are free. And they just invite anyone who's in the room to be a part of the discussion, no matter whether it's the random Aunt So-and-So who's traveled in. It's so messy. Starting next month, I am going to be on the clinical team that walks in and observes as doctors have this conversation. For those of you who know me well, you know I really fear of a lot of death oriented things. Flying, driving, trains, crossing the street, snakes, spiders. I am a little freaked out, but I really believe there's a right answer and I'm going to find it, even if it's painful.

And so, for the people who are younger in the audience who say, "Yeah, yeah, we've heard a lot about relevance lately, but then come tenure time, suddenly everyone forgets about relevance. So how am I really incentivized to be relevant? I try to get field data, I try to do these hard things and I do it. What have I done to deserve then the cold shoulder afterwards?" I get it! And so, what I did is this: I wrote a little pledge that says that when writing letters for tenure-and-promotion purposes, I pledge to take a holistic view of scholarly contribution, value engagement with scholars outside our field, reward making an impact in the real world, and credit immersion in a substantive domain. And then I emailed it to every full professor that I could think of who I thought probably got asked to write a lot of tenure letters, and I asked, "Would you sign this pledge and let me put your name up on the screen at this speech?" I have never got such quick, enthusiastic responses. I think there may be like 40 people here on this slide. I think my email box had, like, 150 exclamation marks from those 40 people. Some people said they already did it. Some people said this is important. This is about our world shifting to seeing more paths more purposes, more ways to succeed. Not just one path, not just one story! We, as a field, suffer a little bit from some insecurity. I know I did. I felt like I was "just" marketing. I often felt unimportant; it wasn't like I was curing cancer. We suffer from the inability to translate things. Well, my early papers are unusable by practitioners because practitioners can't read them. And,

at the time, I couldn't translate them. But after teaching my MBA students how to translate them, now I can. Now I have that ability, but it took some training. Think about the people who are good at translation. I think of Dan Ariely's book and look at how successful it was! People love our material! People love it and now so many people in our community are writing books. I think that's awesome. I think this is *important*. The world is excited about the knowledge we have. Americus Reed and Barbara Kahn even have a Sirius XM radio show. I mean, stop it! They're on the radio! That's very cool. I think we've got to become a little more fierce. There's an ad that I know all of you have seen from Nike with Colin Kaepernick and it says, "If people call your dreams crazy... if they don't believe what you think you can do, good! Don't change! Because what the non-believers don't understand is that calling a dream crazy is *not* an insult. It's a compliment. So, don't try to be the fastest runner in your school or in the world, be the fastest *ever*. Don't dream of wearing OBJ's jersey, dream of OBJ wearing *your* jersey. Don't choose between being a homecoming queen or a linebacker. Be both! Don't think that you have to be *like* anybody to *be* somebody. If you're born a refugee, don't let it stop you from playing for the national team...at age 16. Don't just become the best basketball player on the planet. Be *bigger* than basketball. If you only have one hand, don't just watch football, but play it at the highest levels. And if you're a girl from Compton, don't just become a tennis player. Become *the greatest athlete ever*. Don't ask if your dreams are crazy. Ask if they're *crazy enough*."

Why do we think that these words are just about *sports*? Why do we think that this is just about athletics? This is our life. We are so talented. *Let's be crazy*. And, so, I have crazy things to do and I don't know how they will work out. But I'm going to go do them. I know that you can do them, too, because we have each other. This is an amazing community. Marketing is literally special because... We like each other. We have fun together. We get together with excitement and passion. They are not just professional relationships. They are friendships. People will lift you up and do it for years and years. I asked Tiffany White if she had any pictures of us in the early days. Tiffany White and I met 24 years ago at ACR in Phoenix...in a hot tub...and Tiffany had the picture. There we are, and here we are 24 years later. But 24 years is not impressive. When you've got 45 years together, you can be the same wild and crazy guys together 45 years later. We do things outside of academics, even athletic things. We attend each other's special moments. We introduce our little ones to their academic grandparents...or they're not just grandchildren. Sometimes they're grand-dogs. (There's no shame in that, David Norton!) But we're there together. We're together. We're *together*. We're always together, making fun of each other sometimes, but always together for the big things, for times when we're just looking super glamorous, times when we visit buildings with columns, eating, drinking, wearing shark hats...but always together. And every year we're excited to see one another. We need to do more than that, though. We need to not only be together, we need to not only socialize, but we need to talk to one another about the things we're doing that we're excited about---whether they're traditional academic stuff, applied academic stuff, teaching academic stuff... I don't care. We need to talk to one another and tell one another what we're doing. We can always play, and I'm sure we will. We're quite good at it! And, so, I have high hopes for us, and I want to take this opportunity to thank all of you who have been a part of my story. It's been wonderful and I love that it's not over. There are a lot of big issues in the world, and it's amazing to know that our knowledge can help every one of them. So, what is the *end* of the story? I don't know. But I do know that everyone lived Happily. Ever. After. *Thank you*.

## 2018 ACR Fellow Addresses

### Kids Say the Darndest Things: Insights from Children's Consumer Research

Deborah Roedder John, University of Minnesota, USA

When I was a young girl, one of the most popular TV shows was called "Kids Say the Darndest Things." The show was hosted by Art Linkletter, who interviewed young children asking them for their views on a variety of topics, such as marriage, family, jobs, and the like. Apart from being cute, and quite funny at times, children's answers often provided an interesting perspective on life. Here's a sampling of children's answers to the question of what they want to be when they grow up (Linkletter 2005):

*"I'd like to be six. I'm tired of being five. I've been five for a whole year."*

*"I want to be a nurse and have all ladies for patients. [Why not men?] Because they complain too much."*

*"Nothing, because I don't want to grow up. [Why?] Because of the bills you have to pay at the end of the month."*

I hadn't thought about this TV show for years, until I started working on this address and began to think about how I could provide a perspective on my career conducting research with children. At first, I thought about the array of topics I've examined—such as children's responses to advertising, developing decision-making abilities, and interactions with brands. Then, I thought about the different theories and empirical findings these investigations produced. But, in the end, what I remember most are my experiences interviewing children, and how they really did say some of the unusual, funniest, and "darndest" things.

And so, with my allotted time, I'm going to tell a few stories about my experiences with children that I still remember to this day—and how they raise questions that go beyond children's research to how we conduct consumer research with any subject population.

#### SETTING THE STAGE

Very few people listening to this address have conducted research with children. Yet, many of you are parents, aunts, uncles, or grandparents who interact with children. Can you imagine what it would be like to conduct a research study with children? When you've conducted studies, I'm guessing that none of you has had the following happen:

- After introducing yourself and explaining you are from a local school, your participant says: "Aren't you kind of old to still be in school?"
- One of your participants doesn't show up, and you get the following explanation: "Steven won't be doing the study today. He's in the principal's office for shoving another boy into a hall locker."
- At the end of the study, you ask a participant if they have any questions for you, and one of them asks "Do you really get paid for doing this?"

Welcome to my world. Here are some of the challenges that await if you want to conduct research with children. It's a world where you can't just give surveys to participants to fill out because many of them can't read. It's a world where a participant's response to a question about why they feel a certain way or chose a certain

option often consists of one word: "Because." It's a world where you can't ask participants to write down their thoughts because...well, they don't know how to write yet or it's too hard to try to explain what a "thought" is to them.

Due to these challenges, most of my research with children has been conducted via one-on-one interviews, with research procedures and tasks specially designed for the age group being studied. Because there is a need to interact closely with your research participants, you have opportunities to observe more than just the answers to your specific research questions. You have an opportunity to see if they struggle, are excited, or interested in your research. You have the opportunity to see how they interact with your research task and materials. And, quite often, you have the opportunity to hear things you never anticipated, which leads me to my first story.

#### STORY #1: RESEARCH ENGAGEMENT

I conducted my first research project with children while I was a doctoral student. Although I had never conducted research with children, I felt relatively confident about running the study because I had conducted numerous studies while working in a marketing research firm prior to beginning my doctoral program.

And, the study seemed easy enough. The objective of the study to examine whether advertising was more persuasive in shaping product choices for younger versus older children (Roedder, Sternthal, and Calder 1983). We showed 4<sup>th</sup> and 8<sup>th</sup> graders an ad for a new product, and then asked them questions about their attitude toward the new product, and asked them to make a choice between the new product versus more established and preferred products. We also included questions about their comprehension of the ad, attitudes toward characters in the ad, overall attitude toward the ad, and preferences in the product category. Nothing extraordinary here for an advertising study.

But, since it involved school-aged children, I did use a different type of response scale for the questions. I selected a smiley face scale, which is often used with children in commercial research contexts. The scale points were variations on a smile and a frown, with a neutral face as the midpoint. I figured answering questions with the smiley face scale would be more interesting and fun, in addition to being easier to understand for children of all ages. The resulting survey was 8 pages long, with four questions and smiley face scales on a page.

When I conducted the study at local schools, it seemed to go well. I ended up having to read the survey, one question at a time, to 4<sup>th</sup> graders because a small number had reading difficulties. But, apart from this unexpected development, I didn't see any red flags. Most of the participants seemed excited as they entered the interviewing room, and loved the idea that they were going to watch something on TV. After seeing the ad, they dutifully marked a smiley face for each question, and were delighted to hear about the gift bag they would receive at the end of the day for helping with the study.

Toward the end of the first day of data collection, I decided to ask a few of the children how they liked participating in the study. The first couple of responses were "OK" or "good." Then, one of the 4<sup>th</sup> grade boys piped up and said: "It was worse than school." I knew



the list of things worse than school was probably pretty short for an 8 or 9 year-old boy....so, this was something to pay attention to.

The next day, when the study resumed, I spent time observing the children....looking for evidence that they were getting tired, bored, or generally less enthusiastic as they filled out the surveys. I did see several children who looked less engaged as they flipped through the survey. I remember one boy who swiped his hand across his forehead, with a motion that indicated he thought it was hard work. Some of the children were losing their focus as the study wore on; they started looking around and seemed less interested. Gee... maybe filling out a survey wasn't as much fun as I thought, even though it had a bunch of smiley faces all over it!

Although the research project was a success, I could see that I was going to need a different approach to do research with children. I was interested in working with much younger children in my subsequent research, and wanted to be able to capture why children of different ages responded in different ways. For children, it seemed that the quality of the data collected, and inferences I could draw, depended on developing research procedures that would be engaging to children. I reasoned that when children were more engaged, they would be more likely to be involved in the questions I would pose, and would be more interested in communicating their thoughts to me. I started developing more interesting tasks, games, and stimuli for my research, specifically meant to engage children.

This story raises a question for all of us, regardless of whether we are conducting research with children or adults: Should we place more importance on designing research that engages our participants? My sense is that really engaging participants in our research tasks is seldom top of mind when we are designing studies, and I wonder if it should be more of a priority. In my experience, it is more difficult to design and implement research with this objective in mind. We need to create our own research protocols and tasks, and we may need to conduct this research in person instead of online. In other words, there could be costs to designing research with participant engagement in mind.

What are the possible consequences of not increasing engagement among our participants? One possible consequence is that our participants pay less attention and are less interested in responding to our queries. The percentage of research participants who cannot answer simple comprehension checks at the end of a study seems to be rising, whether the study is conducted in a lab or online. Sometimes, a significant number of participants can't answer a simple question about something they read or something they did during the study. Of course, there have always been a few slackers in our studies. But, I'm *not* talking about a few people....I'm talking about 10%, 15%, 20%, or more of research participants who didn't pay enough attention to answer a simple comprehension check.

Well, you say, we can just increase the sample size to account for the participants who don't pay attention. Fair enough. But, consider the idea that lower levels of involvement may affect the very nature of our results. Do unengaged participants think and act differently? We know that people with a low level of involvement pay attention to and process more peripheral information, and less central information, than people with a higher level of involvement (Petty and Cacioppo 1981). By extension, perhaps low involvement participants are particularly influenced by seemingly peripheral cues in our studies, including subtle manipulations that would appear inconsequential on the surface. On a related note, perhaps subtle primes have more influence with less involved subjects, who use these cues as heuristics rather than more deeply processing or considering other information. I don't think we know the answers to these questions

about engagement, but I would argue that it is definitely worth our consideration.

## STORY #2: THE VALUE OF DISCOVERY

I had the opportunity to put my newly learned lesson about designing more engaging research as I began a new stream of research on children's decision making. The major question addressed here was whether children were adaptive decision makers, and at what age they begin to exhibit this ability. To begin, I decided to focus on children's abilities to make trade-offs between search costs and search benefits when making a choice (Gregan-Paxton and John 1995).

The standard approach for studying these types of questions with adults was to give them a matrix of information, with columns labeled with the names of different products/brands and rows labeled with attributes of these products. The attribute information for each product would be covered so it could not be seen until the participant asked to uncover it. By observing how participants chose to uncover the attribute information, inferences could be made about the way in which they searched for information. Search costs could also be introduced to observe how search patterns varied when searching for information prior to making a choice was not costless.

Clearly, this research methodology could not be used for young children who couldn't read yet. Further, the idea of decomposing a product into individual attributes, some of which were abstract in nature, would be foreign to the youngest participants in the study. So, a different experimental approach was called for....which resulted in developing a game that we called "House of Prizes."

In this game, children were shown two houses made out of a cardboard box. We cut out four windows on each house and covered them with a cloth curtain to hide what was in each window. Behind each curtain was a small prize, such as a colorful ball. Children were told that they could pick one of the houses, and they would receive all the prizes behind the windows for that house. To manipulate low search benefits, half of the children were told that the same prize was behind each window of a house; thus, there was little to be gained once one of the windows was opened for each house. To manipulate high search benefits, the remaining children were told a different prize was behind each window; thus, there was a lot to be gained by opening each of the four windows of each house before making a choice. To vary search costs, children were given several pieces of candy. For the high search cost condition, children had to give up one piece of candy for each window they wanted to open. For the low search cost condition, children were allowed to open as many windows as they wished, without having to give up any of their candy.

By observing the choices children made to open windows in the houses, we were able to observe how children adapted their search behavior according to the level of search benefits and search costs. The findings were consistent with our predictions for the younger (4-5 years old) versus older children (6-7 years old). There was evidence that the youngest children in the study had emerging abilities to adapt to search costs, but the older children in the study seemed to more readily adapt to both search costs and search benefits. In other words, the older children were more strategic in their search behavior, reducing the number of windows opened when the benefits of search were low *and* search costs were high.

However, something interesting happened that we didn't expect. After the first day of data collection, we noticed an interesting search pattern in the high search benefits condition, where there were four different prizes in each house. A few children opened three or four windows in one of the houses, and then chose the other house

as the one they would receive prizes from. This seemed like a potentially sophisticated way to play the game—find out what prizes are one house, and if you don't really like any of them, pick the other house. To confirm our suspicions, we decided to ask children who exhibited this search pattern about it the next day.

Sure enough, one of the first children we interviewed that day opened all four windows of one house, and then picked the other house. When we asked them why they picked the other house, they said: "I want to be surprised!" We heard the same thing from a couple of other children. Hmm...how puzzling. Isn't the whole idea of searching for information to reduce uncertainty and be able to choose an option closer to our preferences? Why would you want to choose something that you don't know anything about at all? The more we thought about, though, the more it made sense. Surprises are good things when you're a young child—a surprise birthday gift, a surprise trip to get ice cream, or a surprise gift from Santa Claus. Some of the children were simply trying to create a situation where they could have a surprise.

This story raises a question about the role of surprising findings in our research: Should we place more value on the process of discovery in our research? Of course, no one really wants bad surprises—manipulations that fail, participants that don't show up or pay attention, or inexplicable patterns of findings. But, what about good or interesting surprises? Perhaps this is more a question for experimental research given that qualitative research is often focused on the process of discovery. However, regardless of the type of research, should we embrace and communicate surprising empirical findings in our articles and other writings? I would argue that, although most experimental research is rightly focused on findings that relate to our predictions, there is a role for reporting surprising findings that could spark additional research and lead us down interesting pathways for future research.

Take the idea of surprise as a motivation for consumer choice, which was a discovery we made while researching children's decision making. Consider for a moment the idea that this motivation may also exist in adults, but we just haven't explored it as an aspect of consumer choice. I would suggest that there is some evidence to this effect. Consider the popularity of subscription services, such as Birchbox, where subscribers receive small samples of different brands of makeup several times a year. Although marketed on the basis of being able to sample new products, I believe part of the appeal is that each shipment offers a surprise for the consumer. Instead of the tedious process of searching through cosmetic displays in stores or searching through volumes of available cosmetics on online sites such as Sephora, a Birchbox subscriber experiences a surprising collection of new and different cosmetics with every shipment that arrives at their door.

The role of surprise in consumer choice also seems to be alive and well in the travel industry. Firms such as Magical Mystery Tours and Pack Up + Go offer vacation packages to consumers where the destination is a total surprise. You arrive at the airport with your baggage and no idea of where you are going. You only have a sealed letter from the travel agency, which you cannot open until you receive an email from your travel agent with the subject heading "Open Your Envelope!" Only then is your travel destination revealed (Kronsberg 2018).

I'm definitely not in the target market for this experience. I get anxious when my plane takes off 5 minutes late. But, apparently, a significant number of consumers have tired of doing research to pick their destination, checking Trip Advisor for the right hotel, and reading travel guides to plan their tours and activities. Maybe it's all too

tiresome, and what we want is to be surprised every once in a while. Sounds like something worthy of further investigation!

### STORY #3: SHOW ME THE MONEY

My final story is about a research project I conducted to understand whether children could be encouraged to drink more milk if we added new varieties of milk (such as fruit-flavored milk) to the assortment available in stores (John and Lakshmi-Ratan 1992). One school of thought was that adding new varieties would not change the consumption of milk—children would choose to drink the same amount of milk, but would substitute an existing variety (e.g., 2% milk) for any new variety (e.g., peach milk). A different school of thought, and our prediction, was that adding new varieties of milk would increase milk consumption for younger but not older children. Our prediction was based on the idea that younger children haven't yet established strong categorization schemes for products, and would see new varieties of milk as something new to drink, as opposed to seeing it as just another variety of milk.

For this study, we conducted interviews with children from 4 to 12. We showed children a product display of different varieties of milk and different varieties of juice, and asked them to allocate 16 coins of play money to the beverages they would want to drink. Essentially, this was a constant sum allocation task that was designed to make it understandable to young children. Our participants were asked to make their choices using the coins, and were then given gift bags for their participation. Their parents received a cash incentive, as is common in commercial marketing research contexts.

I was waiting near the door of our interview space, talking to one of the parents, when her adolescent son walked up, having completed the study. I thought it would be the perfect time to thank him for his participation, letting him know that he played an important role in our research project. He looked at me, nodded his head, and said: "Hey lady, we're just here for the money."

This story raises a question about monetary incentives in our research: What role do monetary incentives play in our research findings? If people see their participation as a form of work for hire, does that change the way they respond to our questions? Many of us rely on MTurk workers to collect data. Note that they are called workers, not consumers. They give us data in exchange for money. Like all employees, they sometimes complain about the amount of money they are paid or how quickly they are paid.

I wonder if monetary compensation changes the mindset of our participants. Maybe they respond more to our research as workers, not consumers. When I worked in marketing research, we would recruit people for focus groups and surveys by telling them that their opinions were important and would provide important input to the company making decisions about the products. Sometimes, we even mentioned that their opinions would help decide if a product would be produced and sold, or what varieties of the product would be offered. Of course, we also offered a monetary incentive, but the idea was that we wanted them to feel that their participation was important and based on something other than just money. I'm not entirely sure who cooked up this protocol, but it did seem like a good thing to remind participants that we thought of them first as consumers, who had opinions we valued.

I do think it's worthwhile to engage participants in a way that puts them in the mindset of a consumer, not a worker....whether it's an undergraduate student or an MTurk worker. Perhaps it goes back to my first story about engaging participants in our research, and eliciting the mindset of a consumer, not an employee. On occasion, I think we tend to forget about the person staring at a computer screen who is participating in our research. We need to figure out how to

engage our participants as consumers we want to hear from....even if they originally decide to participate for the money.

### **IN CLOSING**

In closing, I would like to thank all the little people that made my research possible. In my case, I'm actually talking about little people.....over 5,000 children and teens who participated in my studies throughout my career. They answered questions, played games, and tried their best to be engaged in the research studies we brought to their schools, day care centers, and community centers.

I would also like to thank all the big people, or adults, that made my research possible. I'm grateful to a wonderful set of co-authors, doctoral students, and colleagues that contributed to my work with children as well as adults. It really wouldn't have happened without you!

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# 2018 ACR Fellow Address

## Tribute: Thank You Consumer Research and Marketing!

Punam A. Keller, Dartmouth College, USA

### PREFACE

I prepared this talk two weeks after my mom passed away. A kind colleague who did not know my mom told me my mom must be proud of me. I was taken aback because my mom would never say anything like that to me or any of her children. We all did very different things, and for her to say she was proud on any one occasion might imply she was not proud on other occasions. So her response was always the same—did you like it, did it make you happy? In that spirit of unconditional acceptance and love that my mom gave me, I want to share with you what I like doing and what makes me happy. I do this with the hope that you will continue to find what you like to do, and what makes you happy.

### 1. The role of marketing and consumer research in society

I love being an ambassador for consumer and marketing research. Increasingly, it is important to market how we create consumer and marketing research, and to communicate its value. Business in general, and marketing and finance in particular, is often blamed for lowering well-being by placing profit before people. Advertising and branding are seen as the root causes of a materialistic society, the hallmarks of which are unhappiness and debt. Lack of financial security is blamed on Wall Street greed. And increasingly, consumers are blaming companies for their poor health and rising health care costs. For example, consumers believe advertising encourages people to eat less healthy food and that food companies should provide healthier alternatives. Along the same lines, businesses are blamed for their “take-make-waste” approach toward the environment. There is diminishing trust that businesses will do the right thing, which leads to intense regulatory, political, and public scrutiny of a broad range of commercial activities.

Consumer research has taken a back seat when it comes to solving important consumer problems. Behavioral economics (BE) is frequently touted as offering simple solutions to everyone’s decision-making challenges. BE researchers espouse that policy-makers, managers—indeed anyone—who makes a decision can improve their outcomes by simply being aware of the biases that affect their decisions. Although there is clearly value in recognizing potential decision-making biases that may exist, we continue to put more faith in the concept of BE than in the theoretical underpinnings of biases and the practical guidelines for BE, which are based on rigorous scientific evidence about what really works in the field. To the best of my knowledge, there are no conceptual guidelines on how to use BE to get consumer buy-in.

My Fellows address will connect a much needed conceptual model with empirical support for leveraging the use of marketing and consumer theory to change consumer well-being behavior. Specifically, I demonstrate how we can use deeper consumer insights to enhance consumer empathy and engagement to help consumers achieve their goals.

### 2. A modified Segmentation, Targeting, and Positioning Framework

I’m going to make a bold claim: we cannot change behavior without insights from both marketing research *and* consumer research. Why? Because marketing gives us a behavior change process, while consumer research gives us the theory to help create a robust intervention. There are three reasons for this dichotomy. First, consumer research provides insights on why people are persuaded, and this is a necessary but not a sufficient condition for how to persuade people. Second, we are all familiar with the factors that lead to inconsistencies in attitudes and behavior; the main factor is the impact of contextual factors on behavior. I am being more extreme here than necessary, but I predict that, compared to consumer researchers, marketers who are focused on behavior change are more sensitive to context effects. Third, similar to the why and how of persuasion, consumer research theory is a necessary but not a sufficient condition to help consumers attain their own goals. Marketers are more likely to research consumer goals. Although it is not always evident how theory and application are connected in consumer and marketing research, I am happiest when the link is a goal of the investigation. The figure below describes a four-step process for integrating consumer insights and a marketing process for effective social behavior change.

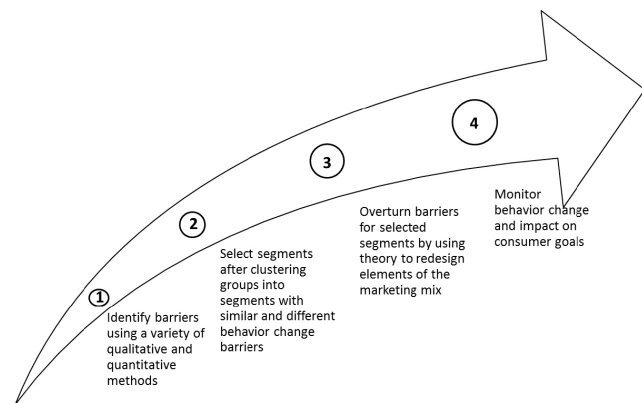


Figure1: Process for designing effective behavior change interventions

#### Consumer barrier segments

despite their avowed consumer centricity, consumer researchers rarely address the challenges their consumers grapple with when making a decision. By contrast, social marketers focus on compliance barriers because the default is status quo behavior. I study avoidant behaviors in the health and wealth domains. So instead of creating benefit segments, I create segments of consumers with similar compliance barriers.<sup>1</sup> I use a variety of qualitative and quantitative methods to identify barriers—I have learned how to be an observer, do in-depth and motivation interviewing, and run focus groups, in addition to taking surveys and gathering secondary data. After clustering barriers, I identify consumer characteristics to help identify segments.

Then I use theory to identify key mediators with corresponding interventions to change behavior. I love attending ACR sessions on



many topics to collect theoretical mediators that influence decision-making. I enjoy sharing consumer research insights with researchers from other disciplines. For example, in a recent project on tailoring medical services, I included a subject expert (in this case a primary care physician), an artificial intelligence expert (because we are using data to learn about consumers' future preferences based on their current consumption habits), a psychologist who is an expert on habit formation, and a health economist who understands electronic health records and health data sources.

Finally, I measure behavior change. As a social marketer, successful behavior change is measured by enabling consumers to achieve their goals.<sup>2</sup>

I would like to share three projects with you to demonstrate this process. In the interest of time, I am going to skip the second step which essentially uses cluster analyses to form barrier segments. Instead I will focus on steps 1, 3 and 4.

### **CASE 1: HOW CONSUMER RESEARCH AND MARKETING WERE USED TO INCREASE ENROLLMENTS AND PARTICIPATION LEVELS IN RETIREMENT SAVING PROGRAMS.**

#### **Background**

My first case is about saving money for retirement. Around half of American households have no retirement accounts at all. No 401(k)s, no IRAs, nothing. You might think that's because they're all expecting pension income in retirement. In fact, according to the Government Accountability Office (GAO), around 29% of households age 55 and older have neither retirement savings nor a pension.<sup>3</sup>

#### **Identify Barriers**

The default setting for retirement saving programs is automatic enrollment because there are too many compliance barriers (such as income, financial literacy, status quo bias, among others) to do the opposite.<sup>4</sup> As a consumer researcher, I and my co-authors hit the pause button and asked if there was an alternative option when it is illegal to automatically enroll people, or when automatic enrollment does not lend itself to engagement and sustainable compliance.

#### **Use Theory to Design Interventions to Overcome Barriers**

We used the anticipatory regret and regret aversion literatures to design an alternative choice format, which we call Enhanced Active Choice.<sup>5</sup> The intervention is a forced choice that highlights the benefits of the communicator-preferred option and the cost of the status quo. Enhanced Active Choice might reframe the alternatives as a choice between: "I want to enroll in a 401(k) plan and take advantage of the employer match" versus "I don't want to enroll in a 401(k) plan and don't want to take advantage of the employer match."

Although it may appear obvious, reminding people of what they will lose if they opt for the non-preferred alternative can have a powerful impact on choice. This is because decision makers are unlikely to seek out information about the costs of remaining with the status quo without prompts (Thaler & Sunstein, 2008)<sup>6</sup>, especially if such thoughts evoke negative emotions like anxiety and regret (Luce, 1998).<sup>7</sup> We believe regret and dislike for the non-preferred alternative will be more marked when the costs of non-compliance are highlighted in the choice format.<sup>8</sup>

#### **Measure Behavior Change**

I partnered with NARPP (National Association of Retirement Plan Participants) to employ Enhanced Active Choice in a new retirement savings enrollment form. The end result was a 25% increase in voluntary enrollment in the Sponsor's 457 plan, and a 600% increase in the use of an auto-escalation program such as SMarT (Save More Tomorrow).

### **CASE 2: HOW CONSUMER RESEARCH AND MARKETING WERE USED TO REDUCE HOSPITAL READMISSION RATES FOR HEART FAILURE.**

#### **Background**

Congestive heart failure (CHF) is a common disease, with an estimate of more than 5.8 million cases in the United States alone, and is one of the main causes of hospitalization in elderly patients. A whopping one-third of these patients return to the emergency room because they experience a heart failure episode every 60 days! Taken together, these factors create significant risks for re-hospitalization; U.S. rates for 30-day readmission for patients with CHF are between 20% and 25%.<sup>9</sup> The CMS (Center for Medicare and Medicaid Services) challenged us to reduce hospital readmission rates for this population.

#### **Identify Barriers**

Most educational programs for CHF during hospitalization focus on increasing motivation to follow recommendations about medications, diet and activity. Heart failure patients face several barriers—patient, disease, professional, and system-related—to self-efficacy and knowledge about their disease condition and needed behavior change. Patient symptoms and co-morbidities prevent them from expressing concerns due to conditions such as fatigue, dementia, and poor eyesight, and patients can omit information due to lack of time during the consultation. Symptoms like confusion and short-term memory loss create problems with maintaining knowledge about the disease condition.

#### **Use Theory to Design Interventions to Overcome Barriers**

Extant educational programs for CHF focus on the benefits of compliance. Less emphasis is placed on increasing the patient's ability to overcome barriers and using external triggers to cue the individual to action. Overcoming challenges that undermine self-efficacy is a key to behavior change and improving health outcomes. Incorporating methods that include patient empowerment by overcoming compliance barriers could improve the hospital to home transition.

To test this hypothesis, we conducted a prospective pilot study to improve patient empowerment in CHF education to see if our tools would improve outcomes of 30-day readmission or death. The first tool, three barrier cards, was intended to increase patient self-efficacy by addressing barriers to compliance.<sup>10</sup> The second tool, a refrigerator magnet, was intended to serve as an external stimulus to behavior change by highlighting the consequences if one does not undertake the recommended actions. We examined the effect of these two tools on readmission and patient and provider satisfaction.

The six-person heart failure education team and study investigators were trained to show each heart failure patient three cards with each key recommendation (daily weight, fluid restriction and medication adherence) written on a card. The team was instructed to tell each patient that they empathized that it was challenging to follow the recommendations and that other patients had also faced

challenges. The team then encouraged patients to share their challenges and barriers. The heart failure education team was provided with a Frequently Asked Questions and Answers sheet for each of the compliance barriers associated with limiting fluids, daily weight checks, and medication adherence.

### Measure Behavior Change

The patients in the two groups were similar in age, gender and risk-for-readmission score. The rate for 30-day readmission in the intervention group was 13.8% versus 19.9% in the matched control group.<sup>11</sup>

## CASE 3: HOW CONSUMER RESEARCH AND MARKETING WERE USED TO REDUCE THE ACQUISITION AND TRANSMISSION OF THE HIV/AIDS VIRUS.

### Background

One in five Africans is infected with the HIV/AIDS virus, with the number being close to one in three in some countries like Zimbabwe.<sup>12</sup> PSI (Population Services International) redesigned their VMMC (voluntary medical male circumcision) program to increase motivation to get circumcised.

### Identify Barriers

Consistent with consumer research on identity and stigma, barriers were categorized into cultural (religious and national barriers), identity (moral/stigma, gender/masculinity), relationship (sexual preferences), and emotional (shame, guilt) barriers.<sup>13</sup>

### Use Theory to Design Interventions to Overcome Barriers

After identifying the target audience barriers, consumer insights were applied to encourage South African males to get circumcised. For example, some men connoted circumcision with reduced masculinity, and this was overcome by asking VMMC ambassadors to wear karate clothes in village theater events. Others believed the circumcision campaign took advantage of those with weak economic status, and this was overcome by using political leaders as role models. Feelings of shame associated with circumcision were counteracted by using entertainment stars as spokespeople, and by disseminating information through new channels such as schools and workplaces. Finally, female significant others were enlisted to reduce morality biases by shifting the emphasis from health to hygiene and fun.

### Measure Behavior Change

The redesigned marketing program has resulted in more than one million males opting-in for the VMMC program.

Communicating the Value of Marketing and Consumer Research

I depend on many other partners in addition to the cross disciplinary investigating team. I work with several government agencies to understand the regulatory environment, to emphasize the importance of education and choice, and to help with dissemination. The cases I share here indicate that my work depends on government agencies like the CDC and OFEFA (Office of Financial Education and Financial Access) at the U. S. Department of Treasury, foundations like NEFE (National Endowment for Financial Education) and NARPP (National Association for Retirement Plan Participants), and firms like CVS Health and Blackrock.

## SUMMARY

My work is about integrating consumer insights and a marketing process for identifying and overcoming barriers to designing successful behavior change interventions. This approach provides a unique opportunity to enhance consumer empathy, engagement, and empowerment by addressing important consumer challenges. If used systematically, this approach can become an indispensable method for increasing the effectiveness of social marketing.

## ACKNOWLEDGEMENTS

To my parents who taught me I could never be denied. To my husband Kevin who is my biggest enabler and teacher. To my daughters, Carolyn and Allison, who are a constant source of inspiration. And to all of you who have encouraged me to not define myself by tenure—to keep going despite being rejected and accepted for tenure multiple times. A BIG thank you to all of you who are vital to my happiness.

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# 2018 ACR Fellow Address

## On Relevance

Richard J. Lutz, University of Florida, USA

I am truly both honored and humbled to be deemed a Fellow of the Association for Consumer Research. I honestly thought that my time had passed for being considered for this award, so it came as quite a shock to me when it was announced at last year's conference. In fact, similar to Kubler-Ross's five stages of grieving, I found myself going through the five stages of ACR Fellowship: Shock, Elation, Unworthiness, Bargaining, and Acceptance.

In selecting a theme for my remarks today, I considered and rejected a number of topics. One of those topics that I originally rejected kept nagging at me. Eventually, it won out. The focus of my talk is relevance. Hopefully, it will also be relevant!

The concern about research relevance is hardly a new one for our field. It has been lamented since at least the 1980s, by ACR and SCP presidents, by *JCR* and *JCP* editors, by previous ACR Fellows, and by other leading scholars. Relevance – or more specifically, the lack thereof – has been identified, and diagnosed. Remedies have been proposed. Journals have been launched with relevance in mind (*JACR* and *JMB*). And yet, about a month ago I received a phone call from Jeff Inman, the current editor-in-chief of *JCR*. Would I consider writing a guest editorial for *JCR* on the topic of “What is Relevance?” Say what!?! Being a firm believer that “there are no coincidences,” I took great comfort in Jeff's request that the topic I had chosen is one that is far from settled.

In my remaining time, I shall attempt, first, to answer Jeff's question. Second, I will briefly trace the history of calls for relevance in consumer research, including some very insightful analyses and proposed remedies. Third, I will provide some informed speculation as to why our perceived relevance problem has persisted and what, if anything, can be done about it.

### Relevance Defined

Merriam-Webster defines relevance as: “(1a) relation to the matter at hand; (1b) practical and especially social applicability.” From this simple definition, it is relatively easy to extrapolate to the notion of consumer research relevance. Consumer research should relate to the matter at hand (i.e., consumer behavior) and should have practical applicability (i.e., implications).

However straightforward these extrapolations may appear, neither is without controversy. For instance, with regard to the matter at hand, many have argued for a very broad construal of consumer behavior. Thus, we have seen consumer research on time usage, voting, and even fertility. It seems that the “matter at hand” is quite a handful. At the very least, the matter-at-hand definition permits a very liberal interpretation of relevance.

The practical applicability definition appears to offer more promise in elucidating consumer research relevance. At ACR's inception in 1970, in addition to the obvious academic constituency, consumer research was construed to be of service to marketing practitioners and public policy makers. It was customary for authors to include a “marketing implications” or “public policy implications” section at the end of their papers.

In the mid-1980s things changed. Early pioneers in what was to become the Consumer Culture Theory (CCT) movement challenged the assumption that consumer research should be “industry's handmaiden.” In the words of Tom Tucker (1967), consumer researchers were admonished to study consumers the way a marine biologist

studies fish, not the way a fisherman studies fish. While I firmly endorse that “science *qua* science” philosophy, the unintended consequence of adopting it was that it seemingly devalued consumer research's external constituents. No longer were implications sections a necessity. The only constituents that truly mattered were other consumer researchers (especially editors and reviewers). Ironically, as the “matter at hand” became broader, the audience for consumer research became narrower.

By the early 1990s, concerns about the relevance of consumer research began to surface. In my last *JCR* editorial (Lutz 1991), I identified the need for “greater attention to substantive consumer behavior issues.” In order to achieve this, I recommended initiating research by identifying a substantive consumer behavior problem (rather than beginning with a theory to be tested); interacting with “systems experts” (e.g., marketing practitioners) to identify meaningful problems; and conducting research in natural settings.

In 1993 Bill Wells, one of ACR's founding fathers, as well as a past president and Fellow, wrote a brilliant treatise, “Discovery-Oriented Consumer Research” (Wells 1993), in which he challenged the field to conduct more meaningful, relevant research. He asserted that since the birth of ACR, the field had strayed from its original sense of purpose and had moved “...away from the real world.” He offered five guidelines for making consumer research more relevant: (1) Leave Home; (2) Forsake Mythology; (3) Reach Out, (4) Start Small and Stay Real; and (5) Research Backward. Time does not permit elaboration of Wells' guidelines here, but I strongly encourage you to go back and read his paper. His perspective is as useful now as it was then.

Terry Shimp, in his 1994 ACR Presidential Address, echoed many of Wells' criticisms of the field, concluding, “The call for greater relevance is now an inescapable element of the consumer research landscape” (p.2). He further identified five constituents for whom consumer research is potentially relevant: (1) other academics; (2) students; (3) businesspeople; (4) public policy officials; and (5) society at large (p.3). In other words, relevance is with respect to a target audience; a consumer researcher who aspires to conduct relevant research is wise to begin with an audience in mind. Of course, this is commensurate with the suggestion that consumer researchers should have a close relationship with practitioners and consumers themselves, or what Brinberg and McGrath (1985) denoted “systems experts.”

A final point that Shimp made pertained to the need for “representation-based” research that places greater emphasis on consumer behavior occurring in the actual marketplace. This viewpoint essentially privileges the study of real-world consumer behavior phenomena over the testing of theories that are typically borrowed from other disciplines. Shimp's notion was that greater attention to real-world consumer behavior phenomena would more or less ensure greater research relevance.

Thus, by 1994, the case was closed. The need for greater research relevance was identified, and several useful avenues for achieving it were specified. Relevant research ensued.

Not so fast.

In 2001, Itamar Simonson et al. titled their *Annual Review of Psychology* chapter, “Consumer Research: In Search of Identity.” In

it, they noted some troublesome trends. (Non-CCT) consumer research in *JMR* and *JCP* was largely conducted on student samples (~75%) in laboratory settings (~90%), hardly the real-world settings envisioned by Lutz, Wells, and Shimp. Furthermore, Simonson et al. identified another disturbing aspect:

“... consumer research articles increasingly emphasize the managerial implications of the findings... Yet, few managers (or consumers) read consumer research articles that are published in major journals, and the issues investigated are typically not at a level that is of much use for them” (p.264).

They also observed that, with a few exceptions, “...most articles published in the leading journals have examined more generic topics such as choice and attitudes. *Thus it is sometimes unclear what differentiates consumer research from other disciplines*” (p.263, emphasis added).

Ultimately, Simonson et al. argue for more attention to the substantive domain (i.e., real-world consumer behavior) as well as research that identifies “generalized empirical phenomena” (i.e., descriptive research) as a starting point for theory building.

In 2003, at the end of his term as *JCR* editor, David Mick raised similar concerns. In addition to delineating a number of pressing real-world consumer problems worthy of the field’s research attention (that presaged his subsequent founding of the Transformative Consumer Research movement), he echoed previous calls for greater research relevance. He also noted the imbalance between theory-testing research focused on mental phenomena and research on actual consumer behavior in natural environments.

In his 2006 ACR Presidential Address, “Meaning and Mattering Through Transformative Consumer Research,” David threw down the gauntlet by calling for Transformative Consumer Research (TCR), i.e., research “... framed by a fundamental problem or opportunity, and that strives to respect, uphold, and improve life in relation to ... consumption” (p.2). He went on to argue that ACR had done little to bring its considerable talents to bear on those sorts of topics and laid out a game plan for making TCR a reality. Twelve years later, TCR has enjoyed considerable success (Davis, Ozanne, and Hill 2016). I point you to the TCR tab on the ACR website to learn more about this exciting movement. Similar to a new product launch, it has taken some time for TCR to gain widespread awareness and appreciation. Despite the fact that TCR offers a clear pathway to greater consumer research relevance, only a minority of ACR members are active TCR participants, and the overall field has continued its soul-searching.

In 2007 *JCR* editor John Deighton expressed concern in an editorial that consumer research was not sufficiently differentiating itself from other social sciences and thereby was foregoing the opportunity to make unique contributions to knowledge. He made a plea for more “concreteness” and less abstraction, with the thought in mind that more concreteness would imply a strong focus on unique consumer behavior phenomena. Ultimately, consumer research should be “valued by others.” Of course, who those “others” are is a key question.

In his introduction to the 2008 *JCR* special issue on TCR, David Mick noted that, “over the years, unfortunately, the field of consumer research has generally under-prioritized scholarship for alleviating problems and advancing opportunities of well-being” (p.377). He also recounted the early success of the TCR movement in fostering more broadly meaningful consumer research. The thirteen papers appearing in that special issue have garnered nearly 4,000 Google Scholar citations in the past decade.

My colleague Chris Janiszewski, in his 2009 ACR Presidential Address, addressed the need for consumer researchers to make a unique contribution to knowledge. Utilizing a marketing perspective, Chris analyzed the “market” for consumer behavior knowledge and concluded that a substantive domain focus was essential. Specifically, consumer research should address consumption-specific issues that the more general social sciences overlook. He included examples: consumer satisfaction, attitudes toward advertising, and brand relationships. In Chris’ remarks we once again see the importance of research on substantive consumer behavior phenomena.

Debbie MacInnis and Valerie Folkes, in their 2010 examination of the disciplinary status of ACR, noted that ACR has, since its inception, aspired to be interdisciplinary. Debbie and Valerie cashed out what “interdisciplinary” would really look like. I especially like their diagram depicting the interdisciplinary model. Note the centroid of the diagram: Consumer Behavior Phenomenon. The examples they offer--materialism, gift giving, and obesity--make it clear that substantive consumer behavior phenomena need not be narrowly defined.

At this juncture, it appeared that some progress was being made in the quest for more consumption-relevant research, particularly in the TCR arena. Recall that TCR is avowedly oriented toward research that is beneficial to consumers themselves. In some instances, a spillover effect might be felt on public policy makers, as they seek to promulgate regulations that inform, protect, or otherwise benefit consumers.

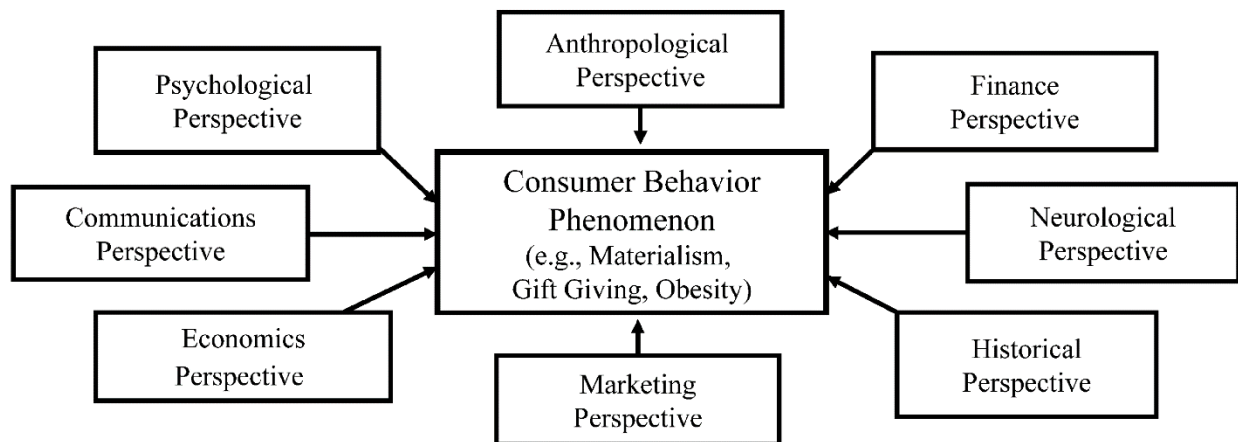


Figure 1: Source: MacInnis & Folkes (2010)

But what about ACR's other constituent--industry? What has been the track record with respect to producing consumer research of relevance to marketing practitioners? Although this question may not be of direct importance to all ACR members, the majority of us are employed in the marketing departments of business schools. It is not too much of a stretch to assert that at least some of us aspire to produce research that is relevant to marketing managers. Indeed, the Consumer Behavior Special Interest Group (CB-SIG) of the American Marketing Association has recently repositioned itself as operating at the interface of consumer research and marketing practice. Last year the CB-SIG initiated the Consumer Research in Practice Award for the best consumer research paper making a managerial contribution, and next summer is hosting its first conference (in Switzerland): "Managerially Relevant Consumer Insights: Crossing Boundaries," with the same emphasis.

Addressing the managerial relevance question head on, Lutz (2011) noted that much academic marketing research intended to address substantive marketing problems appears to fall short of the mark. Others had preceded him with that criticism. As Scott Armstrong (2003) observed, "Few papers in marketing journals would fall into the category of having findings that are useful" (p.71). Daniel (2009) offered an even harsher criticism: "...business journals consist almost wholly of articles written by professors for other professors" (p.3). Although it is certainly a worthy enterprise to conduct research that is primarily aimed at advancing science rather than practice by targeting other scholars, as we will soon see, that defense of our research relevance may be self-delusional.

At the 2010 ACR conference, we were treated to two powerful Fellows' addresses by my former colleague John Lynch and current colleague Joe Alba. Both of them addressed the need for more attention to substantive problems. John counseled:

*"... if we would more often look to the substantive domain as inspiration for our research, three good things would happen. Our work will be of interest to a wider public, we will have more vibrant mutual influence with adjacent social disciplines, and.... benefit more richly from each other's work" (Lynch, 2011, p.15)*

However, it was John's observation that our best researchers (and review teams) appear to think that every paper must make a theoretical contribution. As Brinberg and McGrath's (1985) Validity Network Schema (VNS) illuminates, the likelihood of making a meaningful substantive contribution when one sets out to make a theoretical contribution is severely constrained.

Joe's remarks, subsequently published in *JCR* (2012) as "In Defense of Bumbling," made a strong case for describing the "what" of consumer behavior before tackling the "why." He argues for the use of "abduction" (i.e., "informed curiosity") as a research approach. Note that this is very much in concert with Bill Wells' call for discovery-oriented consumer research. As Joe points out, consumer researchers' penchant for elaborate theories with higher-order interactions militates against communicating with marketing practitioners, whose burning questions more closely approximate main effects. In sum, neither Lynch nor Alba was enthusiastic about the "state of the art" in consumer research with respect to its relevance to practitioners.

In his 2012 ACR Presidential Address, Jeff Inman asserted that "useful, actionable" consumer research was "the elephant not in the room." He cited a recent survey finding that 40% of ACR's membership agreed that more substantive research is necessary and mentioned the TCR initiative as a move in that direction. Critically, Jeff advocated that our research "... should pass the 'So what?' or 'Who

cares?' test and offer useful insights to other constituencies: public policy makers, industry, and yes, consumers as well. Importantly, *relevance to other constituencies should not be a stretch*" (Inman, 2012, p. 2, emphasis added).

In order to generate truly relevant research, Jeff argued, consumer research needs to incorporate "consequential dependent variables" that entail participants' actual resources (e.g., time, money) as opposed to scale responses to a hypothetical scenario. Note that this recommendation tends to favor field research over lab studies or MTurk. Jeff also suggested turning to the substantive domain as a source of research topics, rather than exclusively pursuing theoretically-driven questions.

Jeff concluded his remarks with an important disclaimer, with which I agree wholeheartedly: "Am I saying that we should shift all our focus to research that generates useful insights? Absolutely not. I AM saying that we need to achieve a sustainable equilibrium between research that builds theory and research that applies theory to substantive issues to generate useful insights. Through this, we can form touchpoints beyond our academic colleagues and truly make a difference to practice and to society" (p. 4).

John Lynch and colleagues (2012) echoed Inman's basic thesis and offered some insightful approaches for addressing the perceived imbalance between theory-driven and substantively-driven research. Drawing on Ellison's (2002) analysis, they distinguish *r-quality* (in a nutshell, the rigor of the research in technical terms) and *q-quality* (i.e., "the importance of the paper's main contribution") (p. 474). They argue that it is much more difficult for reviewers to assess *q-quality* than *r-quality* and, consequently, *q-quality* tends to receive short shrift. This has the effect of squeezing out potentially relevant, if not as precise, contributions.

Lynch et al. further argue for greater use of inductive theory-building that originates with a substantive problem. Consequential dependent variables and field studies are suggested as useful mechanisms for pursuing *q-quality*. Recognizing that judgments of *q-quality* are inherently subjective and even idiosyncratic, Lynch et al. advocate a "champion" philosophy in the review process: i.e., at least one member of the review team should be very enthusiastic about the contribution of the research. Assessing the perceived importance of a research topic is thus a central challenge not only for editors but even more significantly for researchers faced with the decision of where to allocate their time and intellectual effort. We shall return to this point.

In his sobering 2013 SCP Presidential Address (and subsequent guest editorial in *JCP*), Michel Pham identified "The Seven Sins of Consumer Psychology." He thoroughly documented those sins as well as potential corrective actions because:

*"Our research findings lack relevance and impact for both our external constituents (i.e., businesses, policy makers, and consumers) and our internal constituents (other consumer researchers and social scientists)" (Pham, 2013, p. 411, emphasis added).*

Excuse me!? What?! The latter charge leveled by Michel sticks a pin (or perhaps a harpoon) into the protective bubble of those of us who have been contenting ourselves to be "relevant" only to academe and eschewing managerial or policy significance.

In support of this perhaps surprising assertion, Michel conducted an exhaustive citation analysis of *JCR* spanning 1994-2008. His findings? A small slice of articles (less than 10%) are "well-cited," averaging over 10 citations per year. But, "the vast majority -- roughly 70% - hardly ever get cited .... [and hence] hardly [have] any measurable scholarly impact" (p. 412). These data points should



be a wakeup call for all of us! Time does not permit a full recounting of the seven sins Michel identified or his proposed remedies, but his paper is a must-read for any serious consumer researcher who wants to have an impact, either inside academe or outside.

While Michel's recommendations echo those of several previous scholars, e.g., the need for inductive theory-building, more attention to content rather than process, and more use of field studies, one recommendation in particular stands out: consumer researchers should "...increase their physical exposure to businesses, policy agencies, and actual consumers in the marketplace" (p.422). He proposes a "field-theory validation path" wherein academic researchers turn to industry consultants or other practitioners as a source of testable hypotheses. Michel's suggestion is reminiscent of Argyris and Schon's (1974) "Theory-in-Practice" approach and would have the desirable effect of grounding our research firmly in the substantive domain.

As we have seen thus far, the decade of the 'teens has witnessed a rash of soul-searching, breast-beating cries for greater relevance in consumer research. But we are not quite through yet. In their introductory *JCR* editorial, "Meaningful Consumer Research," Dahl et al. (2014) pleaded for more meaningful (i.e., "relevant") research. Relying on Wells (1993), they advocated a research approach that begins with a consideration of how useful the findings will be to the audience it addresses. They specifically encouraged considering audiences beyond other academics. Would that exhortation be sufficient to turn the tide?

*JCR* editors were not the only ones encouraging more relevance. In 2015 the *Journal of Marketing Behavior* launched. In his introductory editorial, Klaus Wertenbroch proclaimed "an opportunity for more relevance," with an emphasis on research "...that has relevant and interesting practical implications for decision makers, be they managers, policy makers, or consumers" (p. 1). Klaus drew inspiration from Pham's (2013) "seven sins" and noted that more established journals may have too much cultural inertia in the review process to readily implement an increased focus on q-quality rather than r-quality (in Lynch et al.'s terms).

In her 2017 ACR Presidential Address, Meg Campbell, one of *JCR*'s current editors, made an impassioned plea for greater research contribution, by which she meant "contribute to the understanding of consumer-relevant issues" (p. 1). To do this, she counseled that the research must "...start with a consumer-relevant problem." Being a good marketer, she also emphasized that researchers must actively consider the audience for their research. Meg worries that, as a field, we are not having enough impact, but proposes that a clear focus on understanding consumers is the path to greater research relevance.

Last but not least, earlier this year Meg and Jeff Inman were joined by their fellow editors Amna Kirmani and Linda Price in stating their editorial vision for *JCR*: "It's All about the Consumer." It is evident that they are trying to be change agents, which is certainly within their purview as editors. What are they seeking to accomplish? Among other worthy goals, they "...welcome consumer-focused papers that adopt non-deductive approaches to appropriately document and measure *important* effects... Manuscripts will be evaluated based not only on their conceptual contribution but also on the meaningful, practical insights they generate" (p.956). Thus, we see yet another call for more substantively-driven research.

Inman et al. further note that *JCR* articles "...have trended toward a focus on research topics that are of interest primarily to the academic community – in reality, often only a small portion of the like-minded academics" (p. 957). This observation squares with Pham's disturbing findings about the paucity of citations to much of our work. The *JCR* editorial team recommends careful attention to

the choice of research topic, keeping a firm focus on the consumer. In addition, they advise using "consequential" dependent variables that "...require participants to (a) invest a resource, such as money, time, or effort; or (b) experience a real outcome" (p. 957). Finally, they point to the virtues of field experiments, quasi-experiments, and ethnographic research.

## WHAT IS "RELEVANT" CONSUMER RESEARCH?

Synthesizing the many calls for research relevance, as well as various proposed remedies, I suggest that relevant consumer research has the following properties:

1. A clearly-specified target audience; and
2. A focus on a legitimate consumer behavior phenomenon that is ...
  - a. Interesting (to the audience)
  - b. Important (i.e., not trivial)
  - c. Actionable (i.e., by the audience)
  - d. Potentially generalizable/transferable

Point 1 underscores the basic notion that relevance must be understood in relation to someone other than the researcher him or herself. *Someone* else has to care (Shimp 1994, Deighton 2007, Lynch et al. 2011, Inman 2012, Pham 2013, among others). Point 2 asserts that consumer research must concern itself with *consumer* behavior, not human behavior more generally (Lutz 1991, Wells 1993, Janiszewski 2009, Campbell 2017, among others).

Points 2(a) and 2(b) are self-evident and have been echoed by many, most recently Inman et al. (2018). Point 2(c) deals specifically with the implications of the research. How do the findings alter a marketing manager's decision-making or a public policy official's proposed regulation? Alternatively, how does the research change the way other scholars understand a phenomenon and conduct their own research on it? Ultimately, to be truly relevant, research has to change the target audience's beliefs and/or behavior (Simonson et al. 2001, Mick 2006, Wertenbroch 2015, among others).

Point 2(d) is a necessary recognition that our focus is on scholarly research that advances scientific knowledge. Points 2(a-c) could apply to a consulting project conducted for a firm or government agency. Relevant consumer research must be at least potentially transferable to other consumer contexts.

Two more qualities are not essential, in my view, but nonetheless could contribute favorably to consumer research relevance:

3. Natural settings
4. Effective communication to target audience

Both of those factors may be more applicable with respect to research aimed at influencing external constituents. Point 3 reflects the calls for discovering and/or demonstrating consumer behavior in the real world (Cialdini 1980, Lutz 1991, Wells 1993, Mick 2003, Alba 2012, Inman et al 2018, among others). Point 4 is inspired by the TCR movement's approach wherein research is "taken to the streets" to try to effect desired change. This suggests that the individual scholar should think beyond merely publishing in a top journal if s/he wishes to impact an external constituency. As many have noted, practitioners and consumers do not read *JCR* or *JCP*.

## WHERE DO THINGS STAND – AND WHY?

The foregoing selective review of presidential addresses, fellows' speeches, and journal articles serves to underscore the field's desire for greater research relevance. From early attention to the concern dating back to the 1980s to the recent crescendo of voices (at least a dozen pieces in the past decade), the drumbeat has been steady, if not accelerating. By my rough count, the treatises I have cited herein represent the views of 18 ACR and SCP presidents,

seven ACR Fellows, and seven JCR editors. Yet, judging from the most recent editorial pleas, we are no more relevant in 2018 than we were in 1988!

Why has the perceived deficit in our research relevance persisted in spite of highly-respected scholars calling for corrective action? Are we tone deaf? Incompetent? Misguided? Many factors contribute to the lack of progress, some individual and some systemic. As individual scholars, most of us have been trained to value theory and conduct theory-driven research. (Note: this point does not apply to our CCT colleagues, who ground their research in observed phenomena.) We are naturally drawn to theoretical research; it is what we, and our colleagues, know best. Systemically, the review process at our major journals is ill-equipped to evaluate and nurture research that departs from the norm, as Lynch et al. (2012) persuasively argued. Publishing a substantively-driven piece of research in a major journal is a daunting prospect. The risks have far outweighed the rewards. Unfortunately, our obsession with theory has contributed heavily to our relevance deficit.

In a sense, when the field more or less embraced the “marine biologist” perspective over the “fisherman” perspective and placed little or no weight on actionable implications, it precipitated an unfortunate inward turn. This is rather ironic: that broadening the concept of consumer behavior should lead to a more inward orientation. How so?

Essentially, removing external constituents, whether industry or public policy makers, from the research enterprise has left us talking only to each other (and even that not very pervasively, according to Pham). We have lost a sense of checks and balances on our work. We were able to tell ourselves that we were addressing other academics or, perhaps, consumers themselves, but the real driving force was the review team at our targeted journal. Not unlike the physician who decides on and prescribes various pharmaceuticals to her patients, these four- or five-person review teams are the gatekeepers that determine the fate of our research. And we all know how unbiased, error-free, and uplifting the review process is! (Except for that damn Reviewer B!)

However, for those of us who work in business schools, the traditional reward structure for published research is beginning to evolve toward more attention to ... wait for it ... relevance. The specific term in the 2018 revised AACSB accreditation guidelines is “impact of intellectual contributions” (p. 18). The guidelines further specify that the school “... clearly articulate the contributions to society and are transparent to the public” (p. 19). While citation counts have assumed greater significance of late, citations rest firmly within the academic milieu and are not necessarily indicative of societal impact. The implication of the AACSB standard may be a higher bar for judging the quality of b-schools’ intellectual contributions. It behooves us to stay ahead of the curve. As a field, we may be approaching a true relevance crisis!

### HOW TO BE (MORE) RELEVANT

Let’s suppose for a moment that you are an enterprising young consumer researcher who embraces the need to conduct more relevant research, especially with respect to external constituents. First, I strongly encourage you to read at least three key papers among those I have cited: Wells (1993), Lynch et al. (2012) and Pham (2013). These papers provide an excellent overview of the relevance issue as well as astute guidance on how to address it effectively. From there, how would you proceed? One recommendation that we have seen repeatedly is to initiate your research in the substantive domain. Identify a phenomenon of interest, and apply theoretical and observational tools to address it. However, this seemingly straight-

forward advice addresses only the *necessary* condition for attaining relevance, not the *sufficient* condition. As Wells so aptly put it, “all kidding aside, what does this really mean?” (Wells 1993, p. 498). Not all substantive domain phenomena are of inherent interest or importance. If one is serious about making a relevant contribution to an external constituent (industry, public policy), the most plausible place to begin is by understanding the needs of the audience. How many of us interact with marketing managers or public officials as we decide what to research? How much more productive might our entire research enterprise be if we were to take that step?

As I recommended in my 1989 *JCR* editorial, it would make sense for consumer researchers to “test market” our intended contributions with the audience we hope to influence *before* conducting the research. Furthermore, as advocated by Brinberg and McGrath (1985) and elaborated by Pham (2013), consumer researchers seeking to be relevant should consult with “systems experts” as a fertile source of research ideas. Following this sort of approach would greatly enhance the likelihood that a research project, successfully executed, would make a relevant contribution to its intended audience (Andreasen 1985, Wells 1993). Working “backward” from the audience (i.e., the market) is the mantra that those of us who are marketing professors drill into our students incessantly. We would do well to practice what we preach. Ideally, fostering a collaborative research relationship with marketing practitioners may have the added value of permitting consumer researchers to persuade practitioners of the value of seeking “win-win-win” solutions wherein the firm, the consumer, and society benefit from the firm’s actions.

Of course, as scholars it is incumbent on us to attempt to explain marketplace phenomena, not merely describe them. In that vein, Cialdini’s (1980) “full-cycle social psychology” is instructive. Deftly combining field observations (to establish that a phenomenon is “real”) and laboratory experimentation to elucidate underlying processes is an excellent mechanism for ensuring substantive relevance.

In sum, several action strategies are available that can help an individual consumer researcher achieve greater relevance:

1. Read (at least) these key papers—Wells (1993), Lynch et al. (2012), Pham (2013)
2. Determine the target audience to be influenced by the research
3. Consult with systems experts (i.e., target audience members)
  - a. Source of “theories-in-practice”
  - b. “Test markets” for proposed projects
4. Aim to discover new, important phenomena
5. Use a combination of field and laboratory research (Cialdini 1980)
6. Engage in inductive theory-building
7. Proactively communicate insights to target audience

### WHAT IS ACR DOING TO HELP?

As the primary international association dedicated to furthering consumer research, ACR has a responsibility to assist individual researchers in pursuit of more relevant research. Happily, two terrific examples of this sort of institutional support exist: the Transformative Consumer Research movement and the recently-established *Journal of the Association for Consumer Research (JACR)*.

Founded in 2005, TCR “... seeks to encourage, support, and publicize research that benefits consumer welfare and quality of life for beings affected by consumption across the world” (TCR tab on ACR website). Since its inception, TCR has held six biennial conferences, has awarded thousands of dollars in research grants, and



has been featured in numerous special issues of *JCR* and other journals. Significantly, TCR has attracted more than 500 consumer researchers globally, including some of our most productive scholars, such as one of today’s new ACR Fellows, Punam Keller.

TCR exemplifies many desirable qualities of externally relevant research that I have been espousing today. Consider this graphic from the call for proposals for the 2019 conference.

Note how the process is ultimately solution-oriented, i.e., aimed at making a real-world substantive contribution. The initial step of identifying a significant problem explicitly draws on both internal (to ACR) and external (non-academic stakeholders) expertise. Dialogue and relationships are established that feed directly into theory-guided research. The final step envisions academic-practitioner partnering to implement recommendations. In other words, an entire ecosystem is in place to foster real-world impact of scholarly research. For consumer researchers seeking to make a positive difference in the world through their research, TCR offers a promising community of like-minded scholars.

*JACR* was launched in 2016 with much the same mission as TCR. As stated in the inaugural issue (p. 1, *JACR*’s “... vision [is] that consumer researchers should be conducting research that has significant relevance to consumers, managers, and policy makers.” The explicit aims are to focus scholars on research that is “high in relevance.” *JACR* uses a “special issue” format to attract a critical mass of research on a particular topic, thereby drawing more attention to it, and all ACR members receive *JACR* as part of their membership benefits. A quick perusal of the first few years of issues is enough to easily recognize the more substantive consumer behavior focus. From the initial issue on the science of eating through ownership and sharing, to the evolving retail landscape, *JACR* is strongly focused on real-world phenomena.

These two relatively recent initiatives, both aimed at fostering greater research relevance, are noteworthy and underscore ACR’s global leadership as a consumer research organization. These efforts are to be applauded. However, are they enough? If so, why have we continued to witness so many exhortations for greater relevance in the past few years? Is it possible that TCR and *JACR* and are a

bit too balkanized in their impact? In other words, does their admirable consumer relevance character “spill over” to other sectors in the more general consumer research arena?

**WHAT ELSE CAN ACR DO?**

In considering potential mechanisms whereby ACR might encourage more consumption-relevant research, two possibilities come to mind. One is basically an extension of TCR’s annual call for research proposals, while the other derives from an idea I proposed for marketing scholarship back in 2011 and is a bit more radical. Both ideas are aimed at providing consumer researchers with some guidance in selecting research topics that are interesting, important and relevant.

*Expanding the TCR model.* Since its inception, TCR has been focused on research that has implications for consumer well-being. The 2018-2019 TCR Research Funding Call for Proposals lists more than 20 potential topic areas as examples of the sorts of investigations the TCR community views as relevant. This list represents a terrific starting point for potential TCR researchers. However, since TCR is explicitly aimed at consumer welfare, the topic listing does not include many other legitimate lines of inquiry within the consumer research domain, for example, public policy or marketing practice.

Therefore, I propose that ACR commission a task force to identify and publicize important substantive consumer research priorities. These priorities could be organized by constituency: practitioners, policy makers, consumers themselves, and other academic scholars. In order to fulfill its mission, the task force should include ample representation from each constituency. Similar to the Marketing Science Institute, ACR should revisit and revise the research priorities biannually. Care must be given to having representation of ACR’s base disciplines (e.g., psychology, sociology, anthropology, economics) represented on the task force to ensure consideration of a broad range of potential topics and perspectives.

*Collaborative problem definition.* My more radical proposal draws on an earlier proposal put forth in Lutz (2011, pp. 231-232). ACR should consider establishing a mechanism whereby an author

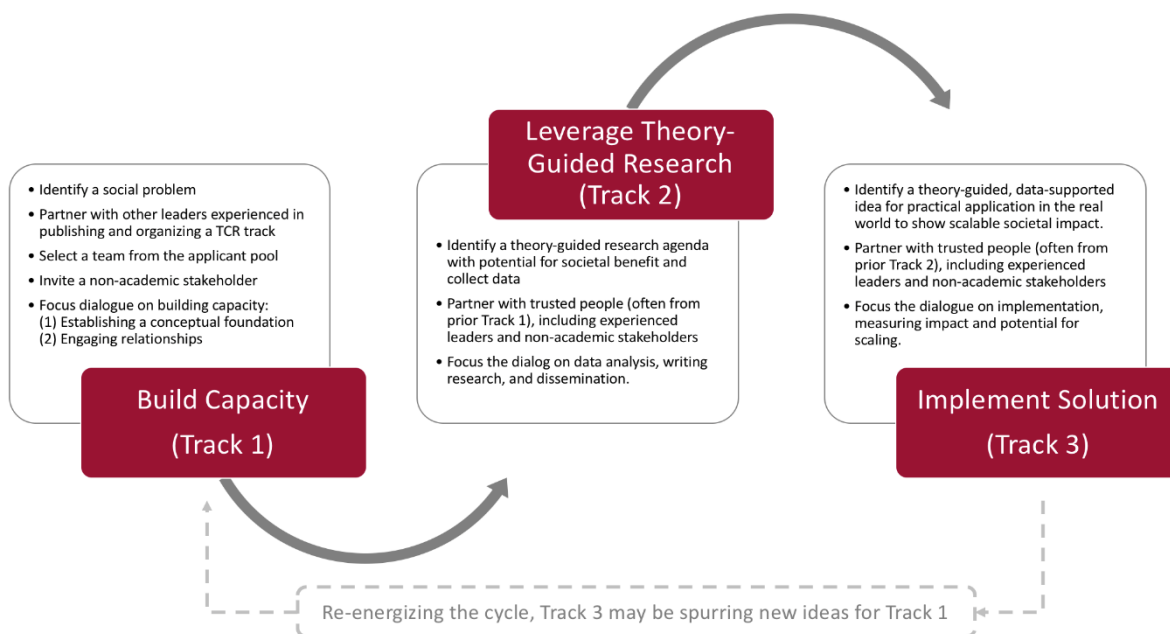


Figure 2: Source: <https://tcr.business.fsu.edu/>

could submit a prospectus for a potential research project and receive feedback from a panel of seasoned consumer researchers and systems experts. The prospectus would specify the intended audience and the nature of the intended contribution. An editor would select a small group of relevant experts and ask them to address this basic question: “If a research study successfully addressed the proposed problem, how important a contribution would it represent?” Suggestions for improvement would also be solicited. Assuming a prospectus passed this basic test, the author(s) could then pursue the project with some degree of assurance that it is a worthy endeavor. Note that it would be important to establish this prospectus review independent of any particular journal in order to avoid any implication of eventual publication. Having reviewed more than a thousand manuscripts for possible publication during the course of my career, it is my strong impression that many of the unsuccessful ones would have failed the initial screening of problem significance I am proposing. Thus, the proposed system would not only have a positive impact on the relevance of consumer research, it would also result in greater system efficiency, as less time would be spent by authors, editors, and reviewers on ill-conceived research problems.

### WHAT CAN THE JOURNALS DO?

I have discussed potential mechanisms whereby individual researchers and ACR can move consumer research toward greater relevance. From a systemic perspective, the third key component is comprised of consumer research journals. In the interest of time, I will focus my remarks on the field’s flagship, the *Journal of Consumer Research*.

As I discussed earlier, the current editorial team has explicitly prioritized relevant, substantive consumer research. Their openness to publishing more substantively-driven research is crucial. However, additional steps need to be undertaken to bring their vision to fruition. As noted earlier, most consumer researchers are trained to conduct hypothetico-deductive research (Lynch, et al. 2012). Relatively few non-CCT consumer researchers (and reviewers) are expert at conducting (and evaluating) inductive research (i.e., research that begins by observing substantive phenomena).

In their *JCR* editorial, Inman et al. (2018) cite the Lynch et al. (2012) paper in support of multiple routes to generating consumer behavior knowledge and note the “strong headwind” that non-deductive, findings-focused research has faced at *JCR*. They continue “... We urge that our associate editors, editorial board members, ad hoc reviewers, and authors...champion rigorous research that provides consumer insight with the use of either standard or ‘nonstandard’ methods and types of meaningful consumer data.” Presumably, this exhortation includes tolerance for an inductive approach.

This may not be enough to steer the *JCR* ship in a more inductive direction. A tremendous amount of inertia is present in the system. Little guidance exists for those who wish to pursue an inductive approach. Lynch et al. (2012) included a brief section, “Criteria for reviewing” non-deductive substantive contributions. Likewise, Pham (2013) devoted a paragraph to criteria for judging descriptive consumer research. However, *JCR* has not yet provided sufficient guidance. For example, the *JCR* website’s “Instructions for Reviewers” is silent with respect to the paradigmatic approach represented in the manuscript. In the “Tutorials” section, we find “A Field Guide for the Review Process,” (Bagchi et al. 2017) that includes a single paragraph on the substantive domain. They state that “... different goals should be judged by different standards,” but do not elaborate. Janiszewski et al. (2016) have an excellent tutorial on “Knowledge Creation and Knowledge Appreciation in Deductive-Conceptual Consumer Research” and note that “...it is

the most popular approach.” Morales et al. (2017) present an insightful tutorial on experimental realism that is implicitly embedded in a hypothetico-deductive paradigm. Surely, a companion tutorial on substantive-inductive consumer research is essential if the current editorial vision is to be realized. Authors and reviewers alike need more guidance. *JCR* and ACR should collaborate on more special sessions at ACR conferences, such as the workshop on consumer relevance scheduled for Saturday afternoon. Another possibility is a special issue or special section of *JCR* devoted to relevant consumer research, similar to the special issue on TCR in 2008. (To be fair, I should note that *JCP* encourages inductive theory-building by welcoming effects-based papers in its Research Reports section.)

In sum, following the lead of the TCR movement, a systemic effort is needed to instill a sustainable stream of substantive, relevant consumer research. It is incumbent not only on authors but also on ACR and *JCR* to effect this welcome change.

### WE ARE NOT ALONE

Lest you feel that my assessment of consumer research relevance is too harsh, or you are left with the impression that ours is a particularly irrelevant collection of scholars, I draw your attention to the Community for Responsible Research in Business and Management (RRBM). (Again, these remarks are of most direct relevance to those of us employed by business schools.) RRBM was formed by a diverse set of 28 scholars from ten countries on three continents, representing all business disciplines (Glick, Tsui, and David 2018). To date, its principles have been endorsed by nearly a thousand other scholars.

In the initial RRBM position paper, “A Vision of Responsible Research in Business and Management: Striving for Useful and Credible Knowledge,” the committee states, “...both the relevance and quality of research in business schools has been under attack for more than two decades” (p.3). They further elaborate what they call the “crisis of relevance” by identifying three pressing issues: “(1) Current research does not produce knowledge relevant for business purposes. (2) A strong orientation toward A-ranked journals distorts incentives towards a narrow focus ... (3) An over-emphasis on theory ... leads to a focus on form more than substance...” (p.11).

Furthermore, they observe, “...research primarily benefits the researchers who conduct it (for career advancement) and those who read it, which consists primarily of other scholars... There is low priority given to how research could benefit business and broader society” (p.12).

All of this sounds painfully familiar. RRBM has as its core mission furthering the collective goal of creating a better society through scholarly research in business. They have promulgated seven fundamental principles of responsible research ([www.rrbm.network/position-paper](http://www.rrbm.network/position-paper)). I invite you to visit the RRBM website and consider joining other leading consumer researchers who have endorsed these ideals.

### PAYING IT BACKWARD ... AND FORWARD

A year ago, as I began thinking about my remarks for this occasion, my first thoughts were ones of gratitude. The ACR Fellow Award means a great deal to me, as ACR has been my primary professional identity for nearly 50 years. Yet I am here today, not due just to my own efforts, but also due to the inspiration and support of so many others. I wish I could have devoted my entire time to thanking them.

I begin by remembering the late Paul Winn, who was my principles of marketing instructor at the University of Illinois and later my Ph.D. colleague, who set me on this path by encouraging me to

pursue my Ph.D. At that point, I was planning to be a market researcher at the *Peoria Journal Star*, so you might say his suggestion made just a bit of a difference in my life! I also wish to acknowledge Jag Sheth, who gave me my first RA position in the Ph.D. program, taught me more than I ever wanted to know about multivariate data analysis, and has entrusted me for the last ten years with membership on the Sheth Foundation Board of Directors. Joel Cohen was a magnificent mentor and dissertation chair who was not only instrumental in launching my scholarly career but also lured me to the University of Florida nine years later. I also benefitted greatly from my other Illinois colleagues Peter Wright, Bobby Calder, Kent Monroe, Bob Burnkrant, Mike Munson, and especially my good friends Mike Houston, Bill Locander, and C.W. Park.

Hal Kassirjian at UCLA is my academic grandfather and set the tone in the department by epitomizing servant leadership. Jim Bettman embodied a scholarly standard of the highest caliber, and still managed to be a “wild and crazy guy.” Noel Capon, Carol Scott, Bart Weitz and a youngster by the name of Debbie Roedder were incredible colleagues. What ever became of Debbie? UCLA was also the home to my first doctoral students – Jack Swasy, Joe Belch, and Scott MacKenzie. Channeling my inner Paul Winn, I literally plucked Scott out of our MBA program and nudged him into our Ph.D. program.

In my 36 years at Florida, I have been blessed with an amazing group of colleagues. In addition to Joel Cohen, who hired me, Bill Wilkie, Dipankar Chakravarti, John Lynch, Joe Alba, and Wes Hutchinson welcomed me in 1982. We were joined over the years by Alan Sawyer, Chris Janiszewski, John Sherry, David Mick, Barb Bickart, Robyn LeBoeuf, David Wooten, and Ratti Ratneshwar. Alan Cooke, Lyle Brenner, Aner Sela, Yang Yang, and Yanping Tu round out the current consumer behavior complement. It has been a true privilege to serve with so many talented scholars over the years.

I have also been fortunate to work with several gifted Ph.D. students at Florida: Doug Hausknecht, Bill Baker, Steve Holden, Chuck Areni, Susan Fournier, Betsy Moore, John Pracejus, Andrew Kuo, and Gia Nardini. In addition to these Florida Ph.D. graduates, there is another group of Florida alums who are near and dear to my academic heart. I met these young people when they were students in my undergraduate principles of marketing course. Most of them subsequently served as undergraduate teaching assistants for me and wrote their undergraduate honors theses under my direction. All of them went on to earn their Ph.D.s, some at Florida, others elsewhere. I am pretty sure that they would say that they would not have considered a Ph.D. in marketing and a career in consumer research without my initial encouragement. More than my scholarly contributions, they represent my legacy to the field, and I am very proud of each of them. Who are these people? Stacy Wood, Chuck Areni, Andrew Kuo, Katie Kelting, Stefanie Robinson, Leigh Anne Novak Donovan, Gia Nardini, Cammy Crollic, Emily Goldsmith, and Irina Toteva. You guys mean the world to me!

In closing, I thank my parents, Willis and Mary Kay Lutz, who encouraged a young farm boy to pursue his academic dream. My wife Rachel has been an unwavering supporter and has balanced my academic focus by nurturing a warm and loving family that has enriched my life immeasurably. Our sons Matt and Jon have blossomed into amazing young men. A contractor and a chef, they ensure a roof over our heads and food on our table! And Matt, in collaboration with his wife Amanda, has filled our lives with the joy and wonder of two precious grandchildren – Claire and Jacob. Sometimes life seems just too good to be true!

Thanks once again to my ACR family for making my ACR Fellows dream come true!

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# Special Session Summaries

## Financial Decisions in the Information Age

Chairs: Tito L. H. Grillo, University of Texas at Austin, USA

Adrian F. Ward, University of Texas at Austin, USA

### Paper #1: Financial Education and Confidence in Financial Knowledge

Stephen Atlas, University of Rhode Island, USA

Nilton Porto, University of Rhode Island, USA

Jing Jian Xiao, University of Rhode Island, USA

### Paper #2: From Novice to Know-it-All: How Google-Based Financial Learning Affects Financial Confidence and Decisions

Adrian F. Ward, University of Texas at Austin, USA

Tito L. H. Grillo, University of Texas at Austin, USA

Philip M. Fernbach, University of Colorado, USA

### Paper #3: Product Complexity as a Barrier to Consumer Financial Decision-Making

Timothy Dunn, University of Colorado, USA

Philip M. Fernbach, University of Colorado, USA

Ji Hoon Jhang, Oklahoma State University, USA

John Lynch, University of Colorado, USA

### Paper #4: Increasing Tax Salience Alters Investment Behavior

Abigail Sussman, University of Chicago, USA

Daniel Egan, Betterment, USA

Sam Swift, Bowery Farming, USA

and Lynch used eye-tracking to show that high complexity of the presentation of financial products detracts attention from key information about the options. Decreased complexity, on the other hand, increases time reviewing product information, which improves comprehension of the product and its attributes and positively predicts identification of the best option.

Lastly, Sussman, Egan, and Swift present an investigation of the use of online investment platforms, which can provide unique features to assist consumers in investment decisions. The authors examined the effects of a feature that allows investors to see real-time information on the tax impact of an action before they commit to this action. Results suggest that seeing this information on the investment platform reduces trading behavior, but there are nuances to this effect. Namely, levels of sensitivity to tax information in the platform are different for investors with different political affiliations and vary with tax popularity (inferred based on Google search popularity of the specific tax).

Together, these papers give a snapshot of how factors related to information technologies are shaping financial decisions in the Information Age. This session acknowledges that these factors are incipient and likely to be intensified in the near future. Thus, looking at them and their consequences now serves us as a glimpse of future issues in financial decision making.

## SESSION OVERVIEW

Consumer research has kept a close watch on how personal and household financial decisions are made and their influence on consumer welfare. However, the landscape of financial decisions now changes faster than ever. A large part of these transformations revolves around the rise of forms of access to information never experienced before. The current papers are guided by the question of, “What do financial decisions look and feel like in the Information Age?”

A major hallmark of this age is the ready availability of information—including increased access to expert knowledge about investing through online platforms. Over the course of six months, Atlas, Porto, and Xiao monitored the effects of an online financial education intervention from one such platform on people’s financial knowledge, confidence in this knowledge, and intentions to adopt desirable financial behavior. Increases in confidence in one’s financial knowledge after the intervention were persistent over time, but effects on actual knowledge were negligible and on intentions were short-lived.

Ward, Grillo, and Fernbach focused on another, perhaps more common, approach to accessing knowledge in our time: online search. Using the Internet and tools like Google, many consumers now rely on online search to educate themselves about investing before making financial decisions. The authors explored how using Google to learn basic information related to the “world of investing” inflates financial self-confidence and leads consumers to reject expert financial advice while also adopting riskier investing behavior.

Although the Information Age offers consumers improved ease-of-access to financial information, processing this information is not always such an easy task. This is noteworthy when consumers deal with information about financial products that can be beneficial but, at the same time, are extremely complex. Dunn, Jhang, Fernbach,

## Financial Education and Confidence in Financial Knowledge

### EXTENDED ABSTRACT

Financial literacy is seen as an essential skill as young adults become financially independent and make major financial decisions, yet researchers have found that financial literacy is often low among young adults aged 19-29 (Lusardi et al. 2010; Shim et al. 2010). A recent meta-analysis has found that one challenge limiting efforts to improve consumer financial wellbeing is a short “shelf life” of financial education designed to improve financial literacy and foster beneficial financial behaviors (Fernandes et al. 2014). Consequently, the National Endowment for Financial Education and others have called for greater insight into how financial knowledge decays after financial education and what factors mitigate the decay.

Recent studies found that financial education has positive effects on consumer financial behavior and welfare, from improving financial capability (Xiao & O’Neill 2016; Xiao & Porto 2017) to better credit choices (Walstad et al. 2017), reducing outstanding debt (Brown et al 2016) and positive impacts on family members (Bruhn et al. 2016). A model of financial literacy predicts that consumers seek financial knowledge until marginal cost equals to marginal benefit (Lusardi & Mitchell, 2014). While more knowledge carries benefits by reducing uncertainty around financial choices (Stigler 1961) and promoting beneficial finance practices (Hilgert et al. 2003), recipients of financial education may also benefit from higher financial confidence as part of an overall ability to implement healthy financial behaviors.

This paper reports results from a randomized field experiment assigning young adults to an externally-validated financial education

curriculum, and tracking a cohort for 6 months. We find evidence that following financial education, financial confidence (i.e. subjective knowledge, or how much you think you know) persists longer than objective financial knowledge (how much you are assessed to know) and beneficial financial behavioral intentions.

A panel of 256 young adults enrolled in a northeastern research university completed five surveys over a 6-month period in 2017. 161 (63%) were randomly selected to complete a commonly used 2.5-hour online course providing financial education training. After the intake survey, we collect information from the participants at five other times: at baseline, immediately after financial education, one week post-intervention, three months post-intervention, and six months post-intervention. At each checkpoint, we measured (1) objective financial knowledge using a variety of questions used in previous research such as by Lusardi & Mitchell (2008); (2) financial confidence using five items measuring participants' perception of their financial knowledge; and (3) intentions to adopt desirable financial behaviors (Dew & Xiao, 2011).

We found little evidence that the financial education intervention increased financial knowledge despite slightly higher score results to the treatment group. Our measurement of knowledge was somewhat noisy and not specifically built to test the curriculum, which might help explain the lack of significant results. However, we found a strong and lasting effect of the curriculum to financial confidence. Financial confidence increased after 1 week ( $p = 0.01$ ) and persisted through three months ( $p < 0.01$ ). Even six months after the financial education intervention, those in the treatment group reported a level of financial confidence roughly a third of a standard deviation higher than the control group ( $p = 0.01$ ).

Behavioral intentions are higher in the treatment group by half of a standard deviation after the curriculum ( $p < 0.01$ ), which extended through the 1-week survey ( $p < 0.01$ ), but showed no difference at 3-months ( $p > 0.20$ ) or at the six-month mark. The results indicate that following financial education, subjective financial knowledge persisted longer than behavioral intentions. The initial effect of the intervention on financial behavioral intentions was robust in the very short run – one week after intervention - potentially hinting for the need of regular injections of financial knowledge to help consumer sustain healthy financial habits.

Financial knowledge, financial confidence, and behavioral intentions were all equivalent at baseline ( $p > 0.3$ ). The financial education intervention was successful in increasing behavioral intentions and financial confidence, at the short and long run, respectively. Taken together, while financial knowledge and behavioral intentions returned to baseline levels one week after financial education, financial education has a positive effect on financial confidence, which extends six-months post-intervention. These results are robust when we review different student subgroups by gender, previous exposure to financial education, and being part of a disadvantaged population.

In a second study, we recruited 491 young adult (18-26) participants online in a study involving experimental manipulations of financial confidence and knowledge. We pretested 4 possible knowledge manipulations and 9 confidence manipulations adapted from Wan and Rucker (2012). The main study asked participants to recall 2 financial experiences that made them feel highly confident and certain (high confidence), happy and excited (neutral), or doubtful and uncertain (low confidence). Participants also either completed a financial education curriculum about emergency savings (a 6-minute video and some comprehension questions) or watched an unrelated video, prior to answering questions about intentions to save for emergencies (a 4-item scale). We expected that both the confidence and knowledge manipulations would together influence behavioral

intentions. We found that only confidence influenced behavioral intentions, in particular, that low confidence reduced intentions to save for emergencies, compared to neutral and high confidence conditions ( $p = 0.05$ ). We further found that the education curriculum we expected would manipulate knowledge appeared to more strongly influence confidence, highlighting the practical relevance of considering confidence in the consumer knowledge acquisition process.

The present research provides insight into how financial confidence, knowledge and behavioral intentions evolve following education interventions. While the training had a negligible effect on our measurements of financial knowledge, financial confidence was the clear beneficiary of even a small dosage of financial education. Likewise, the manipulation of financial knowledge from our second study also revealed a positive effect on financial confidence. The impact of financial education on behavioral intentions appears to be more complex: the improvements in financial decision-making are short-lived and dependent upon financial confidence. Altogether, among contemporary young adults, there appears to be a lasting impact of financial education on financial confidence, which contributes to financial behavioral intentions.

### **From Novice to Know-it-All: How Google-Based Financial Learning Affects Financial Confidence and Decisions**

#### **EXTENDED ABSTRACT**

Online search has become an automatic response to the experience of doubt (Sparrow & Chatman, 2013). Because of this, consumers often resort to Google when preparing for decisions in domains where they are not experts. This tendency is particularly notable in the context of financial decisions: since the early 2000s, the Internet is the most popular source of investing-related information, surpassing written material and financial planners (Federal Reserve, 2016). What has been largely overlooked in this context is that fundamental characteristics of Internet search influence memory and self-perceptions in ways that other forms of information access do not. This phenomenon may carry important implications for financial behaviors.

One such effect is Google-induced overconfidence: people misattribute knowledge found through Google to themselves, eliciting a false sense of already knowing information found online. This phenomenon inflates people's confidence in their own cognitive skills (Ward, 2013). We propose that using Google to access basic investing-related information engenders a false sense of mastery in the domain of finance, and demonstrate consequences of this illusory expertise when people make financial decisions. Experiment 1 establishes the phenomenon by revealing positive effects of Google-based financial learning on self-report (Financial Self-Confidence scale - FSC) and behavioral (bets on one's own financial performance) measures of confidence. Experiment 2 shows downstream consequences: Google-induced financial confidence reduces willingness to accept expert advice and increases preference for riskier investments. These effects are moderated by prior financial expertise.

Prior expertise was measured in the beginning of the experiments in an allegedly unrelated questionnaire. Then, participants (MTurk) were randomly assigned to either access financial information via Internet search (Online Search condition) or receive the same information without engaging in Internet search (No Search condition). All participants were prompted with the same investing-related questions (e.g., "What is a 'Bear Market'?"). The Online Search group were instructed to answer these questions using Google. The No Search group were provided with identical information (answers taken directly from Google's "Answer Box"), but without engaging



in search. Thus, both groups were exposed to the same information, but only those in the Online Search condition used Google.

In Experiment 1, after accessing/receiving the financial information, half of the participants ( $N = 246$ ,  $N_{\text{full sample}} = 521$ ) were randomly selected to complete the 5-item Financial Self-Confidence scale (FSC, sample item: "I am confident in my own ability to recognize a good financial investment,"  $\alpha = .91$ ). Next, all participants received instructions about an upcoming investment task for which they could receive a performance-based reward. Participants then bet on their own performance by balancing how much of the reward would be a fixed value and how much would be performance-based (Fox & Tversky, 1995). After completing the investment task and before knowing their reward, they could change their bet.

FSC was higher in the Online Search condition ( $M = 3.86$ ) than in the No Search condition ( $M = 3.45$ ),  $F(1, 244) = 5.57$ ,  $p = .019$ . Online Search participants also bet more on their performance ( $M = 37.38$ ) than No Search participants ( $M = 34.11$ ),  $F(1, 519) = 10.28$ ,  $p = .001$ . A follow-up analysis revealed that the effect of Online Search on betting was driven by participants with little prior financial expertise,  $F(1, 516) = 4.53$ ,  $p = .034$ . For those with minimal prior investing experience, online search increased bet amounts ( $M_{\text{No Search}} = 32.71$ ,  $M_{\text{Online Search}} = 37.36$ ;  $p < .001$ ); for those with more prior experience, it did not ( $M_{\text{No Search}} = 37.39$ ,  $M_{\text{Online Search}} = 37.43$ ;  $p = .981$ ). Actual performance on the investing task did not differ as a result of search ( $p = .169$ ), suggesting that these differences in betting behavior reflect artificially inflated confidence—not improved skill. This inflated confidence persisted after the investment task, as participants were unlikely to change their bets regardless of the experimental group ( $p = .564$ ).

In Experiment 2, the investment task was a simulation in which participants ( $N = 187$ ) opened a new retirement account in a system resembling services like Betterment. They had to allocate an initial amount of \$10,000 between stocks and bonds. The instructions explicitly said that more money on stocks (bonds) is considered a more aggressive (conservative) strategy, alluding to the idea that stocks are a riskier investment. Before choosing how to allocate the money, participants received from the system a recommendation of how much they should invest on stocks based on their age along with a range around the recommended percentage above which their allocation would be too aggressive and below which it would be too conservative.

Only the Online Search group significantly deviated from the recommended allocation,  $F(1, 183) = 16.11$ ,  $p < .001$ . Importantly, this deviation gravitated towards more aggressive (riskier) allocation choices: on average, Online Search participants allocated 14.16% more on stocks than recommended. This allocation on was not statistically different from the bound above which their allocation choice was considered aggressive. In contrast, the average allocation of the No Search group was not different from the recommended allocation. The online search effect on the difference between recommended and actual allocation was moderated by prior financial expertise. Significant deviations from recommendation towards an aggressive investment strategy in the Online Search group were driven by people with low prior expertise in investing,  $F(1, 183) = 4.25$ ,  $p = .041$ .

The Internet makes knowledge more accessible, and accessibility certainly has good implications for financial literacy. For instance, people can now easily access basic training and expert guidance on specialized online platforms. However, too often consumers rely on quick access to target information through Google and this tendency might have less desirable implications for financial behavior. As this research suggests, the use of Google to self-educate oneself in the financial domain unleashes the shortcomings of overconfidence in

decision settings, including too much reliance on one's own performance (Campbell, Goodie, & Foster, 2004) and risky investment choices (Hadar, Sood, & Fox, 2013). Research on these effects can help understand how to benefit from the ubiquitous access to information while avoiding its cognitive traps.

## Product Complexity as a Barrier to Consumer Financial Decision-Making

### EXTENDED ABSTRACT

Economists recommend that most consumers should annuitize a substantial portion of their retirement savings, though purchase rates are very low (Benartzi, Previtro, and Thaler 2011). One potential cause of this "annuity paradox" may be the difficulty associated with attending to and comprehending the details of annuity products (Brown, Kapteyn, Luttmmer, and Mitchell 2017). In the face of complexity, consumers may disengage without fully considering the beneficial attributes of annuity products. This problem may be exacerbated in today's information-rich environment, where consumers have many draws on their time and attention. In the present set of experiments, we investigate how the complexity of an annuity product affects cognitive and behavioral outcomes.

Experiment 1 uses eye-tracking to examine how attention to key information embedded in annuity brochures (e.g., payout information, disclosures about the financial health of the offering firm) is affected by increased complexity. It is well established that as information is more demanding to process (i.e., increased complexity), individuals will devote increased resources to processing to the extent that it is beneficial. Specifically, when cognitive demand gets to be too great, individuals are likely to shift resources to some secondary goal or task (Kurzban, Duckworth, Kable, & Myers, 2013). This shift would then likely lead to missing important information embedded in the complex material. To test this notion, we created a "distraction" paradigm in which individuals read financial products presented on the right side of a screen while distracting websites rotated on the left side of the screen. The paradigm was meant to mimic real decision-making where consumers often have the option to shift attention from a focal decision to some distraction. We manipulated the complexity of a real-world annuity brochure: a *complex* 21-page version, and a *simple* 14-page version which reduced complexity by removing and compressing information (e.g., footnotes, displaying fewer start date, etc.). Importantly, the *complex* version was the simplest real-world version of an annuity brochure that was openly available to consumers. Participants (aged 40-65 years) completed the distraction task with complexity manipulated between-subjects. We measured individuals' eye movements using a desktop eye-tracker. Results demonstrated a marginal effect of complexity on individuals' attention,  $F(1, 27) = 3.76$ ,  $p = .063$ , where less attention was paid to the annuity material with increased complexity. Furthermore, greater attention was allocated to key areas of interest (e.g., the disclosure page) in the simple relative to complex version of the annuity brochure when the disclosure was presented early rather than late,  $F(1, 27) = 10.88$ ,  $p = .003$ . Last, a "wear-out" effect was demonstrated via a within-subject regression analysis where individuals overall paid less attention over time to AOs in the complex relative to simple versions,  $b = -.02$ ,  $t(30) = 2.07$ ,  $p = .047$ . Thus, as expected, an increase in complexity led to resources (i.e., attention) being shifted away from the annuity brochure.

Experiment 2 aimed to extend the general findings of Experiment 1 by examining the effects of complexity on behavioral outcomes. We hypothesized that increased complexity of the annuity brochures would lead individuals to spend less time reviewing. Consequently,

this would be expected to lead to missing beneficial attributes, worse comprehension of the material, increased perceived effort, and have negative effects on preferences when the complex material was associated with high financial benefits. We embedded three annuity attributes in the materials that recently have been shown to be judged as beneficial by consumers: high financial strength, period-certain guarantees, and inflation protection (Shu, Zeithammer, and Payne 2016). These attributes have been shown to be valued by consumers in a highly impoverished conjoint setting. We hypothesized that consumers' preference for these attributes would not always be realized when embedded in more realistic materials, but only when the materials were sufficiently simple.

We utilized the same materials as Experiment 1, as well as an added *minimal* 5-page brochure, and *1-page reference* annuity product. Importantly, all three positive attributes only occurred for one of the annuity products (e.g., the complex material was associated with the highly beneficial annuity whereas the 1-page document did not have the beneficial attributes). Complexity (*complex, simple, and minimal*) and the location of the beneficial attributes (*complex materials, 1-page reference*) was manipulated between-subjects. All participants received the *1-page reference* in addition to one of the complexity conditions. Participants (aged 40-65 years) first read an overview of retirement products that outlined the three above attributes, followed by a self-paced review session of the annuity materials (e.g., the *complex* 21-page brochure and the *1-page reference*). Upon completion of the review portion, individuals then answered several questions regarding their preferences between the annuities, their perceived effort, and answered incentivized comprehension questions. Similar to Experiment 1, results demonstrated that decreasing complexity led to slightly more time spent reviewing the materials,  $F(2, 251) = 2.71, p = .068$ , and better performance on the comprehension questions,  $F(2, 251) = 3.22, p = .042$ . Furthermore, individuals expressed a preference for the more beneficial annuity only when the materials were less complex. However, this result only emerged in the minimal condition,  $t(82) = 3.79, p < .001$ , suggesting that large reduction in complexity are necessary to achieve any benefits on choice.

In conclusion, we demonstrate that complexity has a negative effect on consumers' behaviors when evaluating financial products. Importantly, even relatively large reductions of complexity had small effects on behaviors, causing many individuals to miss important attributes that would be beneficial if the product was purchased. These results have important implications for the design and marketing of financial product information. They suggest that companies should be dramatically reducing the complexity of their marketing materials, to the extent that they want consumers to seriously evaluate and comprehend the options. The results also contribute to our understanding of the annuity paradox and related suboptimal financial decisions where products are complex and hard to understand.

## Increasing Tax Salience Alters Investment Behavior

### EXTENDED ABSTRACT

The recent proliferation of online investment platforms allows for new opportunities to present information to investors in ways that lead to positive behavior change. In the current research, we examine the effect of providing online retail investors with real-time tax impact preview information. The tax impact preview allowed investors could see the tax impact of certain actions before committing to them, allowing them to moderate the change to avoid taxes. We find that highlighting tax consequences significantly changes investment behavior, suggesting that people were not previously incorporating

this tax information into their investment decisions. Furthermore, we provide evidence suggesting that the reaction is specific to taxes, rather than being a reaction to a generic cost. The current research contributes to literature on tax salience and tax aversion (Sussman & Olivola, 2011; see Olivola & Sussman, 2015 for a review and see Sussman & White, 2018 for a discussion of policy implications) as well as to literature examining how the display of information influences investment decisions (e.g., Bazley et al. 2017; Hartzmark & Solomon, 2017; Shaton, 2017).

Views about taxes and tax policy can influence decisions ranging from where to live and how to vote to which store to frequent and which products to purchase, and even whether and to what extent to comply with the law. Research has found that people will alter their behavior more in response to taxes than to equivalent costs, a phenomenon known as tax aversion (Sussman & Olivola, 2011).

Since taxes tend to elicit strong responses, strategically highlighting tax costs could encourage specific behaviors, even without any changes to the presence or amount of these costs. In the current research, we explore investing as a highly consequential setting in which increasing tax salience may be used as a nudge to counter suboptimal investor behaviors. Specifically, we target the behavior of excessive trading as an established bias that is correlated with significantly lower returns than the overall market (Barber & Odean, 2000; Odean, 1999).

We employ a unique data set of retail investors' behavior at Betterment, an online investment advisor, through a period when the availability of real-time tax impact preview (TImP) information was tested and released. Through this feature, investors were encouraged to view the tax impact of certain actions before committing to them. Importantly, while this feature did not change the value of the taxes, it did make taxes salient and allowed customers to moderate their changes to reduce taxes. Our data combines a 20-day window in which TImP was shown to a random subset of customers with a longer term analysis of investor behavior after the feature completed its full launch.

The experimental period allows us to test causally whether varying tax salience acts as an effective nudge. Data support the conclusion that simple provision of real-time, individualized tax information significantly reduced the likelihood of trading among retail investors. Customers in the TImP condition performed 14.5% fewer allocation changes per customer than customers in the control group ( $M_{\text{Control}} = 0.329$ , vs.  $M_{\text{TImP}} = 0.280$  changes during the experimental period;  $t(12,290) = 2.875, d = .05, p = .004$ ).

Next, we examine more than two years of data from Betterment. This analysis allows us to explore whether reactions to salient taxes are consistent with a pure cost-based account or with a tax-specific account, and provides evidence consistent with the latter. We first leverage prior research showing differential sensitivity to taxes as a function of political affiliation (e.g., Hardisty, Johnson, & Weber, 2010; Sussman & Olivola, 2011). We use data on each customer's zip code to infer likely political affiliation based on presidential vote-share in their location from recent elections. We define tax sensitivity as the extent to which an increase in the value of taxes displayed corresponds to a decrease in the likelihood of completing a trade. We find that (1) Republicans are more sensitive to taxes than are Democrats (2) Making TImP viewing mandatory (vs. optional) corresponds to a greater increase in sensitivity among Republicans than Democrats and (3) Sensitivity to tax amount changes (and subsides) after Trump is elected and Republicans take control of the White House. Finally, moving beyond political affiliation to an unrelated correlate of tax aversion, we examine whether investors react more strongly to tax information when taxes are top of mind. We use

Google search popularity for the term “tax” as a proxy for investor consideration of tax-specific costs and find that sensitivity to taxes increases as a function of tax search popularity.

We propose that online investment platforms allow for new ways of presenting information to investors that can help them make better decisions. Our data provides evidence that tax reminders can be used to leverage one bias (tax aversion) and to assist in reducing others (e.g., overtrading and disposition effects).

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# Sharing and Social Connectedness: How Different Ways of Sharing Affect Social Connection

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## **Paper #1: Self-Deprecation Signals Humility, but Not as Much as Self-Deprecators Assume**

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Michael O'Donnell, University of California, Berkeley, USA  
Minah H. Jung, New York University, USA

## **Paper #2: Speaking Ill of Others: When Negatively-Valenced Gossip Fosters Social Connection**

Alixandra Barasch, New York University, USA  
Jonathan Berman, London Business School, USA  
Heeyoung Yoon, New York University, USA

## **Paper #3: Inside Jokes: Humor as Social Exclusion**

Ovul Sezer, University of North Carolina at Chapel Hill, USA  
Brad Bitterly, University of Pennsylvania, USA  
Alison Wood Brooks, Harvard Business School, USA  
Maurice Schweitzer, University of Pennsylvania, USA  
Michael I. Norton, Harvard Business School, USA

## **Paper #4: Give Me Something of Yours: The Downside of Digital (vs. Physical) Exchanges**

Anne Wilson, Harvard Business School, USA  
Shelle Santana, Harvard Business School, USA  
Neeru Paharia, Georgetown University, USA

### SESSION OVERVIEW

Sharing is ubiquitous, and it has become an essential part of consumers' lives. The advancement of social media and smartphones has enabled consumers to share personal experiences, opinions, and resources with others at the click of a button. Facebook Messenger and WhatsApp handle 60 billion messages a day, and firms like H&M and Sephora use these apps for one-on-one real-time conversations with customers. Moreover, consumers can now share money via Venmo and Google Wallet and car rides with other customers via Uber and Lyft.

Given the prevalence of sharing, it is important to understand how it affects consumers' perceptions of and relationship with others. Prior research has shown that sharing is integral to building relationships (Min, Liu, & Kim, 2017; Reis et al., 2010; Belk, 2009). However, not all sharing is created equal; certain types of sharing are more effective at bringing people together than others. Yet we know little about what specific strategies are successful for connecting people, and which may backfire or push people apart.

In this session, we ask: *what sharing strategies do people use to facilitate relationship building?*; *what are the consequences of these sharing strategies?*; and *what factors moderate their effectiveness?* Four papers look at how different types of sharing—from jokes to gossip to goods—influence interpersonal perception and social connectedness.

The first two papers examine the positive and negative effects of sharing negative content. First, **Critcher, Jung, and O'Donnell** examine how self-deprecation, or putting oneself down in a lighthearted way, affects perceptions of the sharer. In contrary to self-deprecators' intuition that making fun of themselves signals humility and authenticity, recipients believe that self-deprecators are actually less good at both skilled and unskilled domains. Next, **Barasch, Berman, and Yoon** show how sharing negative content, in the form of gossip, can sometimes be socially connecting. Specifically, they find

that sharing negative judgments about others can increase liking and trust of the sharer, as long as the recipient agrees and the comments make the speaker seem discerning.

The next two papers look at how sharing positive content can both foster and undermine feelings of closeness. **Sezer et al.** show that sharing inside jokes can make people feel more identified and connected with their group. However, outsiders who witness inside jokes have less motivation to contribute to and interact with the group. Finally, **Wilson, Santana and Paharia** find that the method of sharing also matters. In particular, giving and receiving goods in physical (vs. digital) form can make people feel closer to each other by increasing perceived psychological ownership.

Together, these papers provide a better understanding of how sharing affects consumers' connection with others. We contribute to this topic by examining different sharing strategies (self-deprecation and jokes), the valence of shared content (gossip), and the method of sharing (physical vs. digital). This session will provide guidance for marketers on how to manage customer relationships through various methods of conversation, and will be of interest to consumer researchers studying word of mouth, social connection, and judgment and decision-making.

## **Self-Deprecation Signals Humility, but Not as Much as Self-Deprecators Assume**

### EXTENDED ABSTRACT

Firms' marketing communications, sellers' pitches, and consumers' purchases are all made with an eye to how others will view them. In various ways, they are all in the service of impression management—attempts to influence and mold how one is seen. Although some impression management efforts are fairly explicit and direct, others are more indirect or coy in their attempts to manage impressions. In fact, sometimes the impressions consumers seek to achieve through their own purchases or consumption decisions can be disrupted or even reversed once those signals become too blatant or when attention is called to them (e.g., Han, Nunes, and Dréze, 2010).

In this paper, we examine a subtle impression management signal that has received essentially no attention in the consumer behavior or psychology literatures: self-deprecation. We define self-deprecation as a statement that puts oneself down in a lighthearted way. Although we ultimately examine how self-deprecators believe their own statements are interpreted (and are actually interpreted) by others, this research is conducted against a backdrop of a rise in self-deprecation in marketing communications by Domino's, Buick, Microsoft, and others. When consumers poke fun at themselves, they presumably aim to express humility and authenticity. But what does consumers' self-deprecation actually communicate, and do self-deprecators anticipate that? After all, impression management strategies cannot be used effectively in those attempting to influence impressions don't know how they are managing them.

Our main study was conducted over two waves. In Wave 1, we recruited 183 communicators on Amazon Mechanical Turk. Communicators identified one domain they were skilled at (top 20th percentile) and one domain they were unskilled at (below average). Communicators wrote two short biographies about themselves—one about each domain—in the third person (as though someone else was writing a profile of them). They knew these would be shared with fu-

ture participants—recipients. Communicators' profiles closed with a first-person quote. Half of communicators wrote a quote that was merely descriptive, whereas half were asked to be self-deprecating. Communicators rated their own skill on each domain. They also saw a question that recipients would answer: "How good at [the domain] do you think [the communicator] perceives himself or herself to be?" Communicators guessed how recipients would respond.

In Wave 2, 234 recipients each read a random batch of 20 messages (biography + quote) sent by communicators. Recipients both indicated their own personal guess of the communicator's skill level as well as the question described earlier, their guess of how the communicators truly saw themselves. All analyses used mixed models that included random effects of communicators and recipients.

Note that by allowing communicators to generate their own content, we are prepared to make more generalized (instead of scenario-specific) claims about self-deprecation.

First, recipients assumed that self-deprecating communicators actually were more humble in their self-views,  $t(208.64) = 2.93$ ,  $p = .004$ , which held similarly across both domains,  $t < 1$ . Second, we found self-deprecation was taken at face value. Recipients believed that communicators who self-deprecated actually had less skill than communicators who didn't,  $t(214.47) = 2.85$ ,  $p = .005$ , which again emerged similarly across skilled and unskilled domains. In other words, self-deprecation did not signal a reduction in narcissism or overconfidence, but instead an understanding of one's lower ability.

Did communicators understand the signal they were sending? Self-deprecators appreciated that they were likely communicating lower self-confidence,  $t(797.24) = 4.79$ ,  $p < .001$ , but they (inaccurately) thought this signal was different for skilled and unskilled domains,  $t(4197.49) = 5.90$ ,  $p < .001$ . That is, self-deprecators knew they were sending a signal of lower self-confidence about their unskilled domain. But the significant interaction reflected that self-deprecators thought they were sending an exceptionally strong signal of lower self-confidence in their skilled domain.

Because communicators were guessing the answer to a question we the experimenters know, we can comment on communicators' insight into the signals they are sending. Self-deprecators' accurate understanding of what signal they were sending depended on the domain,  $t(4121.55) = 3.23$ ,  $p = .001$ . Those poking fun of themselves at an unskilled domain knew what they were communicating,  $t < 1$ , but those self-deprecating a domain at which they felt skilled overestimated how much this would make them come off as humble,  $t(399.95) = 3.39$ ,  $p = .001$ .

Additional analyses and scenario studies offered some insight into: 1) why self-deprecators are miscalibrated in the signal they send, and 2) whether recipients always take self-deprecation as a signal of low self-confidence. To the first point, we found when people self-deprecate about a skill they feel skilled on, this does prompt them to call into question somewhat their high self-views. That is, those randomly assigned to self-deprecate showed a reduction in their self-views on their skilled domain but not their unskilled domain,  $t(4197.98) = 3.78$ ,  $p < .001$ . After all, self-deprecating comments typically have some truth in them—a truth communicators are keenly aware of, even if they don't typically focus on it. This reduction in self-confidence partially explains why communicators overestimate self-deprecation's signal of humility. To the second point, we found that when people self-deprecate on a domain that tends to be less important to people, their self-deprecating comments are still believed, but they are not taken to reflect negative self-esteem more generally. Poking fun at one's own intelligence or appearance is assumed to reflect lower self-esteem more generally, but making fun of

one's artistic ability is taken to signal a confident person who is comfortable laughing at themselves about things few find that important.

Although our empirical efforts have focused on the communicative signals consumers send to each other, our ongoing efforts examine how firms' self-deprecation is interpreted by consumers. That is, firms often assume that self-deprecation signals authenticity. But our previous research and preliminary findings suggest that such authenticity comes at the cost of self-deprecation being interpreted quite literally. Poking fun at oneself is not necessarily a way to diffuse a shortcoming, but instead can reinforce that shortcoming as real.

### Speaking ill of others: When negatively-valenced gossip fosters social connection

#### EXTENDED ABSTRACT

Gossip holds a strong negative stigma in almost every culture (e.g., Foster, 2004), yet it still seems an inevitable part of life. If speaking ill of others makes a bad impression, why is it so common? Previous literature has highlighted the social-functional role of gossip in reinforcing cultural norms (Baumeister, Zhang, & Vohs, 2004). Gossip can also deter selfish behaviors while fostering cooperation (Piazza & Bering, 2008). However, little is known about how gossip affects perceptions of the speaker on an individual level. The current research aims to investigate when and how sharing gossip can foster interpersonal closeness.

Research on self-presentation shows, people are motivated to present themselves in a positive light in order to promote a favorable impression onto others (Goffman, 1959). However, this makes it difficult to discover the true nature of others, especially their most negative characteristics. In this regard, sharing negative (vs. positive) character judgments about another person may make gossipers seem more discerning and observant, because negative traits are not as readily observable as positive traits.

Sharing negative judgments about others also has costs, such as potential harm to the target's and the gossipers' reputation. In this sense, spreading negative judgments is risky; it might make one seem discerning, but petty and impolite as well (Bergmann, 1993; Gilmore, 1978). We propose that because sharing puts a gossipers in a vulnerable position, those who risk these potential negative consequences can signal the closeness of the gossipers-recipient relationship by sharing negative judgments of others, thereby increasing liking and trust of the gossipers. In contrast, speaking positively about others is a safer strategy, but without as many potential benefits. While saying positive things about others may signal politeness, it is less likely to provide the recipient with a discerning observation about the character of others.

We further expect the benefits of sharing negatively judgments of others will only occur when a gossipers speaks directly to a recipient, and not from the vantage point of a third party, or if a gossipers is sharing indiscriminately with a large group. Finally, because the benefits of gossip depend on a judgment seeming discerning, we also expect that gossip will backfire if the recipient does not agree with the character evaluation, ruining the gossipers' relationship with that individual.

In **Study 1** ( $N=76$ ), participants were asked to recall a time when they made an observation about someone that was not readily apparent (i.e., it was discerning). Then, they evaluated whether the observation reflected positive or negative traits, qualities, or characteristics about the person ( $-50 = \textit{extremely negative}$ ,  $50 = \textit{extremely positive}$ ). As expected, the results revealed that a majority of discerning observations about others were negative in valence (64.5%;

=6.34,  $p=.012$ ), and that the average evaluation was significantly negative ( $M=-7.46$ ,  $SD=23.64$ ;  $t(75)=-2.75$ ,  $p=.007$ ).

**Study 2** ( $N=300$ ) tested the hypothesis that sharing negative judgments about others can foster liking and trust using a 2 (statement valence: positive vs. negative)  $\times$  2 (target trait: obvious vs. less-obvious) between-subject design. All participants were told to imagine that they started a new job at a company, and that they worked briefly with a co-worker named Peter who held one positive trait (e.g., intelligence) and one negative trait (e.g., self-centeredness). In addition, one of these traits was presented as obvious and one was presented as less-obvious. Participants then imagined that another co-worker, George, made either a positive or a negative statement about Peter: "You know, I really think Peter is intelligent [self-centered]." After reading the scenario, participants rated George on a liking scale (5-items,  $\alpha=.91$ ) and an affective trust scale (7 items,  $\alpha=.89$ ).

An ANOVA revealed that sharing negative (vs. positive) judgments increased liking for George ( $M_{\text{negative}}=4.46$ ,  $M_{\text{positive}}=3.96$ ;  $F(1,296)=13.74$ ,  $p<.001$ ). Moreover, a two-way interaction suggests that while George was liked when he shared the negative judgment regardless of the how obvious the trait was ( $M_{\text{obvious}}=4.44$ ,  $M_{\text{less-obvious}}=4.49$ ;  $F(1,296)<1$ ), people liked George more when his positive remark was less-obvious than when it was obvious ( $M_{\text{less-obvious}}=4.21$ ,  $M_{\text{obvious}}=3.70$ ;  $F(1,296)=6.88$ ,  $p=.009$ ). This occurred even though participants clearly thought that George was less polite when he said negative things (4-items,  $\alpha=.88$ ;  $M_{\text{negative}}=4.42$  vs.  $M_{\text{positive}}=2.68$ ;  $F(1,296)=216.62$ ,  $p<.001$ ). The same pattern of results emerged for the affective trust DV.

**Study 3** ( $N=206$ ) examined whether the positive effect of sharing gossip occurs only with the recipient of the gossip, but not with a third-party. To test this, we employed a 2 (valence: positive vs. negative)  $\times$  2 (audience: self vs. other) between-subject design and used the same scenario as Study 2. Those in the self condition imagined that George told the gossip directly to *them*, whereas those in the other condition imagined George said the same statement to another co-worker. We replicated the positive effect of sharing negative judgments on liking: George was liked more when he spoke negatively than positively of Peter ( $M_{\text{negative}}=4.02$ ,  $M_{\text{positive}}=3.59$ ;  $F(1,202)=8.81$ ,  $p=.003$ ). Also, as predicted, the results revealed a significant valence  $\times$  audience interaction on liking ( $F(1,202)=6.05$ ,  $p=.015$ ). Specifically, participants only liked George more when he said the negative (vs. positive) comments to them ( $M_{\text{negative}}=4.23$ ,  $M_{\text{positive}}=3.44$ ;  $F(1,202)=14.78$ ,  $p<.001$ ), but not when he said them to another colleague ( $M_{\text{negative}}=3.81$ ,  $M_{\text{positive}}=3.74$ ;  $F(1,202)<1$ ). We found the same pattern for the affective trust measures ( $F(1,202)=8.32$ ,  $p=.004$ ).

**Study 4** ( $N=408$ ) tested the moderating role of agreement by manipulating whether the gossiper's remark was consistent with the recipient's perception. Of course, participants liked and trusted the gossiper more when they agreed with his remark. Moreover, the results revealed that our previous results depend on agreement, such that negative statements are punished more harshly than positive statements when the recipient disagrees with them.

These results provide key insight into the type of information that is most likely to spread via WOM across a wide range of business contexts. For example, consumers may choose to gossip about celebrities, CEOs, or politicians in order to form closer bonds with others. Moreover, public personas who present themselves in an overly positive light may be particularly subject to negative WOM as the public gets insight into their true underlying character.

## Inside Jokes: Humor as social exclusion

### EXTENDED ABSTRACT

Humor is central to social life (Gulas & Weinberger, 2006). From intelligence to friendliness, to emotional stability and imagination, a wide range of positive attributes are associated with being funny (Greengross & Miller 2011; Howrigan & MacDonald 2008; Lippa 2007; Martin, 2002). The ability to use humor effectively is a crucial skill, because a good sense of humor offers myriad interpersonal benefits. Effective jokes make it easier to entertain others and have them accept criticism (Dews, Kaplan & Winner, 1995; Fraley & Aaron, 2004; Madden & Weinberger, 1982; Schindler & Bickart, 2012; Schmidt, 2002), enhance liking, status, and perceived leadership effectiveness (Bitterly, Brooks & Schweitzer, 2017; Eisend, 2009; Yam, Christian, Wei, Liao & Nai, 2017), and even facilitate conflict resolution (Fraley & Aron, 2004). In short, humor often fosters social cohesion.

At the same time, however, the consequences of humor depend on the psychological and emotional reaction of the targets of those jokes, and critically on their appraisal of the humor attempt as funny – or not (Cooper, 2008; Warren & McGraw, 2016). While humor typically binds people together, little is known about the effects of humor that is intended to divide, as with humor attempts that require prior knowledge that is available only to certain members of a social group: inside jokes. In the current research, we investigate how an inside joke influences group dynamics, compared to a public joke: a joke that is understood by all members of the group.

An extensive body of research on social exclusion has shown that ostracism threatens people's need for belongings, control, self-esteem and meaning (Williams, 2009), and influences decision-making (Jones & Kelly, 2010). Because social connection is such a fundamental aspect of social life, even minimal forms of exclusion may lead to negative psychological consequences. For example, people feel threat even when they do not receive a ball during a virtual ball throwing game with strangers (Williams, Cheung, & Choi, 2000), when they feel "out of the loop" on pop culture, by being excluded from a domain of information shared commonly by others (Iannone, Kelly, & Williams, 2016), or even when their presence is not acknowledged by eye contact or civil attention from strangers (Wesselsmann, Cardoso, Slater, & Williams, 2012).

Building on past research on humor and social exclusion, we conceptualize inside jokes as humor attempts that create fault-lines within groups. We propose that individuals who witness an inside joke as an outsider would identify with their groups to a lesser extent, contribute to their groups less, and be less willing to interact with their group members on subsequent tasks. Moreover, we predicted that feelings of social exclusion plays a critical mediating role, such that perceived social exclusion drives lower group identification and negative group dynamics. We suggest that although humor is integral to interpersonal relationships, some forms of humor such as inside jokes may actually backfire and hurt social connection.

In **Study 1** ( $N = 208$ ), we randomly assigned participants to either the *joker* or *outsider* conditions in a between-subjects design, asking participants whether they shared an inside joke, or witness someone else share an inside joke in their daily lives. As expected, inside jokes are pervasive, with 74% of participants recalling a time when they shared an inside joke (telling a joke when someone who they knew would not get the joke was present) and 76.9% recalling a time when they witnessed someone sharing an inside joke with another person. The topics of these jokes ranged from boss nicknames to jokes about in-laws to high-school friends. Most importantly, the



joke tellers overestimated how much the outsider would enjoy the experience.

In **Study 2** ( $N=198$ ), we randomly assigned participants to one of two between-subjects conditions: *Inside Joke* and *Public Joke*. Participants in both conditions watched a short stand-up comedy clip, and then imagined that they were having a conversation with their coworkers. We showed participants in the *public joke condition* a dialogue in which employees referred to the same joke in the video that they just watched. In contrast, we showed participants in the *inside joke condition* a dialogue in which employees shared an inside joke that was not related to the video they watched. Participants in the *inside joke condition* identified with the other employees less than did participants in the *public joke condition*. Participants in the *inside joke condition* felt significantly more excluded than participants in the *public joke condition*. Social exclusion mediated the relationship between inside jokes and group identification. Including social exclusion in the model significantly reduced the effect of inside jokes, and social exclusion was a significant predictor of group identification.

In **Study 3** ( $N=202$ ), we asked participants to watch three funny videos and then randomly assigned them to either *Insider* or *Outsider* conditions in which they interacted with two other confederates who referred to a joke that they either watched or did not watch. We found that participants identified with their groups to a lesser extent, contributed to their groups less in a collective brainstorming task, and were less likely to choose the same group members for subsequent tasks when they were an outsider to the joke.

We contribute to the humor and social exclusion literatures by identifying a distinct form of humor: inside jokes. We find that those who share inside jokes underestimate how negative the experience is for the outsider, and that those outsiders feel socially excluded, less motivated to help the group, and more motivated to leave it. In addition being a tool for social cohesion, humor can also be used as a form of social exclusion.

### Give Me Something of Yours: The Downside of Digital (vs. Physical) Exchanges

#### EXTENDED ABSTRACT

Consumers can now give and receive many goods in digital form that could once only be shared in physical form (e.g. money, books, movies). While the increased ease and convenience of exchanging digital goods is in many ways beneficial, we show that it also comes at a cost. In particular, we demonstrate that exchanging digital (vs. physical) goods reduces consumers' feelings of interpersonal closeness to those with whom they exchange the goods. We demonstrate that this effect is driven by perceived psychological ownership and rule out alternative explanations including pain of payment, ease and convenience of payment, and social emotions.

Existing work demonstrates that consumers feel greater psychological ownership over physical versus digital goods, a phenomenon referred to as the "mere-ownership effect" (Atasoy and Morewedge 2017). Accordingly, we predict that when consumers give and receive goods, the mere-ownership effect will lead consumers to also feel more like they are giving something of theirs or receiving something of the other person's when goods are in the physical versus digital form. As a result, consumers will feel interpersonally closer to others when they give or receive physical (vs. digital) goods.

In experiment 1a, 401 participants from MTurk imagined they owed someone \$35 and they either paid that person back in cash or via digital payment application. After, participants rated their perceived closeness to and comfort with the person they paid, which we

averaged to create an index of interpersonal closeness ( $\alpha = .89$ ). An independent t-test showed that participants felt significantly closer to the other person when they gave them money in the form of physical cash ( $M = 5.34$ ) compared to a digital payment ( $M = 4.83$ ,  $t(399) = 3.76$ ,  $p < .01$ ).

We replicate the results of experiment 1a in experiment 1b from the receivers' perspective and across varying amounts of money. Participants ( $N = 403$ ) from MTurk imagined they went on a trip with a friend and they either paid for an activity during the trip for both their friend and themselves or they paid for the flights and hotel for both their friend and themselves, and so their friend owed them either \$25 (low amount) or \$520 (high amount). Participants then imagined their friend paid them back via physical cash or digital payment before completing the perceived interpersonal closeness index. Results of a multiple ANOVA did not indicate a significant main effect of payment amount or an interaction of payment amount and form on any of the DVs. As such, collapsing across payment amount, a t-test indicates that participants felt significantly closer to their friend when their friend paid them back with physical ( $M = 6.38$ ) versus digital money ( $M = 5.97$ ,  $t(401) = 3.87$ ,  $p < .01$ ).

In experiment 2, 203 participants from MTurk imagined they went to dinner with a friend and they paid the bill, but their friend paid them back for their half either via physical cash or digital payment application. Participants then completed the interpersonal closeness questions and an index ( $\alpha = .90$ ) of two items measuring perceived other psychological ownership. Participants also indicated the perceived pain, ease, and convenience of their friend's payment. Results from t-tests indicate that participants felt significantly closer to their friend when they were paid back in physical ( $M = 5.91$ ) versus digital form ( $M = 5.53$ ,  $t(201) = 2.63$ ,  $p < .01$ ) and they perceived their friend as having higher ownership over the physical ( $M = 6.32$ ) versus digital money ( $M = 5.53$ ,  $t(201) = 27.64$ ,  $p < .01$ ). Further, a mediation analysis shows the effect of form of money on perceived interpersonal closeness is fully and significantly mediated by perceived other ownership over the money ( $\beta = -.49$ , 95% confidence intervals do not include zero). Importantly, while form of the payment significantly affected perceptions of pain, ease, and convenience as expected, unlike perceived ownership, none of these measures significantly mediated the effect of form on perceived closeness.

We extend our effects to a non-monetary domain (i.e. books) in experiment 3. We asked 198 participants to imagine a coworker lent them a book in physical or digital, e-book form. Participants then indicated how close they felt to their coworker and their perception of their coworker's ownership over the book. Participants felt significantly closer to their coworker when they were lent a physical ( $M = 5.80$ ) versus digital book ( $M = 5.49$ ,  $t(196) = 2.25$ ,  $p < .01$ ) and they perceived their coworker had higher ownership over the physical ( $M = 6.20$ ) versus digital book ( $M = 4.76$ ,  $t(196) = 8.56$ ,  $p < .01$ ). Further, perceived ownership fully and significantly mediated the effect of form of the book on perceived closeness ( $\beta = -.56$ , 95% confidence intervals do not include zero). Of note, we also asked participants to rate their feelings on a set of social emotions (e.g. pride, thankfulness, embarrassment), and there were no significant effects.

Finally, in experiment 4, we manipulated both form and ownership to demonstrate further evidence for our proposed mechanism. We asked 400 participants from MTurk to imagine their coworker gave them tickets to an event. Participants imagined their coworker gave them the tickets in physical form or over email, and said that they actually bought these tickets a long time ago and can't use them (high ownership) or they were given these tickets earlier that day and can't use them (low ownership). Participants then indicated how close they felt to their coworker. T-tests indicate that participants

felt significantly closer to their coworker when they were given the tickets in physical ( $M = 6.03$ ) versus digital form ( $M = 5.84$ ,  $F(1, 399)$ ,  $p = .04$ ) and when the high ownership ( $M = 5.83$ ) versus low ownership condition ( $M = 6.03$ ,  $F(1, 399)$ ,  $p = .03$ ). There were no significant interactions.

Across five studies, we show that giving and receiving physical (vs. digital) goods enhances feelings of interpersonal closeness as a result of perceived psychological ownership. We rule out alternative mechanisms for our effects such as pain, ease, and convenience of the exchange and social emotions.

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# The Technological Consumer in an Interconnected World

Chair: Eugina Leung, Erasmus University Rotterdam, The Netherlands

**Paper #1: Economic Tremors and Earthquakes: Sharing, The Sharing Economy, Crowdfunding, Cryptocurrencies, and DAOs**  
Russell Belk, York University, Canada

**Paper #2: Searching for the Tree and Missing the Forest: How Broadening Search Promotes Belief Updating**

Eugina Leung, Erasmus University Rotterdam, The Netherlands

Oleg Urminsky, University of Chicago, USA

**Paper #3: A Computational Social Science Framework for Visualizing the Possibility Space of Consumer-Object Assemblages from IoT Interaction Data**

Donna Hoffman, George Washington University, USA

Thomas Novak, George Washington University, USA

**Paper #4: Machine Talk: How Conversational Chatbots Promote Brand Intimacy and Influence Consumer Choice**

Thomas Hilden, University of Geneva, Switzerland

Christian Hildebrand, University of Geneva, Switzerland

Gerald Häubl, University of Alberta, Canada

## SESSION OVERVIEW

Advances in digital technologies are transforming the way consumers connect with others and with machines. Recent development in crowdfunding and cryptocurrencies allow us to easily share resources. Similarly, search engines provide us with easy access to information. These technologies facilitate the sharing of information and resources among consumers. However, emerging technologies achieve more than connecting consumers together – they connect consumers with machines. Consumers increasingly interact with machines, from a connected network of devices to online chatbots. In short, technological innovations create an ever-more interconnected world.

Nonetheless, despite the transformational impact on everyday consumption of recent technological progress, we know surprisingly little about the interaction between consumers and technology. For instance, does interaction with machines shape consumption experience? Does interaction with others using these technologies facilitate the sharing of information and resources? If these technologies do facilitate information sharing, do they improve the quality of judgement consumers make?

This special session brings together papers spanning different aspects of emerging technological innovations to showcase this exciting research domain. The papers feature research on crowdfunding and cryptocurrencies, search engines, the Internet of Things, and chatbots. This special session will contribute to the consumer behavior literature by providing timely insights into the value of technology. It complements the literature on the consumption experience of technological products. Previous research shows that interaction with technological products can create both positive and negative experiences (Etkin 2016; Mick and Fournier 1998; Wilcox and Stephen 2013). This special session complements this research stream to present these experiences from different perspectives.

Given the lack of research on these new technologies, new theory is needed in order to define foundational constructs and processes and provide direction for future research. The overarching goal of the special session is to understand how interaction with technology shapes consumption experience. In particular, these papers aim to provide insights into how technology connects consumers with oth-

ers and with machines. This special session starts with a review paper on how technological innovations are transforming the way we share resources and information. The first paper “Economic Tremors and Earthquakes: Sharing, The Sharing Economy, Crowdfunding, Cryptocurrencies, and DAOs” discusses how new digital phenomena, such as crowdfunding, cryptocurrencies, and Distributed Autonomous Organizations, are promising to be seen as major tremors for future consumption and economies. The second paper “Searching for the Tree and Missing the Forest: How Broadening Search Promotes Belief Updating” investigates empirically how consumers’ belief updating is constrained by the search terms they use on search engines. The third paper “A Computational Social Science Framework for Visualizing the Possibility Space of Consumer-Object Assemblages from IoT Interaction Data” develops a computational science approach for understanding consumer experience from Internet of Things interactions. The final paper “Machine Talk: How Conversational Chatbots Promote Brand Intimacy and Influence Consumer Choice” empirically examines how interaction with conversational chatbots can impact consumers’ brand perceptions and purchase decisions. Together, these papers will advance our understanding of the technological trends in the marketplace and their significance. The session would be particularly of interest to researchers interested in technology, computer network, and experiential consumption.

## Economic Tremors and Earthquakes: Sharing, The Sharing Economy, Crowdfunding, Cryptocurrencies, and DAOs”

### EXTENDED ABSTRACT

Earthquakes and tremors sometimes jolt us from our business-as-usual complacency. Likewise, certain digitally-facilitated phenomena promise to shake up our economic landscape. We are beginning to appreciate the tremendous economic and social impact of social media, online selling, and digital giants like Google, Amazon, Apple, and Facebook. But the internet has also facilitated challenges to the ways our economies work. They offer ways that we can acquire goods without purchasing or making them, acquire funds without banks or venture capitalists, buy things without state-backed currencies or financial intermediaries, and run corporations without managers or employees. These changes offer potentially foundational changes in the ways we have come to assume that an economy must operate.

Sharing is as old as humankind, but it has been aided by the internet. We can set up online neighborhood clearinghouses to share tools, toys, games, and clothes our children have outgrown. We can take the danger out of hitchhiking and facilitate carpooling through online informal ride-sharing. Cities offer free access to bikes and thereby reduce traffic congestion. Through Couchsurfing we can offer and find free lodging in others’ homes around the globe. And we can share opinions with unseen others about the best restaurants, service people, travel destinations, movies, music, and much more.

While Napster is no longer a way to freely share music and film files online, a number of for-profit alternatives have arisen to acquire such files for a fee or to stream them to our devices without our ever owning or possessing them. While the music and movie industries did not respond quickly or well to sharing, commercial sharing has sprung up via iTunes, Spotify, Hulu, Netflix, and others. Services such as Airbnb, Zipcar, Uber, and Lyft offer short-term housing, cars,



and rides. The automobile industry is becoming involved in making cars and rides available without buying a car or using public transit. German auto makers like Mercedes, Audi, and BMW are prominent among these companies, but French and American car makers have also started or acquired car and ride sharing services. Self-driving cars promise to further shake-up these services.

Like non-profit neighborhood sharing, crowdfunding initially started as a way to crowdsource needed resources, but in this case money was what was sought. Kickstarter began following the 2008 financial meltdown and focused on raising money for artists and creative projects. While initially crowdfunded creative projects like music albums and films raised money by promising copies of the end product and merchandise such as t-shirts, crowdfunding has grown and proliferated into a variety of forms and areas of application. Popular projects involving products have included the Pebble smart watch, Villy glow-in-the dark bicycles, and Oculus Rift VR goggles (subsequently acquired by Google for \$2 billion). In these cases, part of the incentive for contributors was to receive the product before others (termed reward-based crowdfunding). This is similar to advance pre-production subscriptions for a new product as Gutenberg's did before printing of the world's first Bibles. Villy bicycles didn't need the money, but used crowdfunding to gauge market demand. In other cases, the contribution to crowdfunded projects is more of a donation. Crowdfunding has been used to raise money for college tuition, medical costs, funeral and memorial expenses, amateur sports team equipment and transportation, scientific studies, school equipment, wilderness preservation, political campaigns, and many other non-profit causes. Civic crowdfunding aids city services and building. This too is an old model and was used to secure funds to build the base for the Statue of Liberty. In the US, after the JOBS Act of 2012, equity crowdfunding became legal and entailed more of an investment model with financial returns expected. Equity crowdfunding is an alternative to entrepreneurs seeking venture capital funding. Within Islamic sharia finance the model is one of risk-sharing rather than investment. And debt-based crowdfunding relies on peer-to-peer (P2P) lending to pooled applicants who bypass banks and other corporate lending institutions.

Crypto-currencies are another way to bypass the banking system using blockchain technology to transfer funds and keep a shared online ledger of transactions through computers around the world. Prominent cryptocurrencies include Bitcoin and Ethereum. Although Bitcoin was associated with the "dark net" of illegal drug and weapon on the "Silk Road" site and has also been the currency demanded as ransom by malicious hackers, it soared in value, popularity, and price volatility in 2017, despite cases of Bitcoin exchanges being hacked and the virtual currency of Bitcoins being stolen. Cryptocurrencies allow transactions without the intermediaries of financial institutions, government guarantees, and credit card companies. It offers great promise (as well as risk) to consumers and threats to financial institutions who could be bypassed as well as governments who fear a threat to their authority and ability to manipulate the economy through fiscal policy. The institutions threatened are examining ways to use blockchain technology themselves.

Another use of blockchain technology is to enable Distributed Autonomous Organizations (DAOs), which operate like corporations, but without a human power structure or facilities for production, marketing, and distribution. Instead, such a venture, like the Ethereum-based "The Dao" which operated in 2016 and 2017, effectively crowdsources capital to begin a virtual corporation that uses "smart contracts" to outsource normal business functions. The organization has a charter and mandate and could conceivably share revenues with many crowdsourced funders or a few who start such a

virtual company. Imagine a super version of Uber or Lyft using autonomous vehicles, 24-7 hours of operation, lower costs (no human drivers or payment and software intermediaries), and excellent service to take over this industry and others. But The DAO shut down in 2017 after hackers stole several million dollar worth of Etherium currency and the US Securities and Exchange Commission initiated investigations.

I will discuss the degree to which each of these concepts and technologies should be seen as tremors or major earthquakes for future economies and consumption. While prediction can be hazardous, the impact of these developments is being felt now and will continue to shake things up in months and years ahead.

### Searching for the Tree and Missing the Forest: How Broadening Search Promotes Belief Updating"

#### EXTENDED ABSTRACT

The use of search engines has revolutionized information search. Consumers increasingly rely on search engines to answer their questions across different domains, from exploring whether a medicine is safe for consumption, whether to buy a particular stock, to whether an election candidate is corrupt. However, previous research suggests that search engines provide narrow results and over-represent confirming evidence (Kayhan 2015; White 2013). We propose that people fail to sufficiently take into account the limitations of their search terms. As a result, in seven studies, we demonstrate that people's inferences are biased by their search terms, with implications for choices. Additionally, we show that people believe that search can bias inferences when prompted to consider the possibility, but do not sufficiently or spontaneously correct for this bias.

Study 1 tested whether people's initial attitudes influenced the search terms they generated, with implications for inferences. 201 MTurkers were first asked to rate their initial attitudes towards caffeine, and then asked to generate a search term to learn about the effects of caffeine. Half of the participants were randomly assigned to conduct a Google search using the spontaneous search terms they had just generated, while the other half were asked to use a neutral search term ("caffeine health benefits and risks") instead. Then they were asked to spend 5 minutes to look briefly at the search results on the first page, click on the links that seem informative and write a short summary on what they found on the topic of the effects of caffeine based on their information search. All participants uploaded a screenshot of their search.

Afterwards, participants indicated how they thought caffeine affects the body. Initial attitudes were more strongly correlated with final attitudes for participants in the spontaneous search condition ( $r=.67, p<.001$ ) than those in the assigned neutral search condition ( $r=.31, p<.001$ ), indicating that participants were more likely to retain their initial judgements when they used self-generated search terms. The neutrality of the self-generated search terms (as rated by a separate group of 146 MTurkers) mediated the effect of initial attitudes on final attitudes towards caffeine for participants in the spontaneous search term condition ( $b=.046, 95\% CI=.0038$  to  $.13$ ), but not for participants in the assigned neutral search term condition ( $95\% CI=-.045$  to  $.024$ ), suggesting that the use of non-neutral spontaneous search terms yielded the biased inferences.

Study 2 ( $N=206$ ) examines whether external cues shift people's spontaneous search terms based, subsequently biasing inferences. Half of the participants were asked to read a commentary about the positive effects of caffeine while the other half were asked to read a similar commentary about the negative effects. Participants then generated a search term, conducted a Google search with their

## A Computational Social Science Framework for Visualizing the Possibility Space of Consumer-Object Assemblages from IoT Interaction Data

### EXTENDED ABSTRACT

The consumer Internet of Things (IoT) connects everyday objects to the Internet. The recurrent and complex interactions of these objects give rise to new consumer (and object) experiences (Hoffman and Novak 2018; Novak and Hoffman 2018). IoT interactions generate extremely large amounts of data in a variety of forms. These include sensor data, human-device interaction data, human-place interaction data, device-to-device interaction data, chatbots and other discourse data. These data are very high dimensionality and consist of often millions of ongoing interactions among objects and consumers. This makes IoT data big in two ways: 1) their size, in terms of the number of objects that are interacting with each other, and 2) their complexity, in terms of the number of attributes or features describing each object.

The challenge for consumer behavior research is how to extract meaningful insights about the kinds of consumer and object experiences that emerge from IoT interactions, along with the very identity of the multi-level assemblages that emerge from these interactions. But, the complexity of such data poses significant challenges for hypothesis testing in a predictive analytics framework. Also, conventional approaches for data reduction and visualization (e.g. PCA, MCA, and MDA) explain only a small percent of the variation and have difficulty revealing the underlying structure.

To address the challenge, we develop a computational social science approach (Lazer, et.al. 2009) for understanding consumer experience from IoT interactions. Computational social science involves the quantitative modeling of data from digital environments. While computational social science tends to focus on digital captures of social media and related behaviors, an emerging area of inquiry is the computational analysis of the massive amount of IoT interaction data for consumer behavior insight.

Our computational social science analysis of IoT data is anchored by strong theory. Our approach operationalizes the concept of an assemblage's underlying topological space of possibilities (DeLanda 2006) – the space associated with capacities from which IoT interactions and resulting consumer experience emerge (Hoffman and Novak 2018). In this paper, we focus on the structure of the possibility space that underlies individual consumer-object assemblages that have actually emerged.

We use structured IoT discourse data from the web service IFTTT. IFTTT applets are assemblages that combine the capacity of one component to affect (“if this” trigger) with the capacity of another component to be affected (“then that” action). The realized possibility space is operationalized as the set of unique IFTTT applets that have been created by IFTTT users. Between 2011-2016, a total of 331,391 IFTTT applets have been published by users and made available for others to use. Of these published applets, 20,675 comprise the possibility space of unique combinations of a set of four categorical variables representing the trigger channel (Amazon Alexa, Fitbit), trigger event (say a phrase, goal achieved), action channel (Philips Hue, Nest), and action event (turn on lights, lower temperature). The 20,675 unique published applets use 347 different trigger channels using 1110 different trigger events, and 297 different action channels using 591 different action events.

Our approach, which uses assemblage theory concepts to guide decisions about pre-processing, model selection and interpretation. In the first stage, we use a natural language processing (NLP) approach to uncover meaning in the “if-then” applets by training shal-

search term and rated their attitudes towards caffeine as in Study 1. Participants in the positive commentary condition held more positive attitudes towards caffeine after search than those in the negative commentary condition ( $M_{\text{positive}}=4.49$  vs.  $M_{\text{negative}}=3.68$ ;  $t(204)=3.67$ ,  $p<.001$ ). The neutrality of the keywords (rated by a separate sample of 148 MTurkers) mediated the effect of condition on attitudes towards caffeine ( $b=.23$ , 95% CI=.05 to .53).

In Study 3 ( $N=248$ ), participants were assigned either a neutral search term (“caffeine health benefits and risks”), a negative search term (“caffeine health risks”) or a positive search term (“caffeine health benefits”) for their Google search. Participants who used the positive search term to conduct the google search held more positive attitudes towards caffeine post-search than those who used the neutral search term ( $M_{\text{positive}}=5.04$  vs.  $M_{\text{neutral}}=4.40$ ,  $t(162)=2.88$ ,  $p<.01$ ). Similarly, participants who used the negative search term ( $M=3.45$ ,  $SD=1.56$ ) were less positive post-search than those who used the neutral search term ( $M_{\text{negative}}=3.45$  vs.  $M_{\text{neutral}}=4.40$ ,  $t(165)=3.96$ ,  $p<.001$ ).

Study 4 replicates the results of Study 3 with a consequential choice. 348 Dutch undergraduates were assigned either a negative search term or a positive search term, as in Study 3. After participants conducted their search and rated their attitudes, they were asked to choose between a caffeinated or decaffeinated energy drink. Participants assigned to searched a positive keyword were more likely to choose the caffeinated energy drink (52% vs. 36%, Chi-square=9.07,  $p<.01$ ). Post-search attitudes towards caffeine mediated the effect of condition on choice ( $b=.58$ , 95% CI=.34 to .91).

Lastly, we tested whether people were aware of and corrected for bias from search. In Study 5 ( $N=384$ ), participants were assigned to use either the negative or positive caffeine search term, rated their caffeine attitudes, and estimated what their attitudes would have been if they had used the opposite search term. Participants in the positive search condition predicted more negative attitudes had they conducted the negative search ( $M_{\text{actual}}=5.11$  vs.  $M_{\text{predicted}}=3.17$ ,  $F(1, 179)=120.92$ ,  $p<.001$ ), and vice versa for those who had conducted negative search ( $M_{\text{actual}}=3.74$  vs.  $M_{\text{predicted}}=5.03$ ,  $F(1, 179)=56.35$ ,  $p<.001$ ). When prompted, people recognized that using different search terms shifts inferences.

In Study 6 ( $N=396$ ) participants were assigned to use either the negative or positive search term and, either before or after conducting their search, predicted their attitudes towards caffeine if they were to conduct the positive or negative search. The effect of assigned search terms was reduced when participants first considered the counterfactual effects of search ( $M_{\text{difference before}}=.89$  vs.  $M_{\text{difference after}}=1.67$ ,  $F(1, 392)=7.02$ ,  $p<.01$ ). However, this correction was insufficient and the effect of search term persisted ( $M_{\text{positive}}=3.87$  vs.  $M_{\text{negative}}=4.76$ ,  $F(1, 392)=18.55$ ,  $p<.001$ ) even when the prompt was shown before the search task. Likewise, Study 7 ( $N=190$ ) finds that the difference in attitudes after being assigned to use positive vs. negative search terms was reduced, but remained significant when participants engaged in a second non-assigned search ( $F(1, 188)=7.79$ ,  $p<.01$ ). These results suggest that people can only partially correct for the biasing effects of search.

This paper makes several contributions. First, despite the prevalence of information gathering using search engines, how search terms affect inferences is understudied. Second, while the information system literature has examined confirmation bias in search engines, this research shows that people's inferences and choices are biased by their search terms but they correct for this bias when prompted, even if insufficiently so.



low neural networks (word2vec) (Mikolov 2013a; Mikolov 2013b) to learn distributional representations (embeddings) of the 1085 words contained in the text of the trigger and action categories, channels, and events of the 20,675 unique applets. We trained a word2vec model using the skip-gram formulation with negative sampling to learn a 50-dimensional space of 1085 word embeddings. 20,675 applet embeddings were then constructed as the normed weighted average of the word embeddings for all words in each applet (Mikolov, et.al. 2013b).

Second, we used unsupervised machine learning based on t-distributed stochastic neighbor embedding (t-SNE) (van der Maaten and Hinton 2008) to reduce the word and applet embeddings into latent constructs that serve as dimensional lenses for the third step, and for spatial representations.

In the third step we use topological data analysis (TDA) (Carlsson 2009; Lum, et.al. 2012; Singh, Memoli, and Carlsson 2007) to summarize the high-dimensional applet embeddings into three-dimensional topologies of simplicial complexes that represent the shape and structure of the applets. We used the Ayasdi software platform (ayasdi.com) to implement the TDA mapper algorithm (Singh, Memoli and Carlsson 2007). The topological model of the possibility space of applet embeddings, shows 19 overlapping groups of applet assemblages.

Because a weighted average of word embeddings does not distinguish trigger from action, the “if this, then that” applet embeddings do not differentiate “this” from “that.” Thus, we also created separate capacity embeddings for the trigger text (capacity to affect) and action text (capacity to be affected). A horizontal concatenation produced what we call a “trigger+action” embedding doubling the number of columns of the data. A vertical stacking produced a “trigger/action” pair of capacity embeddings, doubling the number of rows.

We used these additional embeddings to investigate the structure of 2238 smart home applets (group 15). Follow-up TDA using the “trigger+action” embeddings, accounts for the separate roles of triggers and actions and shows clearly how smart home experience is distributed across 8 distinct groups. To visualize how the paired capacities are connected for each of the 2238 smart home applets, we performed a t-SNE of the stacked “trigger/action” paired capacity embeddings and plotted the coordinates for each of the 8 smart home groups. The results reveal further insights regarding smart home experience. For example, groups B and D contrast the effects of distant external vs. proximal internal trigger events on the smart home. Our theory suggests distant triggers will lead to more abstract communal self-expansion experiences, while proximal triggers will lead to more concrete agentic self-extension experiences.

### **Machine Talk: How Conversational Chatbots Promote Brand Intimacy and Influence Consumer Choice**

#### **EXTENDED ABSTRACT**

The use of natural language and more conversational interfaces gradually transforms how consumers interact with firms (Dale 2016; Hirschberg and Manning 2015). The use of messenger systems as a new interaction paradigm between human consumers and intelligent bots has been declared as the “next operating system in commerce” (Economist 2016; Suri, Elia, and van Hillegersberg 2017) and is expected to transform how humans search, shop, and express their preferences (Feldman, Goldenberg, and Netzer 2010).

Research on the impact of these novel forms of messenger-based interaction modalities on consumers is both scarce and predominantly concerned with design and technology-related issues

rather than the consequences for consumer behavior. Specifically, the majority of prior work on anthropomorphic agents and conversational bot systems examined either factors related to optimizing the design features of such interfaces (Landis 2014; Lokman and Zain 2010), factors related to user perceptions and acceptance (Boden et al. 2006; Comendador et al. 2015), or how systems can learn in an unsupervised fashion through interactions with a user (Serban et al. 2017).

The current work examines how conversational bot interfaces affects consumers’ perception of customer-firm interactions and how the properties of a bot interface (such as the employed communication style or the level of personalization) can influence consumers’ product choices. Based on a series of four incentive-compatible experiments in a car rental context, we show that consumers perceive a conversational bot interface as substantially more human-like compared to traditional booking interfaces and that this greater perception of human-like characteristics creates both more intimate consumer-brand relationships (even for an entirely unknown brand) and makes consumers more likely to select higher-priced premium offers (such as accepting costly fuel service upgrades).

Study 1 was designed to test our hypothesis of whether a conversational bot interface is perceived as more human-like and promotes a more intimate customer-brand relationship compared to a traditional booking interface. We developed a conversational rental car interface based on the flowXO bot technology across all studies. A total of 236 consumers who regularly rent a car online were recruited from a European consumer panel ( $M_{Age}=37.14$ ,  $SD_{Age}=11.26$ , 49% females). Participants were randomly assigned to either a traditional booking interface or a conversational bot interface. In the traditional booking interface condition, participants first chose their preferred pick-up and return location, time and date, and their preferred vehicle class (compact car, sedan, SUV). In the conversational bot interface, participants specified the same rental options in the same order but a conversational bot asked participants to indicate their preference for each aspect of the car rental by typing into the chat console of the interface. We used regular expressions in the bot backend to verify entries and the bot had no obvious human characteristics. Immediately after the booking process was completed, we assessed the perceived humanness of the system (example item: “This configuration system has human properties”,  $\alpha_{human}=.96$ ) and how intimately they feel connected to the brand (example item: “I feel like AI.Rental really cares about me”,  $\alpha_{BrandIntimacy}=.92$ ). In line with our prediction, we find that prospective car buyers perceived the conversational bot interface as significantly more human-like compared to the traditional booking interface ( $M_{Bot}=4.89$ ,  $M_{Traditional}=3.14$ ;  $t(234)=7.654$ ,  $p<.001$ ) and also reported greater intimacy with the brand compared to the traditional interface ( $M_{Bot}=4.42$ ,  $M_{Traditional}=3.91$ ;  $t(234)=2.248$ ,  $p<.001$ ). As predicted, brand intimacy was significantly mediated by greater perceptions of humanness (5000 bootstrap resamples;  $CI_{95\%}=[.86;1.59]$ ), rendering the residual direct effect nonsignificant.

Study 2 further examined whether greater intimacy can be induced by altering the type of communication style employed by the system. A total of 214 regular car rental customers participated in this study and were randomly assigned to either a traditional booking interface, a bot interface using a formal communication style (identical to Study 1), or a bot interface using an informal communication style (as identified by a pre-test). A one-way ANOVA revealed a significant effect on both perceived humanness ( $F(2,214)=26.87$ ,  $p<.001$ ) and perceptions of brand intimacy ( $F(2, 214)=4.283$ ,  $p<.05$ ). Follow-up contrasts with Tukey HSD correction confirmed that the more informal communication style was perceived as more human-

like compared to both the interface using a formal communication style ( $M_{\text{Bot\_informal}} = 5.15$ ,  $M_{\text{Bot\_formal}} = 4.49$ ;  $t(214) = 2.239$ ,  $p = .07$ ) and compared to the traditional booking interface ( $M_{\text{Traditional}} = 3.11$ ;  $t(214) = 7.198$ ,  $p < .001$ ). The findings on brand intimacy mirrored the findings on perceived humanness and also replicated the pattern of mediation results revealed in Study 1.

Studies 3 and 4 further examined the impact of a conversational bot interface on consumers' downstream consequences on choice. Study 3 tested whether consumers are more likely to accept a premium offer during a booking process and revealed that consumers were more likely to accept a costly fuel service upgrade compared to a traditional booking interface ( $P_{\text{Bot}} = 47.4\%$ ,  $M_{\text{Traditional}} = 29.2\%$ ;  $z(257) = 2.257$ ,  $p = .05$ ) and this effect was amplified when the interface was personalized such that the bot matched participants' gender and the initial letter of their first name ( $P_{\text{BotPersonalized}} = 54.5\%$ ,  $P_{\text{Bot\_NotPersonalized}} = 44.1\%$ ). Study 4 extended these findings across a range of typical car rental upgrades (fuel service upgrade, pre-installed GPS navigation, and in-car wifi) ( $P_{\text{Bot}} = 42.6\%$ ,  $M_{\text{Traditional}} = 25.4\%$ ;  $F(1, 157) = 10.13$ ,  $p < .001$ ). This effect was robust even after controlling for domain expertise ( $p > .61$ ) but was weaker when consumers had a low need for human interaction in a service process ( $\beta_{\text{Bot} \times \text{LowNeedInteraction}} = -.11$ ,  $t(155) = 3.272$ ,  $p < .01$ ).

To the best of our knowledge, this is the first work that explores the consequences of conversational bot interfaces on consumers. We provide evidence that these interfaces can systematically alter consumer brand perceptions and consumers' likelihood to accept costly upgrades that are provided by a service provider. The current research also provides a new look on research on constructed preferences and reveals that the modality of expressing one's preference through interactive, text-based interfaces with a non-human agent (or bot) can alter consumers' credibility perceptions of offers that are often rejected when interacting with human agents (as in Studies 3 and 4).

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# Tell Me Something I Don't Know: Consumer's Mistaken Beliefs

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Rebecca K. Ratner, University of Maryland, USA

## **Paper #1: Mistaking the Journey for the Destination: Overestimating the Fruits of (More) Labor**

Eva C. Buechel, University of Southern California, USA

Carey K. Morewedge, Boston University, USA

Jiao Zhang, University of Oregon, USA

## **Paper #2: Inferring Personality from Solo vs. Accompanied Consumption: When Solo Consumers are Perceived to Be More Open**

Yuechen Wu, University of Maryland, USA

Rebecca K. Ratner, University of Maryland, USA

## **Paper #3: Handshaking Promotes Deal-making by Signaling Cooperative Intent**

Juliana Schroeder, University of California at Berkeley, USA

Jane L. Risen, University of Chicago, USA

Francesca Gino, Harvard Business School, USA

Michael I. Norton, Harvard Business School, USA

## **Paper #4: Mispredicting Reactions to Gambling Losses and Their Impact on Consumer Choice**

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Nathan Novemsky, Yale University, USA

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### SESSION OVERVIEW

Though consumers (like lay psychologists) develop and use theories to help them understand and respond to the social world, their beliefs are not always aligned with actual experiences (Wilson and Gilbert 2003). In fact, consumers often fail to maximize utility derived from consumption due to their mistaken beliefs. For example, consumers are not skilled at predicting the duration and intensity of future emotional reactions (Kahneman and Snell 1992; Wilson et al. 2000). The discrepancy between forecasted and actual experiences can go beyond affective experiences, and occur in domains such as judgments of others' beliefs (DePaulo et al. 1987), choice alternatives (Iyengar and Lepper 2000), or the evaluation mode (Hsee 1996).

This special session explores consumers' mistaken beliefs and highlights the recent developments across different domains including interpersonal context, gambling context, and goal pursuit. The session brings together four papers that offer insight into the underlying mechanism for this discrepancy and demonstrates interesting and important downstream consequences for consumer well-being.

The first paper by **Buechel, Morewedge and Zhang** begins by discussing consumers' misbeliefs in goal pursuit. Consumers intuit that working harder toward a goal makes attaining it sweeter ("sweat-equity"). However, exerting more effort during goal pursuit actually does not increase the happiness associated with goal achievement. Outcomes are less affect-rich and capture less attention when forecasting them than when experiencing them, leading forecasters to overestimate the role of effort in producing happiness.

Moving from goal pursuit, the next two papers examine consumers' mistaken beliefs in interpersonal contexts. **Wu and Ratner** examine consumers' beliefs about others' evaluations about them if they engage in a public leisure activity alone versus accompanied, and compare these beliefs with people's actual evaluations. Consumers think that others will perceive them negatively when they engage in leisure activities alone. However, people actually make more posi-

tive inferences about the openness of solo relative to accompanied consumers, which is not anticipated by consumers themselves.

Next, **Schroeder, Risen, Gino and Norton** examine the impact of handshake, a ubiquitous form of greeting in interpersonal contexts, on cooperation, and consumers' beliefs about its effects. The authors show that although consumers do not expect handshakes to affect negotiation outcomes, handshakes can actually induce cooperation in adversarial contexts, positively influencing dealmaking outcomes.

Finally, **Baskin, Novemsky and LeBoeuf** identify consumers' mispredictions of their own decisions in a gambling context. While people predict that they will spend less on hedonic products after a gambling loss based on lowered wealth, losers actually spend as much as winners on expensive products. This is because consumers attempt to repair their mood through these purchases after experiencing a gambling loss.

Together, this session investigates consumers' mistaken beliefs in various domains including interpersonal contexts, goal pursuit and gambling. These papers shed light on the underlying mechanism of these discrepancies, and provide important implications for consumers well-being. We expect this session to appeal to a broad audience, including researchers interested in social influence, interpersonal contexts, affective forecasting, consumer lay theory and decision making.

### **Mistaking the Journey for the Destination: Overestimating the Fruits of (More) Labor**

#### EXTENDED ABSTRACT

*... climbing a mountain is different from taking the tram to the top, even if you end up at the same place.*

*- Wu 2018: New York Times*

*You will enjoy the fruit of your labor. -- How joyful and prosperous you will be*

*- Psalm 128:2 NLT*

People believe in "sweat-equity"—that working harder toward a goal makes attaining it sweeter. Indeed, putting effort into producing a good can yield utility (Buechel and Janiszewski 2014) and successfully completing a good makes people value it more (Norton, Mochon, and Ariely 2012). Even the erroneous perception that a painting, for example, took more effort to produce improves its perceived value (Wirtz et al. 2004). Despite these benefits, we propose that the belief in sweat equity creates systematic affective forecasting errors. Specifically, we propose that belief in sweat equity leads affective forecasters to overestimate the extent to which exerting *more* effort during goal pursuit increases the pleasure associated with goal achievement.

We argue that the bias of overestimation of sweat equity emerges due to forecasters being better able to consider effort specifications than experiencers. Outcomes are typically less affect-rich when forecasting them than when experiencing them, leading the outcome to capture less attention when forecasting it than when experiencing it (Buechel et al. 2014; Hsee and Rottenstreich 2004). We suggest that, consequently, forecasters are better able to consider cognitive



features of the outcome such as the effort it required to produce than are experiencers.

A pilot study provides first evidence that people hold a strong belief in sweat equity across a variety of goals. For ten kinds of goals drawn from previous literature, (from creating art, to hiking, to completing a home renovation project) participants indicated that they would be happier achieving that goal if its achievement required more or less of their effort ( $\beta = .24$ ,  $Z = 3.58$ ,  $p < .001$ ).

By comparing forecasts and experiences, four experiments then show that this belief leads to a systematic affective forecasting error. Forecasters in Experiment 1 predicted their happiness and enjoyment (averaged to an index of pleasure) about receiving a chocolate for unscrambling either 2 or 20 sentences. Experiencers reported their happiness and enjoyment after unscrambling 2 or 20 sentences. A 2 (role: forecaster, experiencer)  $\times$  2 (effort: high, low) interaction ( $F(1, 231) = 7.97$ ,  $p = .005$ ) revealed that forecasters predicted that they would experience greater pleasure receiving the chocolate after unscrambling 20 ( $M = 6.14$ ) than 2 sentences ( $M = 5.45$ ;  $p = .005$ ), but experiencers reported equal pleasure independent of the effort they exerted ( $M = 6.05$ ,  $M = 6.71$ , respectively,  $p = .25$ ).

Forecasters in Experiment 2a predicted their happiness about creating a difficult (many steps) or an easy (few steps) origami animal. Experiencers reported their happiness upon creating the difficult or easy origami. A 2 (role: forecaster, experiencer)  $\times$  2 (effort: high, low) interaction ( $F(1, 218) = 8.73$ ,  $p = .003$ ) revealed that forecasters predicted they would be happier having created the difficult ( $M = 4.83$ ) than the easy animal ( $M = 4.11$ ;  $p = .01$ ) whereas experiencers were equally happy having created the difficult or the easy animal ( $M = 1.91$  and  $M = 2.38$ ; respectively,  $p = .10$ ).

Experiment 2b conceptually replicated Experiment 2a, but manipulated the *perceived* difficulty of making the animal, while holding the actual difficulty constant via a contrast effect (i.e., all participants made the same animal instead of an easier vs. difficult animal). The results mirrored those of Experiment 2a.

Providing process evidence, Experiment 3 and 4 examined whether increasing affect-richness during forecasts would reduce forecasters' sensitivity to sweat equity. Experiment 3 manipulated the affect-richness of the task. In the control (affect-poor) condition, participants unscrambled the same 2 [20] sentences as in Study 1. In the affect-rich condition, they unscrambled sentences from the erotic romance novel "Fifty Shades of Grey". A 2 (role: forecaster, experiencer)  $\times$  2 (effort: high, low)  $\times$  2 (affect-richness: control, affect-rich) interaction revealed that the difference in sensitivity to sweat equity was moderated by affect-richness ( $F(1, 380) = 5.37$ ,  $p = .02$ ). In the control condition, the results replicated the pattern from Study 1 ( $F(1, 184) = 7.63$ ,  $p = .007$ ). Forecasters in the affect-rich condition predicted that they would be similarly happy regardless of the effort they exerted, therefore resembling experiencers who were equally happy regardless of the effort exerted in both conditions,  $F_s < 1$ .

In Experiment 4, all participants first unscrambled 5 or 20 sentences. They then either reported their happiness (experiencers) or forecasted how happy they would be about completing the same task again one week later in two forecasting conditions. Specifically: Forecasters in an immediate forecaster condition made their predictions immediately after completing the task (while still in an affect-rich state). Forecasters in a delayed forecaster condition made their predictions after watching a 3-minute neutral video (after their affect had subsided). Experiencers reported their happiness immediately after completing the task (while in an affect-rich state). A 3 (role: experiencer, immediate forecaster, delayed forecaster)  $\times$  2 (effort: low, high) interaction revealed that sensitivity to sweat equity was moderated by affect-richness ( $F(2, 242) = 3.47$ ,  $p = .03$ ). Experienc-

ers and forecasters without delay reported and predicted they would be equally happy in both the high and low effort conditions ( $p_s < .29$ ). Forecasters who made their predictions after a delay, however, predicted they would be happier in the high ( $M = 6.71$ ) than low effort condition ( $M = 5.44$ ;  $F(1, 242) = 6.16$ ,  $p = .01$ ).

Together the results provide evidence for a bias whereby people overestimate the rewards of sweat equity. It emerges because an asymmetry in the affective intensity of outcomes being forecasted and being experienced creates a difference in sensitivity to effort specifications.

### **Inferring Personality from Solo vs. Accompanied Consumption: When Solo Consumers are Perceived to be More Open**

#### **EXTENDED ABSTRACT**

Prior research shows that consumers are inhibited from engaging in public leisure activities alone (vs. accompanied) because they believe that others would think they have fewer friends if they go solo (Ratner and Hamilton 2015). The current paper examines how people actually evaluate solo (vs. accompanied) consumers in public leisure settings, and how this compares to consumers' lay beliefs. We explore the possibility that solo consumers are perceived more positively than accompanied consumers on some personality dimensions.

Building on prior research (Miller and Nelson 2002; Trope 1986), we propose that while solo (vs. accompanied) consumers are perceived to be less socially connected, people are also more likely to attribute solo (vs. accompanied) consumers' attendance (e.g., visiting a museum) to an intrinsic interest in seeking intellectual or aesthetic stimulation, leading to positive inferences about solo (vs. accompanied) consumers on openness. For example, a solo consumer is more likely to visit a gallery to enjoy the aesthetic value of art, as opposed to if she goes with friends, in which case she may simply want to socialize. The positive inferences observers make about solo (vs. accompanied) consumers on openness could contribute to the overall favorability towards the consumer, compensating for the negative inferences they make about solo (vs. accompanied) consumers on social connectedness.

Study 1 established that openness and social connectedness are the key dispositional dimensions on which solo (vs. accompanied) consumers are perceived to differ. Participants considered one of three different public leisure activities (blockbuster/comedy show/public lecture) that a target consumer engaged in either alone or accompanied, and rated the consumer on the big five personality dimensions (John and Srivastava 1999) and social connectedness. Across three contexts, respondents perceived solo (vs. accompanied) consumers to be more open, less extraverted and less socially connected. Extraversion and perceived social connectedness were positively correlated. Neither agreeableness, neuroticism nor conscientiousness emerged as significant in distinguishing people's perceptions of solo (vs. accompanied) consumers.

Study 2 examined people's evaluations of solo (vs. accompanied) consumers on openness, social connectedness, as well as overall favorability towards the target, and compared these with consumers' lay beliefs. Participants were either asked to imagine going to a movie by themselves or with company (actor condition) or imagine observing someone going to a movie alone or with company (observer condition). Consumers accurately predicted the extent to which others would perceive them to be more socially connected if accompanied than solo. However, consumers failed to anticipate that observers made positive inferences about solo (vs. accompa-



nied) consumers on openness (actor:  $M_s=4.70$  vs. 4.44, ns; observer:  $M_s=5.64$  vs. 4.80;  $p<.05$ ). Furthermore, solo (not accompanied) consumers underestimated how favorably overall others would evaluate them (solo:  $M_s=4.06$  vs. 5.09,  $p<.05$ ; accompanied:  $M_s=5.08$  vs. 5.11, ns).

Study 3-5 tested situations where solo (vs. accompanied) consumers are not perceived to be more open. Study 3 explores the possibility that when an observer concludes that a target person's behavior is under the influence of potent situational forces, the observer will refrain from making the openness inferences about solo (vs. accompanied) consumers. Participants either imagined seeing a person watch a movie *at a theater* alone or with a friend, or imagined seeing a person watch a movie *on a plane* alone or with a friend. Solo (vs. accompanied) consumers were perceived as more open and less socially connected in the theater condition. However, in the plane condition where observers could easily attribute the target's behavior to a situational constraint (e.g., having nothing else to do on the plane), they no longer perceived solo (vs. accompanied) consumers to be more open or less socially connected. In both theater and plane conditions, solo (vs. accompanied) consumers were evaluated as favorably as accompanied consumers.

In prior research, dining at a restaurant and attending a theater were treated similarly in terms of consumers' anticipation of others' evaluations when they engage in the activity solo versus accompanied. We argue that observers' actual evaluations about solo versus accompanied consumers may differ across these two contexts: though attending a movie alone (vs. accompanied) is perceived to be more open due to stronger attribution to a motive to seek intellectual or aesthetic stimulation, dining at a restaurant alone (vs. accompanied) may not elicit the same trait inference due to the high possibility that the behavior is constrained by a basic physiological need (i.e., hunger) rather than purely discretionary. In study 4, we examine people's evaluations of a solo (vs. accompanied) diner, and compared these with evaluations of a consumer going to an event related to food but not normally to fulfill physiological needs (food sampling along with talks about food history). As predicted, solo (vs. accompanied) consumers were perceived as more open in the food-related event where the psychological constraint was low. In the restaurant condition where the attendance could be attributed to a physiological need, this effect disappeared. The extent to which the attendance was attributed to the intrinsic motive to seek intellectual or aesthetic stimulation mediated the relationship.

Although solo (vs. accompanied) consumers were perceived to be more open in the US, a culture that emphasizes individual autonomy, the same effect may not hold in non-Western cultures that stress interdependence and situational norms. Prior literature suggested that compared to Americans, Chinese are less likely to attribute others' behaviors to internal traits (Miller 1984). In study 5, we recruited participants from China and the US. All participants imagined seeing a person go to a movie either alone or accompanied. Solo (vs. accompanied) movie-goers were perceived to be more open by American but not Chinese participants. Solo (vs. accompanied) consumers were perceived to be less socially connected in both cultures. Overall, Chinese respondents evaluated solo (vs. accompanied) consumers less favorably; US respondents evaluated solo and accompanied consumers equally favorably.

Together, we show that though solo (vs. accompanied) consumers are perceived to be less socially connected, as consumers expected, solo (vs. accompanied) consumers are also perceived to be more open, which is not anticipated by consumers themselves. Contrary to consumers' own predictions, overall solo consumers are perceived as favorably as accompanied consumers.

## Handshaking Promotes Deal-Making By Signaling Cooperative Intent

### EXTENDED ABSTRACT

In adversarial contexts, people often rely on nonverbal signals from partners when deciding whether (or not) to cooperate. We explore the impact of a ubiquitous form of greeting—a handshake—on cooperation. In particular, we predict that shaking hands signals an intent to act cooperatively. As a result of this signal of cooperative intent, handshaking may increase trust between counterparts and consequently induce them to behave more cooperatively. This prediction is based on prior research suggesting that individuals' beliefs about the other party's social motives can predict their own willingness to cooperate (Deutsch 1949; Pruitt and Lewis 1975; Pruitt and Rubin 1986). However, prior research largely measured social motives via individual differences in social value orientation (De Dreu and Van Lange 1995; Deutsch 1949; Kelley and Schenitzki 1972; McClintock 1977; Messick and McClintock 1968; Van Lange and Kuhlman 1994) or manipulated social motives via explicit instructions or incentive schemes (De Dreu and McCusker 1997; Sattler and Kerr 1991). We instead examine how nonverbal behavior can causally influence perceptions of social motives in seven studies using three distinct adversarial contexts: integrative negotiations, distributive negotiations, and economic games.

To first understand people's predictions about how handshakes influence adversarial outcomes, we ran a pilot study with individuals about to engage in a negotiation, and asked them to predict how a handshake would influence their negotiation experience, behavior, and outcomes. The majority of negotiators believed that a handshake would make their negotiation experience more formal, whereas the minority believed a handshake would induce cooperation, almost no negotiators believed that a handshake would meaningfully change their deal-making outcomes.

Studies 1-3 test the actual effect of handshakes on integrative negotiation outcomes. In Studies 1a and 1b, executives engaged in integrative negotiations who shook hands achieved better negotiation outcomes, controlling for whether or not the pair knew each other already. We next tested the causal effect of handshake by randomly assigning pairs to shake hands or not prior to an integrative job negotiation. In Study 2, pairs who shook hands engaged in more cooperative behavior (i.e., open information exchange) and, as a result, achieved higher joint outcomes. Providing further evidence that handshakes signal of a counterpart's cooperative intent, Study 3 demonstrates that merely observing a counterpart shaking hands—but not actually shaking hands themselves—makes participants believe that their counterparts have more cooperative intent, compared to not observing counterparts' prior behavior or observing them avoid a handshake. Furthermore, participants' own cooperative behavior was driven by their inferences about their counterparts' intent.

Study 4 considers a different adversarial context: an economic game. Pairs playing the game have a choice to defect, gaining more for themselves at the expense of their partner, or to cooperate, gaining less for themselves but improving the joint outcome. Whereas integrative negotiations include cooperative incentives, because both parties can benefit mutually, the economic game in Study 4 also examines consequences of handshaking under more competitive incentives. Study 4 further examines whether the effect of handshaking is robust to social value orientation and incentive structure. Finally, to address the issue of experimenter demand effects, we explore whether handshaking affects cooperation among individuals who are instructed or uninstructed to shake hands. Results from this study revealed that participants were less likely to defect when they

shook hands with their partner, and this effect occurred regardless of whether participants were instructed or not to shake hands. The effect of handshaking on defection was also robust to participants' self-reported social value orientation.

Study 5 measures participants' assessments of their partners' intentions following a handshake or no handshake, as well as participants' own behavioral intentions in an economic game. Study 5 further tests whether handshakes promote cooperative behavior only when they communicate cooperative intent, examining whether a countervailing psychological signal of a counterpart's intentions can change individuals' interpretation of, and reaction to, handshaking behavior. Specifically, when participants' counterpart shook hands but reported "feeling sick," participants believed the handshake was malicious and the avoidance of a handshake was caring, but the reverse effect was observed when the counterpart appeared in good health.

Finally, Study 6 tests the effect of a handshake in a distributive negotiation in which we assess an additional aspect of cooperation: lying and truth-telling. Distributive negotiations are zero sum such that parties' interests are completely opposed: If one party gains, the other must necessarily lose. Distributive negotiations therefore represent a strong test of our hypothesis that handshakes can promote cooperation, because cooperation requires one party to sacrifice some of their own potential gain. In Study 6, executives randomly assigned to shake hands at the start of a distributive negotiation engaged in fewer antagonistic behaviors—such as lying—that could benefit themselves, resulting in more equitable outcomes. Therefore, the advantaged negotiator actually showed greater willingness to cooperate after a handshake even to their own detriment.

Across these studies, handshaking promoted cooperative behavior. To many, handshakes that occur at the onset of an adversarial context may seem like inconsequential nonverbal gestures. Yet, as we demonstrate in the present research, in an array of adversarial contexts from negotiations to economic games, shaking hands signaled cooperative intent, thereby leading people to act more cooperatively. Even in more antagonistic distributive negotiations, a handshake can lead the advantaged party to cooperate more, harming their own outcome to create a more equal distribution of the bargaining zone. Together, these studies demonstrate that handshaking can produce cooperation, consequently influencing dealmaking outcomes.

### Mispredicting Reactions to Gambling Losses and Their Impact on Consumer Choice

#### EXTENDED ABSTRACT

Imagine gambling in a casino with a plan to stop when you have either won or lost \$100. Imagine further that you win: will you be tempted to make a purchase at one of the retailers nearby? Imagine instead that you lose: now, how tempting will those retail displays be? Most important, will you have insight into your own behavior, and will you be able to predict in advance how winning or losing will affect you? Can people predict how taking (and resolving) risks will affect their subsequent purchasing behavior?

We examine whether people can accurately forecast how winning and losing will affect their purchase decisions. We show that people may have reasonably accurate intuitions about how winning will affect them: they think that their increased wealth will cause them to spend more than if they had broken even, and they are largely correct about this. However, people have a much harder time forecasting how losing will affect them. In particular, although people predict that they will spend less after losing because of their

decreased wealth, they actually spend more, purchasing hedonic products in an attempt to make themselves feel better.

Predicting when decisions will be made based on affect is vitally important, yet research has documented many systematic failures of predictions of mood effects. People do not predict future moods and their consequences very well, especially in circumstances that revolve around whether or not to gamble more (Andrade and Iyer 2009), how one will feel after indulging (Xu and Schwarz 2009), or how one will feel after experiencing disrupted hedonic experiences (Nelson and Meyvis 2008; Nelson, Meyvis, and Galak 2009). Due to these mispredictions, people may make incorrect decisions based on what they think will happen rather than what will actually happen.

We highlight an important misprediction in gambling contexts. Whereas prior research has shown that people may not accurately predict the extent of the negative emotions they will feel if they lose (Andrade and Iyer 2009), our research suggests that people mispredict whether their mood will affect their decisions at all. In other words, our hypothesis is that people predict that choices after a loss will be based on their lowered wealth level rather than their mood. Therefore, even though people go into a Las Vegas casino thinking that they will not spend much if they lose in the casino, they will actually spend *more* money after losing in the hopes of improving their mood.

In all of our studies, we simulated a gambling environment by having participants gamble a portion of their participant payment. They had 3 equal probability outcomes: winning additional money (winners), having their participant payment unchanged (neutrals), and losing some of their participant payment (losers). Since the gambles are for real money, losses in these scenarios affect their mood negatively.

In Study 1a, we find that gamble losers, as compared to neutrals, are more willing to buy jokes in order to improve their negative mood using money from their own participant payments. Winners are also willing to spend more money on jokes, but their decisions are not mediated by mood. Study 1b shows that participants can correctly predict winners' buying preferences, but not losers' preferences.

Study 2a examines the underlying process by manipulating mood directly. Participants saw either neutral photographs or positive-affect-inducing photographs (Lang, Bradley, and Cuthbert 2008). Among gamble losers, the positive-affect photographs improved their negative mood. As a result, losers in the positive-affect condition reported a lower willingness to buy an indulgent item (truffles) compared to losers in the neutral-photograph condition. Purchases of winners and neutrals were unaffected by the mood manipulation. Study 2b examined predictions about Study 2a. We found only a main effect of picture, such that participants predicted, regardless of gambling outcome, that those who saw the positive photographs would buy more than those who saw the neutral photographs.

Study 3a looks at the process behind winners' decisions. Subjective wealth was manipulated after the gamble by asking participants to recall small or large accounts (Morewedge, Holtzman, and Epley 2007). While losers' willingness to buy truffles did not change based on the subjective wealth manipulation, both winners and neutrals wanted to spend more money when they recalled a large account (vs. small account), suggesting that both winners and neutrals make decisions based on subjective wealth, but losers do not. Study 3b examined predictions about study 3a. Again, participants failed to predict mood repair following a loss, but rather predicted that recalling a large account would increase spending regardless of the gambling outcome.

Studies 4a examined price/quality tradeoffs by asking participants to choose between cheaper/low quality jokes and more expensive/high quality jokes from their participant payments after gambling. Both winners and losers wanted to buy more high quality/more expensive jokes than neutrals. While a separate group of participants in study 4b could predict winner choices, they could not predict loser choices, thinking that losers would buy the less expensive jokes.

Study 5a seeks to rule out that losers experience the “what the hell effect?” (Cochran and Tesser 1996) and just want to buy anything after they lose money. We find that losers, as opposed to winners and neutrals, have a strong preference for hedonic over utilitarian spa massages. Study 5b shows that people predict the opposite – that losers would have a stronger preference for utilitarian products.

In summary, it seems people have the wrong beliefs about how they will behave following gambling. They think that their wealth will drive purchases. While they are correct that winners buy more as a result increased wealth, they are not able to predict that losers also buy more (and buy more hedonic offerings) in an attempt to repair their mood.

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# Extraordinary Ordinality: Subtle Influences of Numerical Rankings On Consumer Behavior

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## Paper #1: Assuming Ordinality: Best-to-Worst Inferences in Vertical Lists

Mathew S. Isaac, Seattle University, USA

Shailendra P. Jain, University of Washington, USA

## Paper #2: The Victory Effect: Is First-Place Seeking Stronger than Last-Place Aversion?

Steven Shechter, University of British Columbia, Canada

David J. Hardisty, University of British Columbia, Canada

## Paper #3: Format Neglect: How the Use of Numerical Versus Percent Rank Claims Influences Consumer Judgments

Julio Sevilla, University of Georgia, USA

Mathew Isaac, Seattle University, USA

Rajesh Bagchi, Virginia Tech, USA

## Paper #4: The Rank Length Effect

Fengyan Cai, Shanghai Jiao Tong University, China

Jieru Xie, Virginia Tech, USA

Rajesh Bagchi, Virginia Tech, USA

## SESSION OVERVIEW

Consumers today have access to an overwhelming amount of information about products and services. Given this, they may feel compelled to sift through endless information on the many options available in the marketplace in order to make appropriate decisions (Leclerc, Hsee and Nunes 2005). Alternatively, consumers may rely on information provided in ranked lists prepared by third parties. Rankings have become increasingly popular because they simplify decision-making by presenting comparative information to consumers in an easily digestible way.

Despite consumers' frequent use of rankings and the power that ranked lists have to sway consumer choice, the literature on rankings remains sparse (for exceptions, see Isaac, Brough and Grayson 2016; Isaac and Schindler 2014; Leclerc, Hsee and Nunes 2005). In order to enhance our collective understanding of how consumers process rankings and lists, this session is devoted to the presentation of some of the latest findings in this important domain.

**Isaac and Jain** show that rankings are so pervasive that even when consumers are merely presented with an unnumbered vertical list of items, they assume that the items have been ranked and listed in "best-to-worst" order of quality or performance. This effect is robust, as consumers infer ordinality from verticality even when they are explicitly informed that order is non-diagnostic.

Rather than examining the inferences that consumers make upon encountering unranked lists, **Shechter and Hardisty** focus their attention on explicitly ranked lists. They explore the intensity of consumer preference for being at the top of a ranked list as well as the degree of aversion for being at the bottom of said list. The authors construct utility functions for ranked lists and find that consumers are risk seeking for first place and risk averse for last place. Additionally, they find that first-place seeking is stronger than last-place aversion.

Whereas the first two papers examined the relative evaluations of different items on a list, the last two papers explore how subtle interventions can influence preference for the same ranked item. **Sevilla, Isaac, and Bagchi** introduce the phenomenon of *format neglect* in the domain of rank claims. They show that consumers

evaluate equivalent rank claims using numerical [percent] formats more favorably when these involve sets of less than [more than] 100 items. This effect occurs because consumers tend to overweight the nominal value of ranking position to the detriment of format and set size information.

**Cai, Xie and Bagchi** show that even when claims involve the same numerical format, the number of items that have been ranked has a substantial impact on consumer preference. They introduce the *rank length effect*, a phenomenon where the same "Number 1" item is evaluated more positively in a longer list (e.g., Top 20 list) than in a shorter one (e.g., Top 5 list). They find that this occurs due to consumers' biases when forming their mental evaluation lines.

We hope that these new findings on rankings and lists spur significant interest and research ideas on this theoretically and substantially rich area of marketing communications.

## Assuming Ordinality: Best-to-Worst Inferences in Vertical Lists

### EXTENDED ABSTRACT

When consumers are presented with a list of items, do they infer that the spatial presentation of the items conveys meaningful information about the items' relative quality or performance? Although prior research has detected presentation order effects (i.e., primacy and recency effects), most of this work has explored how people recall stimuli. In contrast, the present research examines comparative evaluations of items presented simultaneously within a vertical list, when no recall is necessary.

Limited research has examined how consumers use spatial position to make evaluations or choices from a simultaneously presented set of items. This work has found evidence for "edge avoidance" (Rubinstein, Tversky, and Heller, 1997), "centrality preferences" (Shaw et al., 2000), "middle bias" (e.g., Attali and Bar-Hillel, 2003), and a "center-stage effect" (Valenzuela and Raghbir, 2009). The basic finding from past research is that options in the middle of an array are evaluated more favorably (and chosen more often) than those on the edges. Although different mechanisms have been proposed for this effect, it may result from greater perceptual attention being devoted to options in the center of a choice set.

In contrast to edge avoidance (which has not been studied in the domain of vertical lists), we suggest that consumers who encounter vertical lists tend to assume that the items are rank-ordered from best to worst. We posit that because vertical lists are routinely ordered in this way, consumers may overgeneralize this normative tendency and infer that even unordered lists have been arranged from best to worst. In a series of seven experiments (four of which are described here), we provide evidence that consumers infer ordinality from verticality. In addition to identifying a number of boundary conditions for this inference, we show that the presumption of ordinality is so ingrained that the best-to-worst inference may persist even if the provider of a list explicitly communicates that order is non-diagnostic (e.g., that the list is alphabetized, randomized, etc.).

In Experiment 1, we asked 166 online participants to review a list of ten brands that were supposedly the names of popular websites in a foreign country but were actually letter sequences fabricated by a website that generates "meaningless pseudowords." The ten websites



were presented simultaneously as a vertical list but were not numbered. Depending on condition, participants either received no explanation about how the websites were ordered or were informed that the websites were ordered alphabetically. Participants then estimated the relative popularity of the website that was listed second versus ninth from the top on a scale from -100 to +100, with positive values indicative of a best-to-worst inference. This mean relative popularity rating was higher when no explanation about order was given ( $M = +30.10$ ) than when the list was alphabetized ( $M = +9.24$ );  $t(164) = 3.20, p < .01$ . However, mean ratings were significantly higher than zero in *both* conditions, suggesting that consumers made a best-to-worst inference even when they had been explicitly informed that display order was non-diagnostic.

If consumers infer ordinality from vertical position, then they should believe that the evaluative distance between two items is greater when their vertical positions are distant (vs. proximal). We tested this in Experiment 2 by showing 158 consumers an unnumbered list of the best places to work that included nine foreign companies (actually pseudowords) that were shown “in no particular order.” In one condition, a specific company was listed first (from the top) whereas the same company was listed eighth in another condition. Subsequently, participants provided a relative rating of this company versus the company that was listed ninth (again on a scale from -100 to +100). As predicted, the mean relative rating was higher when the two companies were apart in terms of vertical position (i.e., two versus nine) ( $M = +12.25$ ) versus when they were adjacent (i.e., eight versus nine) ( $M = +.51$ );  $t(156) = 2.58, p = .01$ .

Experiment 3 aimed to show that the best-to-worst inference arises because of consumers’ normative expectations about how vertical lists are arranged. A total of 226 consumers were exposed to a series of best-to-worst lists (e.g., lists that go from 1 to 10) or to a series of worst-to-best lists (e.g., lists that go from 10 to 1). Following this task, which manipulated participants’ normative expectations, they were presented with the same unnumbered list as in Experiment 1 and estimated the relative popularity of the website that was listed second versus ninth. The mean relative popularity rating was higher after exposure to the best-to-worst lists ( $M = +29.49$ ) versus the worst-to-best lists ( $M = -2.85$ );  $t(224) = 7.60, p < .001$ . However, whereas the mean rating was significantly higher than zero in the best-to-worst norm condition, this was not the case in the worst-to-best norm condition. This suggests that consumers’ propensity to make best-to-worst inferences when encountering a vertical list is driven by communication norms. More specifically, consumers overgeneralize the tendency of lists to be ordered from best-to-worst and apply this heuristic to lists in which order has not been unspecified. However, when the best-to-worst norm is weakened (through repeated exposures to worst-to-best lists), the effect is attenuated.

Finally, in Experiment 4, we found that the best-to-worst inference is stronger for unordered vertical lists than for unordered horizontal lists. A total of 233 participants encountered an unnumbered list of ten websites, shown in “no particular order,” that were either arranged vertically or horizontally. They then provided a relative evaluation of the website that was listed second versus ninth (either from top-to-bottom, or left-to-right, depending on condition) on a 10-point scale (higher numbers indicating a best-to-worst inference). The mean relative rating was higher when the list was vertical ( $M = 4.92$ ) versus when the list was horizontal ( $M = 4.37$ );  $t(231) = 1.93, p = .05$ .

In sum, this research extends our theoretical understanding of serial position effects by focusing on evaluations rather than recall and by demonstrating the dominance of “best-to-worst” inferences over edge avoidance in the domain of vertical lists.

## The Victory Effect: Is First-Place Seeking Stronger than Last-Place Aversion?

### EXTENDED ABSTRACT

The rise of gamification has increased the number and variety of ways in which people compete. Our research concerns competition with rank feedback. We focus on settings in which rank is a function of effort, competitors can see each other’s (anonymized) performance measures, and no prizes are awarded. Our work builds on past economics and social psychology literature examining optimal contest design and rank preferences (Bull, Schotter, & Weigelt, 1987; Che, & Gale, 2003; Dutcher, Balafoutas, Lindner, Ryykin, & Sutter 2015; Fullerton, & McAfee 1999; Kuziemko, Buell, Reich, & Norton, 2013; Lazear, & Rosen 1981; Taylor, 1995).

We conduct two main studies in this paper. In Studies 1a-1e, we survey individuals to assess their risk preferences for different ranks in a competition. Specifically, we use the probability-equivalent method (Hershey & Schoemaker, 1985) to construct utility curves (over rank) for each individual, and we analyze the patterns observed. Subjects read the following:

*Suppose you and five other people of similar fitness level (either gender) are matched up in a competition to see who takes the most steps over the next month (from a combination of walking, running, and stairs). Imagine that there are no prizes given out in this competition, and that rankings and performance would be displayed through an anonymized leaderboard (i.e., you will not know the identity of anyone else in your competition group, nor will anyone else in your group know your identity; however, you will know which rank is yours).*

*The following questions are designed to assess your preference between using a strategy that would guarantee a certain outcome (e.g., third place out of 6) vs. using another strategy that gives you a chance of finishing in first place (out of 6) and a chance of finishing in last place (out of 6). Assume each of these two strategies involves the same amount of effort. We will vary the chances approximately five times, to estimate the percentage chance that makes you indifferent between choosing the certain rank outcome and the uncertain rank outcome.*

We obtained the indifference point (i.e., utility) for each rank and for each study subject ( $n = 1001$ ). The idea that people are last-place averse, but are even more first-place seeking. We also find statistically significant support for the following hypotheses:

*Hypothesis 1*     *Individuals care about rank in contests without prizes. Specifically, they have greater utility for higher ranks.*

*Hypothesis 2*     *a) Individuals are risk-seeking when in second place, b) risk-averse when in second-to-last place, and c) more risk-seeking in second than risk-averse in second-to-last place.*

*Hypothesis 3 Individuals experience a greater decrease in utility from first to second place, compared to the decrease in utility from second-to-last to last place.*

Study 2 takes the ideas and insights of Study 1 to the lab, to observe if and how individuals' effort and performance change in response to rank feedback provided half-way through a contest. Participants in the treatment group arrive to the lab in round 1 and read the following on a computer screen:

*Today you will be grouped with 5 other students in a continuous step climbing competition. You will be doing the first round of the study and repeatedly climbing a step for 5 minutes, taking as many steps as you can. You will then need to return to the lab at a future date to participate in the second round of the study. Before you start your second round, we will show you the rankings and scores from the first round. You will then proceed to complete the second round of the study, in which you will again climb as many steps as you can in 5 minutes.*

*We will use participant identification numbers to anonymize the results. We will show you your own participant identification number so that you can see where you are ranked and how you scored. However you will not know the identity of anyone else in your competition group, nor will anyone else in your group know your identity.*

*Once your second round score is tabulated, we will send you an e-mail announcing the final rankings and scores (based on both rounds) of every contestant in your group. There are no prizes given out in this contest.*

We had 231 subjects go through the treatment arm. We also had 162 control subjects, who also stepped as many times as they could in two rounds of 5 minutes each. However, they were told the purpose of the study was to evaluate their individual performance, and they were not shown other subjects' performance measures.

We observe that first-place seeking behavior is significant among male participants, whereas there is nearly no difference in performance change between female treatments and control at the higher ranks. On the other hand, female subjects appear to try very hard to get into the "top half", as shown by their response to placing in the middle ranks after round 1. We do not find evidence of last place aversion in this actual competition; treatments and controls have similar responses to learning they placed in the bottom two ranks after round 1.

Our results support the notion that individuals inherently care about rank in competitions. Our study of risk preferences using hypothetical competitions showed that individuals consistently demonstrate last-place aversion as well as first-place seeking behavior. Interestingly, the latter effect appears even stronger than the former. Our study of an actual physical contest showed support for first-place seeking behavior among men, but not among women. Neither gender demonstrated last-place aversion behavior. This may have to do with the anonymized display of our contests results. Future work may consider the effects of displaying leaderboards that include ac-

tual contestant names, the effect of different competition group sizes, and the effect of prize money on contestant effort.

### **Format Neglect: How the Use of Numerical Versus Percent Rank Claims Influences Consumer Judgments**

#### **EXTENDED ABSTRACT**

When marketers promote their products and services, they often claim to be part of an exclusive tier within their competitive set (e.g., "Product X is in the top 10"). Although recent behavioral research has investigated how consumers respond to rank claims (e.g., Isaac, Brough and Grayson 2016; Isaac and Schindler 2013), this work has focused exclusively on claims having a numerical format (e.g., "top 10"). But marketers often communicate ranking information using percentages—such as "top 20%." In the present research, we explore how the use of a numerical format claim (e.g., Product X is in the top 10 out of 50 products) versus an equivalent percentage format claim (e.g., Product X is in the top 20% out of 50 products) influences consumer judgments and decisions. We find robust evidence of an effect whereby consumers respond more favorably to numerical rank claims when set sizes are smaller (i.e.,  $< 100$ ) but more favorably to percent rank claims when set sizes are larger (i.e.,  $> 100$ ), even when the claims are mathematically equivalent. This finding represents a violation to normative theory.

We further suggest that this preference reversal occurs because consumers who encounter rank claims fail to fully account for claim format (i.e., numerical vs. percentile) and set size, a phenomenon we describe as *format neglect*. As a result, they rely predominantly on the nominal position conveyed in the claim (e.g., 10 in "top 10" or 20 in "top 20%"). Our theorizing is consistent with past research showing that consumers often overweight focal and specific information about a case while neglecting other relevant general information (e.g., Bar-Hillel 1980; Kahneman and Tversky 1973; Lyon and Slovic 1976; Nisbett and Ross 1980; Yan and Sengupta 2013). However, whereas previously identified biases in the processing of percentage information have been largely attributed to attentional oversight or calculation complexity (e.g., Bagchi and Ince 2016; Kruger and Vargas 2008), we posit that format neglect stems from consumers' conscious belief that nominal position is more important to the evaluation task than set size, despite the fact that they are equally important and must be considered in conjunction in order to appropriately judge ranking position information. As a result, we predict that consumers, rather than fully integrating both pieces of information to arrive at their evaluation, will rely relatively more [less] on nominal position [set size].

We report findings from five experiments across different consumer contexts that provide evidence for an interaction effect between rank claim format and set size on consumer evaluations and demonstrate that this interaction arises because of format neglect. Experiment 1 provides initial evidence of our basic effect by showing that participants respond more favorably to a numerical rank claim when the item referenced in the claim is part of a small set, but that they respond more positively to a percent rank claim when the item is part of a large set ( $F(1, 229) = 16.76, p < .001, \eta_p^2 = .068$ ). This study also provides evidence for the existence of format neglect as the underlying mechanism, by showing that participants rely on nominal values more than format and set sizes when formulating their evaluations. Experiment 2 provides further support in favor of format neglect ( $F(2, 462) = 4.03, p = .018, \eta_p^2 = .017$ ) and demonstrates that the inflection point for this effect occurs when set size is approximately 100. This occurs as percentages are by definition expressed with relation to the number 100, hence, set sizes of this

magnitude generate identical ranking positions regardless of format (e.g. top 20% out of 100 is equivalent to top 20 out of 100).

In experiments 3 and 4, we identify interventions that can be used to debias consumers. These interventions also provide additional support for our proposed format neglect mechanism by demonstrating that when the importance of set size on evaluations is highlighted perceptually, as in Experiment 3, or cognitively, as in Experiment 4, the effects found in our earlier experiments are attenuated. We found the debiasing task to be effective for both, Experiment 3 ( $F(1, 296) = 4.21, p = .041, \eta_p^2 = .014$ ), and Experiment 4 ( $F(1, 358) = 9.02, p = .003, \eta_p^2 = .025$ ). Finally, Experiment 5 is a field experiment conducted at a cheese shop over a 12-week period. It demonstrates that the manipulation can increase real sales for a product that is ranked within a large set, when its ranking is stated in percentage as opposed to numeric format or when no ranking information is presented altogether ( $F(2, 81) = 9.71, p < .001, \eta_p^2 = .19$ ). Together, these studies provide robust evidence for format neglect and its underlying mechanism. Together, these five studies provide robust evidence in favor of our proposed effect and underlying mechanism.

In summary, the present research introduces the concept of percent rank claims to academic research and contributes to the numerical rankings literature by elucidating how different rank claim formats—such as numerical and percent claims— influence consumer evaluations. Our research uncovers a novel bias—when processing ranked list claims, people rely on the nominal position communicated in the claim (e.g., 10 in “top 10” or 20 in “top 20%”) to make inferences and neglect other equally diagnostic information, such as the ranking format employed and the size of the considered set. Hence, through a subtle manipulation such as ranking format, we uncover an unexpected exception to normative theory and a marketing relevant and actionable effect.

### The Rank Length Effect

#### EXTENDED ABSTRACT

Advent of modern technology and competition has led to the age of choice abundance. Within any category, and for any product, there are multiplicity of options. When selecting a movie to watch, a restaurant to visit, or even a product to purchase, a consumer may have to sift through hundreds of choices. To make these comparisons tenable, several organizations such as Rotten Tomatoes, Yelp.Com, and Consumer Reports offer rank lists, which aid decision-making. These rank lists often vary on the number of items ranked—for e.g., Top 100, Top 20, or Top 5. We investigate how the number of items in the list affects evaluations.

Consumers use an item’s rank to make inferences (Sorensen 2007; Pope 2009; Isaac and Schindler 2014). We propose that evaluations of an item in a rank list not only depends on its rank, but also on the number of items ranked. Specifically, we posit that the Number 1 item will be evaluated more positively in a list with more items (Top 20 vs. 5). However, the difference between items will be smaller in the longer list.

Recognize that, at its core, a rank is a number. Past research suggests that consumers construct mental number lines to make sense of numbers (Dehaene 1997; Restle 1970). We believe that consumers may construct such mental number lines when evaluating ranked items. The mental number line is labile and is usually constructed during task execution (Pinhas and Pothos 2013; Fischer, Mills and Shaki 2010). We posit that the position of items on this evaluation scale will be constructed based on the number of items in

the list—when more (less) items are in a rank list, the corresponding items will be placed further away from (closer to) each other.

We propose that when people transfer ranks from a rank list to their mental evaluation line, they try to accommodate all the items on this list. A Top 20 (vs. 5) list has more items so consumers use more of their mental number line when representing these items. This leads to two consequences—first, consumers use the extremities of their mental number line to place items when the rank list is longer (vs. shorter). Therefore, the top ranked and the bottom ranked items are farther apart with a longer rank list (Top 20 vs. 5). Consequently, the top ranked item in a longer (vs. shorter) list will be evaluated more positively. Secondly, because a longer rank list has more items, consumers will compress these items to fit them on their mental number line. Consequently, the distance between the different ranked items will be compressed more with a Top 20 (vs. 5) list. Results from four studies support these propositions.

In experiment 1A, we randomly assigned 85 participants to one of two conditions, where they saw a Top 20 or a Top 3 movie list. Participants then rated the Number 1 film by providing their overall evaluations (0 = Not good/100 = Very Good), liking (0 = Not at all/10 = Very much), and recommendation intentions (0 = Definitely no/10 = Definitely yes). The Number 1 movie was rated more positively when the rank list was longer (vs. shorter). One possible alternative explanation could be that people may have inadvertently confused the length of the rank list with the total number of movies the Top 20/3 list was chosen from. To rule this explanation out, in Experiment 1B, we used a 2 (Rank range: Top 20 vs. Top 3) by 2 (Information about total number of movies: available vs. not available) between-subject design. In the information (not) available condition, we explicitly told (did not tell) participants that the Top 20/3 list was chosen from 102 movies. The results of a two-way ANOVA (see Table 1) showed that participants judged the Number 1 movie more positively in the Top 20 (vs. 3) condition, and these evaluations were not influenced by whether or not information about the total number of films was provided or not.

In two subsequent experiments, we explored the underlying mechanism. In Experiment 2, we used a similar movie ranking context (Top 20 vs. 5), but we asked participants to evaluate both the Number 1 and the Number 3 movie. If the scale points of the mental evaluation line contract (expand) when the list length increases (decreases), then the difference in evaluations between the Number 1 and the Number 3 movie should shrink (increase). As shown in Table 1, evaluations of both the Number 1 and 3 movies were significantly higher in the Top 20 (vs. 5) condition. However, the difference between the Number 1 and Number 3 movie was lower in the Top 20 (vs. 5) condition.

Experiment 3 replicates these results in a product evaluation context. Participants ( $N = 86$ ) were informed they were considering purchasing hiking boots and were randomly assigned to one of two conditions—and shown either a Top 20 vs. 5 list of hiking shoes. In the Top 20 (5) condition, participants were presented a scale printed on a piece of paper and were asked to indicate their evaluations for all 20 (5) pairs of hiking shoes. After finishing this task, all participants indicated their evaluations (0 = Not good at all/10 = Very good), willingness to pay, and assessments of how much better the Number 1 ranked shoes were relative to the Number 5 ranked shoes. As shown in Table 1, participants’ responses (including willingness to pay) for both the Number 1 and the Number 5 shoes were higher in the Top 20 (vs. 5) condition. However, the difference between the Number 1 and the Number 5 shoes was smaller in the Top 20 (vs. 5) condition. Moreover, evaluations mediated the effect of rank



length of rank on willingness to pay, demonstrating downstream consequences.

In summary, we introduce a novel effect that has both theoretical and practical implications. We show how consumers make sense of rank lists and how deviations in length can influence evaluations.

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# Consumer Experience in the Changing Marketplace of Health and Wellness

Chairs: Ankita Kumar, University of Wisconsin - Madison, USA

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## **Paper #1: Turning the Titanic: Creating Consumer-Centric Cultures and Improved Consumer Experience in Large, Established Health Care Systems**

Gregory Carpenter, Northwestern University, USA

Beth Leavenworth DuFault, State University of New York at Albany, USA

Ashlee Humphreys, Medill School of Journalism, Media, and Integrated Marketing Communications, Northwestern University, USA

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## **Paper #2: Conflicting Institutional Logics and Eldercare Consumers' Coping Strategies in Asymmetrical Service Relationships**

Ankita Kumar, University of Wisconsin - Madison, USA

## **Paper #3: Public Discourse and Cultural Valorization in the Cancer Marketplace**

Lez Trujillo Torres, University of Illinois at Chicago, USA

Benét DeBerry-Spence, University of Illinois at Chicago, USA

Søren Askegaard, University of Southern Denmark, Odense, Denmark

Sonya Grier, American University, Washington DC, USA

## **Paper #4: Trusting the Data, the Self and "the Other" in Self Tracking Practices**

Dorthe Brogård Kristensen, University of Southern Denmark, Odense, Denmark

### **SESSION OVERVIEW**

In the spirit of this year's ACR theme of Trust in Doubt? we bring together four projects that examine the rapid evolution of today's health care market, including the important dynamics of how consumer trust may be gained, lost, and re-established. The papers in this session blend multiple methodologies to explore different health and wellness contexts, viewing these service industries as a nexus of cultural and institutional forces and actors embedded within broader market dynamics. They offer insights into how market actors (consumers, organizations, service providers, regulators, legislators, popular culture) shape each market and their interpretations and actions within them.

Across micro to macro levels, they ask the following questions: how does a health care system change organizational culture to become more consumer-centric; what sensemaking and coping strategies do consumers use, when a commercial logic replaces a care logic in the health care market; how is the 'worthy' health consumer culturally produced; and what is the role of the "other" in consumer wellness empowerment.

The first paper studies the transition process in five large United States health care systems from entrenched, traditional culture to a more consumer-centric focus, to find what factors have facilitated or impeded change. The authors find that trust is an important factor in organizational culture change both at the institution level and for patients/consumers. The post trust world is evident in the tension between the bonds of trust patients want to have in their medical providers vs. the responsabilization they do not necessarily want as newly empowered consumers of medical care.

The second paper examines how consumers endowed with different combinations of resource capabilities navigate the eldercare

services market around Alzheimer's Disease. Based on archival data and interviews with various stakeholders across the network of care for the aging, the authors find myriad market factors, such as facility profit-motives, chronic staff shortages and poorly motivated workers, that contribute to consumers' feelings of betrayal and loss of trust in this prolonged service relationship.

The third paper studies how public discourse impacts cultural valorization in the cancer marketplace between 1987 and 2016, and, thus, offers a historical view of the dynamic nature of value processes. The authors find a system of "hopeful uncertainty" driven by public discourse mediates reconfigurations in the cultural value of, which includes trust in, consumer subjects, practices, and services in the marketplace, as well as the triggers and implications of these changes.

The fourth paper analyzes consumers' trust in data as they communicate and articulate health and well-being through self-tracking practices in fitness and Quantified Self communities and the role of "data mediators" (data coaches and personal trainers) as they assist in reading and setting up frames of action. By locating the roles of consumer, coaches and social media, this study questions self-tracking as a highly individual practice.

Across a variety of domains, spanning two ideologically disparate cultures, these studies capture the discursive, market-mediated shaping of medical consumers, their subjective experiences, and the role of trust in the fast-changing health care and wellness landscape.

## **Turning the Titanic: Creating Consumer-Centric Cultures and Improved Consumer Experience in Large, Established Health Care Systems**

### **EXTENDED ABSTRACT**

#### **Introduction**

The battle is on to disrupt the multi-billion dollar health care industry—and many of the battle lines have been drawn around consumer experience. Large, established, traditional health care systems are facing unprecedented competition from new market entries and different models of care. In recent news, CVS has partnered with Aetna to create a mega-entity health care payer and medical provider. Jeff Bezos, Warren Buffett, and Jamie Dimon of JP Morgan have joined forces to start their own health care company. Visionary entrepreneurs have launched stand-alone "doc in the box" clinics with easy and convenient open access, unaffiliated with existing health care systems, yet extremely popular with patient consumers. Such examples of increasing disruption abound.

In this fast-evolving market, health care systems understand that they must become more consumer-centric in order to survive and thrive, as patients exercise their increasing choice in the marketplace, and demand a better care experience. But understanding and implementing are two very different things, especially for large systems with entrenched cultures. As these entrenched systems work to respond to consumer demand for better experiences, informants within them self-report this cultural change akin to "turning the Titanic". In this study, we ask: 1. How can such health care systems implement processes to become more consumer centric? And 2. What is the consumer experience in these systems as they are attempting change?



We analyze five large United States health care systems to find what has made this transition successful, and what has impeded it.

## Background

Health care professionals and the industry as a whole have accepted the need for care to be patient-centered (Epstein and Street 2011). Patient-centered care has been linked to better patient outcome (Oates et al. 2000; Robinson et al. 2008); increased patient satisfaction (Maizes et al. 2009; Malingers et al. 2005); greater perception of value (Epstein and Street 2011); and decreased medical costs (Charmel and Frampton 2008). However, there are many obstacles and many different possible approaches to creating change, and the most effective path forward for those systems seeking change remains unclear.

A corollary to patient centered care is seeing the patient as consumer who is involved in the coproduction of their medical care, decision-making, and delivery (Gallen et al. 2013; Joiner and Lusch 2015). This mindset has been a more difficult one for the medical community to embrace (Hyatt 2003; Newman and Vidler 2006). However, ignoring the consumer focus leads to decreased patient satisfaction, lower reimbursement rates, loss of revenue, and lower new customer acquisition due to word of mouth and negative public reviews. However, the literature on the processes of a transition to a more consumer centric approach within health care is even more sparse than the literature on the process for achieving true patient centered care success.

## Methods

We gained entry to five large health care systems (>\$1 billion/annum revenue each) that have made it a leadership priority to transition to a consumer-centric model. The systems are situated across the US in the Northeast, the Southeast, the Midwest, the West, and the Sunbelt. Cross-sectional varied observation sites were chosen within all systems--these ranged from small rural, suburban or inner-city clinics, to large flagship medical centers, to specialty care centers such as sports medicine and cardiac rehab, to administrative support sites. Over a period of 10 months, all four authors traveled to each system for naturalistic observation and in situ interviews. All four authors also visited all system headquarters and various satellite sites for unstructured depth interviews (n= 72) ranging from 45 minutes to 3 hours each. Informants were distributed vertically (e.g. CEOs, CMOs, Chief Experience Officers and other C-suite executives, middle management, front line care providers, ancillary and support staff) and horizontally (e.g. employees from medical services, marketing, strategy, billing and finance, insurance). We also held depth interviews with patients from each system (n=17) to triangulate their experiences with system data.

## Findings

Using the framework of process implementation during transition (Gebhardt, Carpenter, and Sherry 2006) to find what processes are associated with the success of implementation of patient-centered/consumer centric care practices, we find that this follows a similar process in health care as a transition to a consumer-centric focus in other industries. Gebhardt and his coauthors found that organizational culture had to change via a four-stage process model for a transition to market-oriented, consumer-centricity: 1. Initiation 2. Reconstitution; 3. Institutionalization and 4. Maintenance. In addition to seeing strong evidence that this model holds in our case, we also find that it must occur in order. As an example, it appears that a major impediment to cultural change in a health care system trying to transition to a more patient/consumer centric focus is attempted

institutionalization of new cultural values and “norming” or proceduralizing them before the reconstitutive efforts had succeeded—e.g. before achieving buy in by all stakeholders across the institution.

We also find that the cultural values needed for successful consumer-centric shifts in the Gebhart et al work on non-health care industries are necessary for the systems to successfully transition to a consumer-centric model. Higher or lower levels of empathy, respect, collaboration, trust, openness, and a shared vision of “consumer first” appear to relate directly to system-wide success or difficulty in transition.

Interviews with patients in these systems reveal a number of themes that mirror the institution, such as the importance of respect, empathy, trust, and openness. However, we also see dramatic tensions that persist and are deepened between patient desired empowerment vs. unwanted responsabilization (DuFault et al. 2016; Botti et al. 2009; Joiner and Lusch 2015; Thompson 2004; Veresiu and Giesler 2014). Further, we find a large array of patient preferences that do not match what providers and/or leadership believe their newly envisioned consumers want.

In conclusion, we find that we can effectively analyze the transition of health care systems as they move to a more consumer-centric focus by utilizing the framework of process implementation during transition. However, we also find that extensive challenges remain in incorporating the “voice of the consumer” into these systems.

## Conflicting Institutional Logics and Eldercare Consumers' Coping Strategies in Asymmetrical Service Relationships

### EXTENDED ABSTRACT

#### Introduction

An estimated 5.7 million Americans of all ages and 1 in 10 persons over the age of 65 years are living with Alzheimer's and other dementias in 2018. With numbers projected to rise to 7.1 million by 2025 (Alz.org), and little hope for a cure in sight (Dilts 2018), the care and management of Alzheimer's patients is a major public health concern. Many of these seniors with cognitive and functional limitations need assistance at home, or in community and institutional settings (cbo.gov). Current senior care is in a state of crisis, which is guaranteed to grow as the boomers age. Much of this industry, especially since Wall Street entered the picture in the 1990s, views eldercare as an emerging commercial opportunity and strives to maximize shareholder profit, expansion and pursues workforce and other efficiencies. Conversely, care facilities are experiencing shortage of care workers which directly impacts quality of care. Consumers experience a dearth of alternatives, poor care, high cost and retrenchment of long-term care insurance and welfare support.

Prior research on elderly consumers has looked at post-retirement identity reconstruction (Schau et al. 2009), technology adoption behaviors (Gilly and Zeithaml 1985), age-related changes in consumption behaviors (see Moschis 2012) and old age consumption as a group phenomenon (Barnhardt and Peñaloza 2013). However, our understanding of the market serving elderly consumers, how structural conditions, resource endowments and competing institutional forces constrain and shape their service experiences, is limited.

This research examines the issue of how consumers, endowed with different combinations of resources, cope in a market where institutional interests have produced conditions where consumers face now just the effects of Alzheimer's on a loved one but also shortfalls in services provisioning. It explores the interpretive framings various stakeholders use to make sense of their subjective positions and

experiences, and the consequent interpersonal dynamics between service providers and consumers in the often-protracted service experience of long-term care.

## Methods

I use the concept of institutional logics to analyze the broader macrosocial environment of the eldercare market. These are the sociohistorically patterned beliefs, values and practices that stakeholders (organizations and actors) pursue (Thornton et al. 2012). To initially parse the various institutional logics, archival data was collected on eldercare, medical and pharmacological news, and debates on health care policy. Further this research uses Bourdieu's theory of cultural capital (Bourdieu 1986) to examine the role of resources in how families cope with Alzheimer's disease and Elias's figurational sociology (Elias 1978) to examine the micropolitics of power in asymmetrical service relations. For this, in-depth interviews were conducted with 42 stakeholders across the aging network to understand subjective experiences of eldercare (Thompson et al. 1989). Participants included family caregivers, directors of care facilities, care workers, lobbyists, legislators, social workers and eldercare attorneys. Additionally, participant observation was conducted at support-group meetings, conferences and fundraising events. Data analysis followed a hermeneutic approach (Thompson 1997).

## Findings

The analysis reveals that plural institutional logics are at play in this unstable market (Fligstein 2002). The logic of care, followed by family caregivers, advocates helping the elderly through their evolving needs. Eldercare facilities follow a self-reproducing commercial logic and strive for shareholder profit and future expansion. The commercial logic (in the health care domain) has not gained legitimacy from all stakeholders but the most reputable service providers have strategically coupled the commercial and care logics. The regulatory logic designed to ensure safety, pursued by regulatory and legislative agencies, has prompted manipulative industry tactics such as unnecessary use of psychotropic medications and elimination of Medicaid beds. Care workers, who are mostly female, perform the bulk of this low-skilled, underpaid, physical and affective labor, cite these contradictory logics when explaining quality of care. Together with the waning social welfare logic that seeks to reduce public health expense, the situation favors a market transformation towards at-home care, though the social costs for families will remain prohibitive.

Value is created when a consumer's well-being is improved (Porter 2010). The divergent institutional logics explain the value proposition-outcome gap experienced by eldercare consumers. Their search for value emerges as a contested process embedded within broader market dynamics (Venkatesh et al. 2006). Myriad market factors, such as facility profit-motives, chronic staff shortages and poorly motivated workers, contribute to consumers' feelings of betrayal. Better resourced consumers still experience challenges in service encounters with care workers because of their high level of dependence and lack of alternatives (Elias 1978). As their care goals are frustrated, family caregivers are often forced to intensify monitoring and care labor to extract 'value' - a tactic that I designate as 'value salvage'. Among families lacking resource endowments (economic, social and cultural capital), the caregiving journey produces experiences of poorer care, challenges in various service interactions, more constrained choices, family sacrifices and susceptibility to moral judgments.

## Contributions

This research contributes to understanding of health care disparities (e.g., Lee et al. 1999) and the dilemmas of attenuated access (e.g., Crockett and Wallendorf 2004) as well as the detrimental effects of marketization of health care (Varman and Vikas 2007). It examines the trickle-down effects of neoliberal socio-economic policies which have produced conditions of heightened risk.

It also empirically and critically examines the concept of value co-creation (Vargo and Lusch 2004), which proposes that value propositions attract stakeholders to share their resources during collaborative service exchanges. Challenging the view that a service ecosystem is a self-governed, self-adjusting entity with ties of coordination and reconciliation of conflict (Vargo and Lusch 2016), this research brings to bear, the discordant, conflictual side of value co-creation by highlighting the social costs of divergent stakeholder interests (Arnould 2007; Gummerus 2013; Peñaloza and Venkatesh 2006).

Unlike most of health care, which is moving towards the ideology of consumer-centric care (Epstein and Street 2011), much of the eldercare services industry lags. Our participants seek a service experience that justifies the high cost of care; frustrated by shortfalls, they try to salvage value. From the consumers' perspective, it is a service relationship failure and creates a situation that threatens the welfare of vulnerable seniors. The misaligned institutional interests and practices also interfere with the attainment of identity projects (e.g., the performance of role of caring family or competent care worker) (Deighton 1992; Epp and Price 2008).

## Public Discourse and Cultural Valorization in the Cancer Marketplace

### EXTENDED ABSTRACT

#### Introduction

In the year 2001 cancer became the most urgent health care problem that Americans felt the country faced (Gallup 2018). Given that AIDS had been viewed as the top priority for over 15 years (Gallup 2018), this represented a significant shift in public opinion. An interesting and important question this raises is "What social process enables changes in cultural value?" Scholars point to cultural valorization; that is, the "creation and operation of systems of (e)valuation," (Corse and Griffin 1997, p.174) which enable reconfigurations in the cultural value of institutions, practices and actors (Crane 1987; DiMaggio 1987; Lang and Lang 1988; Lamont 2012). For instance, Corse and Griffin's examination of Zora Neale Hurston's novel "Their Eyes Were Watching God" illustrate the cultural valorization process that transformed this novel from 'average' to 'canonical' status. However, historical processes that illuminate how public discourse reconfigures value (e.g., worth, merit, meaning, status) in the marketplace are limited in the marketing literature.

Prevailing theoretical views of value in marketing examine value at the micro level. These perspectives highlight that value emerges from the intrinsic characteristics of products and changing individual perceptions (e.g., Zeithmal 1988), co-creative efforts between consumers and firms (Vargo and Lusch 2004), and collective efforts of and reflexivity in consumers (e.g., Figueiredo and Scaraboto 2016; Parmentier and Fischer 2015; Schau, Muniz, and Arnould 2009; Thompson 2005). Sociocultural perspectives that examine macro-level emergence or changes in value remain scarce. A notable exception is the growing literature on legitimation (Dowling and Pfeffer 1975; Humphreys 2010a; Suchman 1995), which is considered a valorization sub-process that focuses on the "recognition...

of the value of an entity” (Lamont 2012, p.8). Our study builds on the literature that investigates the legitimation of new markets (e.g., Humphreys 2010a), stigmatized practices (e.g., Humphreys 2010b; Karababa and Ger 2010), and brand discourses (e.g., Giesler 2012).

Our examination of cultural valorization is important because learning about the mechanisms and triggers behind such value shifts can enhance our understanding of *how* marketplace entities experience dramatic changes in valorization while others do not. Thus, by studying cultural valorization we gain a more comprehensive view of the dynamic nature of value processes and how these may intersect and/or influence micro value processes in a variety of contexts. Additionally, understanding value reconfigurations have practical implications as these can marginalize or stigmatize marketplace actors by creating hierarchies or categories of “worthy” consumers, consumption practices, and markets, as some studies with baseball players (Allen and Parsons 2006), popular music (Regev and Seroussi 2004), and intellectual reputations (Lamont 1987) have shown. Our study, in particular, examines how public discourse impacts the cultural valorization of the cancer marketplace. We consider the following research questions: How is a service-centered market valorized by public discourse? What triggers influence cultural valorization changes in this market? What are the implications of value reconfiguration in this market?

## Method

We employ a multi-method approach to address these research questions. Specifically, to look at changes in historical discourses, developments and actions, we use archival data that include articles and advertisements (1987-2016) from mainstream U.S. newspapers (New York Times, Wall Street Journal, USA Today), popular books, TV shows and films, and informational materials such as pamphlets, videos, and documents from a variety of sources (e.g., library repositories, U.S. congress, regulators, trade organizations, non-profit organizations, and consumer groups). We utilize automated content analysis (Humphreys and Wang forthcoming) and co-occurrence network analysis (Koyama and Matsumoto 2004) to examine changes in macro discursive and affective structures in newspaper articles. We also use semiotic analysis (Chandler 2007; Mick 1986; Christensen and Askegaard 2001) and guidelines from Belk, Fischer, and Kozinets (2013) to conduct an iterative examination of all other textual and visual materials.

## Findings

We find that cultural valorization in the cancer marketplace relies on the operation of a system of discursive and affective (e) valuation. This system is based on discourses of collective hopeful uncertainty, with the emotions of fear and hope becoming paradoxical identifying features of this bioscience-based market. We also find three types of triggers that influence this system of (e)valuation: 1) ideological influences on meanings of hope by various marketplace actors at different points of time (e.g., government, expert systems, consumer advocates); 2) historical sociocultural developments (e.g., AIDS crisis, breast cancer activism, cause marketing); and 3) scientific discovery and commercialization efforts (e.g., AIDS cure; cancer treatment developments; cancer service innovations). Together, these triggers fuel changes in the system of collective hopeful uncertainty; thus, reconfiguring public perceptions of cultural value of the cancer marketplace over time. Lastly, we find that the operation of and changes to a system of collective hopeful uncertainty have implications for the consecration, reproduction, and hierarchy of consumer subjects in public discourse, and the emergence, growth,

and perceived financial valuation of this market’s services and treatments over time.

## Contributions

First, we contribute to the value literature by showing that an emotion-driven discursive system underlies the emergence, change, and reproduction of value in public discourse. Our study responds to calls by Arnould (2014), Figueiredo and Scaraboto (2016), and others for more process-based perspectives of value. Second, we show that notions and processes of value are subject to sociocultural historical construction and influences, responding to Askegaard and Linnet’s (2011) call for contextualizing marketplace phenomena. These two major contributions expand our current perspectives of value beyond products, individual or groups experiences and cognitions, and direct interactions of consumers with providers of good or services. Our work also contributes to the literature on cultural discourse and ideologies in health (e.g., Barg and Grier 2008; Thompson 2005) by highlighting their interrelatedness with affective structures. Last, our study has implications for the transformative consumer research literature as it underlines how cultural valorization and changes in contextual meanings (DeBerry-Spence 2008) can influence regimes of historical categorization, worth, and/or hierarchy of consumers, consumption practices, and markets.

## Trusting the Data, the Self and “the Other” in Self Tracking Practices

### EXTENDED ABSTRACT

#### Introduction

This paper focuses on the role of “the other” in usage of and trust in self-tracking data. Due to demographic pressures and the rhetoric of crisis in the health care sector, increasingly consumers are encouraged to take responsibility of their own health in order to gain control over the body and well-being (Fotopoulou and O’Riordan 2016). The emergence of self-tracking technologies has increased the possibility for lay people to access, evaluate and manage their own health – to become the master of their own health and well-being (Lupton 2013). Through the use of wearables and commercial apps on smartphones, tablets and computers, people have acquired the opportunity to monitor and track sleep, eating habits, weight, sports activities, calorie intake etc. (Etkin 2016; Kristensen and Ruckenstein 2018; Pantzer and Ruckenstein 2015). The data can be connected to social media sites, where, for example, one’s running route, speed, or diet can be shared amongst users.

#### Background

Among many self-trackers, it is assumed that the production of numbers or objective outcomes is a viable way to assess and represent the value of one’s life, to enhance personal health and well-being, that is both objective and freed of human bias (Daston and Galison 2010, Kristensen and Ruckenstein 2018). This insight leads to an understanding of tracking data as a very individualized form of health practice and as an example of self-help. But then, what is the role of personal coaches and data coaches that assist people in using and relating to data output? And what is the role of the audience - the people who link with and comment on data through likes etc. on social media platforms where self tracking data are shared?

#### Contribution

The aim of the paper is to analyse how self-trackers communicate and articulate health and well-being through data output tracking their physical activities, sleep and food consumption. Moreover,



the paper analyses the role of “data mediators” i.e., data coaches and personal trainers that use data visualization to communicate and keep track of their clients. While the role of the audience has been addressed (Baym 2013; Rettberg 2018), in the area of self-tracking there are only a few studies that consider social relationships (Depper and Howe 2017; Fotopoulou and O’Riordan 2016; Lomborg and Frandsen 2015). These studies, however, do not specifically address the role of social relationships in perception, trust and use of data

### Method

The paper is based on an ethnographic study of self-tracking among fitness users and personal trainers (15 informants). The overall methodology of the project involved ethnographic studies of self-trackers’ experiences and everyday practices, with focus on social relations and media platform that form part of self tracking practices. Departing from post-phenomenological approaches (Verbeek 2011), we seek evidence of how technologies mediate perceptions and action, and condition experience. We furthermore demonstrate that self-tracking technologies become participants in the transformation of self-experience, but that social relationships also play a crucial role. An additional focus is on the role of “likes” associated with the sharing of self-tracking technologies on social media platforms. More specifically, we analyse the feedback loop (Patzer and Ruckenstein 2015) provided by data, coach and likes.

### Findings

Departing from these questions, the paper will analyse the mutual constitution of a kind of mechanical objectivity (Daston and Galison 2010) and the subjectivity of the self-tracker (Verbeek 2008). The study shows that the relationship with the coach and “likes” on social media platforms provides a “hook” or a reward structure through which consumers are moulded (Kristensen et al. 2017; Schüll 2012). Quantification and visualization provided in self-tracking can provide visibility to certain aspects of self and performance, and by so doing, can provide a frame for action. Personal trainers here assist by providing advice on how to use self-tracking in a balanced and sound way and by offering feedback on the overall process of training in a fitness center. They assist their clients in reading data, responding to data, and using or discarding data as useful frames of action. They also aid their clients in managing the tension between being “in control” through quantified measurement for performance, and opening up for an embodied feeling of being “in contact with oneself”. Social media audience also play a role, as they provide feedback on data output visualizations and confirm the actual frame of action set up by personal trainers and their clients. Based on these findings, this research questions the notion of self-tracking as an individual practice. Furthermore, this research has the implication that management of health may be located outside the health care sector.

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## In Praise of Badness

Chairs: Evan Weingarten, University of California, San Diego, USA

Amit Bhattacharjee, Erasmus University, USA

Patricia A. Williams, Wharton School of Business, USA

### **Paper #1: In Pursuit of Imperfection: How Flawed Products Can Reveal Valuable Process Information**

Erin Percival Carter, University of Maine, USA

A. Peter McGraw, University of Colorado Boulder, USA

### **Paper #2: Repeat Performances Decrease Consumer Perceptions of Authenticity**

Rachel Gershon, Washington University St. Louis, USA

Rosanna Smith, University of Georgia, USA

### **Paper #3: The Upside of Immorality: The Signal Value of Offensive Producer Behavior**

Amit Bhattacharjee, Erasmus University, The Netherlands

Jonathan Z. Berman, London Business School, UK

Gizem Yalcin, Erasmus University, The Netherlands

### **Paper #4: So-Bad-It's-Good: When Consumers Prefer Bad Options**

Evan Weingarten, University of California, San Diego, USA

Amit Bhattacharjee, Erasmus University, The Netherlands

Patricia A. Williams, University of Pennsylvania, USA

## SESSION OVERVIEW

Almost by definition, consumers should prefer good product options to bad ones. All else equal, people tend to prefer options that are higher in quality, free of flaws, consistent, and morally acceptable over those that are worse, flawed, inconsistent, or morally objectionable (Kruger et al. 2004; Kunda 1990; Levin and Johnson 1984; Lord et al. 1979; Tetlock et al. 2000). However, recent research demonstrates that mistakes in the design process can bolster product preference (Reich, Kupor, and Smith 2018), that horrible movies often attract devoted fans (Sarkhosh and Menninghaus 2016), and that consumers often seek out hedonically unpleasant experiences (Keinan and Kivetz 2011).

Why would consumers ever prefer to spend their limited time and money on bad options? Though some initial investigations have started to chronicle when these preferences might emerge, many unanswered questions remain. What do flaws, inconsistencies, or offensive qualities signal about products or producers, and when are these qualities important enough to drive consumer preference? What factors drive consumers to choose bad options rather than good options, and where do consumers derive their utility in each case?

This session seeks to provide new insights about when and why bad qualities can improve the value of products and services. First, **Carter** and **McGraw** showcase five studies demonstrating when product flaws are appealing. When product flaws reveal desirable information about the creation process (i.e., a singer forgetting a lyric proves a concert isn't lip-synced), they can boost rather than diminish preference. Second, **Smith** and **Gershon** discuss how inconsistency in performance can enhance perceptions of authenticity. In four studies, they provide evidence that people perceive performers who repeat performances as less authentic, reducing consumer evaluations. Third, **Bhattacharjee**, **Berman**, and **Yalcin** present evidence that offensive behavior by artists (e.g., personal racism or producing content with racist themes) can arouse greater consumer interest in their work. Across four studies, people perceived offensive artists as more authentic and creative than those who behaved acceptably. Finally, **Weingarten**, **Bhattacharjee**, and **Williams** present evidence

for so-bad-it's-good consumption, or consumer preferences for extremely bad options over mediocre ones. In nine studies across several content domains, people were more likely to choose options they expected to be extremely bad rather than merely bad or average.

Together, these papers provide a more nuanced understanding of how consumers gain utility from seemingly bad qualities. This session explores what traditional notions of product quality fail to capture: the costs of badness may help signal the presence or authenticity of other desirable sources of value.

All four presentations are developed and have at least four completed studies. We expect this session to generate interest among researchers spanning a broad range of topics, including consumer preference, experiential consumption, signaling and symbolic consumption, authenticity, taste and quality, aesthetics, and humor. And given the presentations' relevance to fundamental assumptions about consumer preference and notions of value, we hope to stimulate a fruitful discussion.

### **In Pursuit of Imperfection: How Flawed Products Can Reveal Valuable Process Information**

#### EXTENDED ABSTRACT

Can a product be too perfect? Can marketing communications be too polished? Can packaging be too pristine? Although decades of marketing research and business best practices assert that consumers prefer flawless consumption experiences, we show that consumers sometimes prefer flawed experiences. Concertgoers, for instance, may be pleased to hear a singer flub a lyric because the error reveals the performance isn't lip synced. Or an uncle may be delighted by a badly wrapped present because he knows that his six-year old niece did the wrapping.

Marketers are trained to identify, improve, and highlight marketing tactics that consumers care about. Because consumers prefer consistent color, symmetrical shape, and a smooth texture in their produce, for example, it is logical for marketers to assume that people prefer unblemished apples to blemished apples. Indeed, after crops are harvested, culling aesthetically imperfect produce is the primary reason for losses of fresh produce (Gunders, 2012). However, consumers can also care about how a product came to be (Newman and Bloom 2012; Rozin 2005). Organically farmed produce, for example, is preferred by some segments to conventionally farmed produce.

Consumers who value how a product originated may seek information to verify what production processes were used (Meyer 1982). Process information, however, is often scarce or difficult to verify (e.g., Darby and Karni 1973; Sun, Keh and Lee 2012). Unable to observe the process (e.g., without making a trip to the farm) and dubious of a retailer's claims (Friestad and Wright 1994; Campbell and Kirmani 2000), would-be buyers act as detectives, using the clues available to them to infer the presence of a valued production process (Harris 1981; Huber and McCann 1982; Kirmani and Rao 2000). Although flaws typically hurt product evaluations, we propose that they enhance product evaluations when a flaw provides a clue that the product was produced via a desired process. Minor blemishes can indicate that an apple was grown without pesticides. We suggest that whether a flaw signals a desired process or not is dependent on the

consumers' causal understanding of how the flaw originated (Fernbach, Darlow and Sloman 2011; Fernbach and Erb 2013; Garcia and Koelling 1966; Krynski and Tenenbaum 2007; Tversky and Kahneman 1977 & 1980).

We test our hypotheses in five studies that use products and marketing communications as stimuli.

In study 1, we randomly assigned half of the sample ( $n=107$ ) to read a statement suggesting that some produce labeled organic is not actually grown according to organic standards. When subjects doubted organic claims, they reported being more likely to select apples from bins containing flawed apples compared to bins containing flawless apples (39% versus 20%,  $\beta_{\text{doubt}} = .95$ , Wald = 4.3,  $p = .04$ ).

In study 2, we randomly assigned half of the sample ( $n=108$ ) to read a statement suggesting that many concerts are lip synced. When subjects doubted that the show was live, they preferred a flawed performance more often than subjects in the control condition (58% versus 20%,  $\beta_{\text{doubt}} = 0.887$ , Wald = 4.1,  $p = .04$ ).

Study 3 was designed to test a prediction that flaws should improve evaluations when subjects: 1) value the process and 2) have the knowledge necessary to infer a process. We randomly assigned subjects ( $n=282$ ) to a 2 (product: flawed apples vs. flawless apples) by 2 (knowledge: control vs. non-organic methods more effective at controlling pests) design. We also measured the extent to which subjects preferred organic produce. Our analysis revealed a significant three-way interaction between flaw, knowledge, and preference for organic products,  $t(274) = 2.0$ ,  $p < .05$ . A floodlight test (Spiller et al. 2013) showed that whereas flawed apples were always less desirable among subjects who did not generally favor organic produce (regardless of the knowledge manipulation), flawed apples were evaluated more positively among subjects who preferred organic apples and who were informed that pesticides are more effective at controlling pests. A bootstrapped mediation analysis (Preacher and Hayes 2008) revealed that certainty that the apples were organic mediated the effect, and the competitive mediation pattern was consistent with our predictions (Zhao, Lynch and Chen 2010).

In study 4, we examine how the severity of a flaw and presence of an alternative (non-ideal) process explanation for the flaw moderate our effect. Using a 3 (flaw severity: flawless, mild flaw, severe flaw)  $\times$  2 (process: ideal vs. non-ideal) design, we find that flaws (typos in an email from a favorite celebrity) only improve evaluations relative to flawless alternatives when they are minor as opposed to severe. Furthermore, we find that the positive effect of even a mild flaw on evaluations disappears when the flaw no longer signals the ideal process (that the email was written by the favorite celebrity) and instead signals a non-ideal process (that PR companies write promotional emails with typos so that the emails appear that they may have been written by the celebrity as opposed to a PR professional). The effect was mediated by certainty that the celebrity wrote the email, and moderated by both presence of an alternative cause for the flaw and by an individual difference measure of the importance of the celebrity writing their own email.

Finally, in study 5, we conducted a conjoint analysis on willingness to pay for a number of chairs with different features combined with a 3 (process importance: control, reclaimed, beetlekill) by 3 (knowledge: control, reclaimed wood often shows sign of use, beetlekill wood exhibits blue streaks) between subjects design. Analyzing the utility weights of various product features revealed a significant interaction of our process importance and knowledge manipulations ( $F(4, 505) = 3.06$ ,  $p = .03$ ), such that the utility weight of a flaw was only positive when participants valued a process that was associated with that flaw and had the knowledge necessary to connect the presence of the flaw to the associated process.

We conclude by discussing implications for consumer reasoning, choice models, and marketing tactics.

## Repeat Performances Decrease Consumer Perceptions of Authenticity

### EXTENDED ABSTRACT

Repeat performances are common: celebrities repeat themselves in interviews, entrepreneurs give the same business pitches, comedians often repeat their routines, and politicians deliver the same stump speech across numerous audiences. While behaving consistently or reliability has been found to enhance perceptions of authenticity and evaluations more generally (Cross, Gore, and Morris 2003; English and Chen 2011; Napoli et al. 2014), we find that repeat performances can dampen consumers' perceptions of performer authenticity and subsequent consumer intentions. We theorize that this is because consumers hold similar intuitions about performances (like jokes, speeches, and business pitches) as they do about artworks—there is one authentic, original performance and repetitions are seen as copies. Indeed, for artworks, originality is a salient dimension along which authenticity is assessed (Bruhn et al. 2012; Moulard et al. 2015). We propose that when consumers rate a performer who repeats a performance as less authentic, they are drawing on this originality dimension of the term; the performer now appears less authentic with respect to originality. Importantly, we theorize that this is driven by a lay belief that repeating one's own performance decreases authenticity, rather than by discernible differences between repeated and non-repeated performances. We test these predictions in five studies.

In Study 1, participants viewed the same clip of a business pitch and either read that it was the speaker's first or tenth time giving that exact pitch. Participants then rated how authentic they believed the speaker was using a three-item scale of authenticity perceptions (authentic, sincere, and genuine). Despite watching the same clip, participants who believed they were watching a repeated (vs. non-repeated) performance perceived the speaker as less authentic.

Study 2 was divided into connected studies. First, we created repeat performances by recording individuals answering the same interview questions three times. We found that participants believed their responses became less authentic with each repetition. However, when a separate group of participants (who were unaware of repetitions) viewed a single clip, we did not observe a difference in perceived authenticity. Finally, a third group of participants viewed a single interview clip (1<sup>st</sup>/3<sup>rd</sup> take), and were told either correct or incorrect information about the clip ("This is this person's 1<sup>st</sup> [3<sup>rd</sup>] time recording their answer to this question"). We found a main effect of belief (participants rated the interviewee as less authentic when they believed the clip was a repeat), but no effect of whether the clip was actually a repeated or non-repeated performance. These studies provide converging evidence that this effect is driven by a lay belief that copying one's own performance decreases performer authenticity rather than by discernible differences between repeated and non-repeated performances.

Study 3 tested this effect in a different domain and measured consumer consequences of repeat performances. We used two performances in which a comedian told the same joke in different contexts (repeat condition) or only one of those performances (no-repeat condition). Participants viewed either one clip (randomly assigned) or both clips consecutively (randomized). Participants then answered questions regarding perceived authenticity and consumer intentions for the comedian. As predicted, participants who saw both clips had lower consumer intentions toward the comedian than those



who saw only one clip. Consistent with previous studies, repeat performances decreased perceptions of authenticity. Further, perceptions of authenticity significantly mediated the relationship between repeated performance and consumer intentions.

Finally, Study 4 showed that repeated performances do not always result in negative consumer attitudes. We contrasted the effect of repetitions on performer authenticity for performances in which the content is either highly self-expressive or less self-expressive. In the self-expressive condition, participants viewed another comedian telling the same joke in two different contexts, while in the non self-expressive condition, participants viewed a doctor explaining the same medical findings in two different contexts. We theorized that repetitions lower authenticity perceptions because consumers are hinging on the originality dimension of authenticity when assessing self-expressive acts. However, for non self-expressive material, such as medical findings, we propose that consumers are less concerned with the originality of the performance and more concerned with its accuracy. As predicted, we found a significant interaction between repetition and self-expressive content. In the self-expressive condition, consumer intentions were higher for participants who viewed only one clip, but for the non-self-expressive condition, consumer intentions were higher for those who viewed both clips. Perceived authenticity mediated this interaction.

These studies document a novel effect—identical performances result in different judgments of the performer depending on whether observers believe the performance was repeated. While prior research has established that individuals who behave consistently are generally seen as more authentic (Cross, et al. 2003; English and Chen, 2011; Napoli et al., 2014), this work suggests that exposure to certain kinds of consistency can potentially dampen perceptions of authenticity. This work also shows that the same cue of repetition can create opposing effects on authenticity judgments depending on which dimension is evoked. In this case, we contrasted whether the content of a performance was self-expressive or not. This demonstrates empirical support for the notion that entities are authentic “with respect to” some referent (Carroll and Wheaton 2009; Dutton 2003), wherein, it is critical to identify the dimension people are referencing when forming authenticity judgments.

This work also holds practical implications. Performers often invest significant effort into producing original content, but these findings suggests that if they are recorded repeating a performance, their reputation could suffer. Consumers often observe repeated performances. For instance, as in Studies 3 and 4, YouTube viewers are often directed to similar clips of the same performer. Our work suggests that performers would benefit from controlling the reproduction of their content in order to manage how often they are shown repeating performances.

This research contributes to a body of work that has identified the importance of perceived authenticity in consumer preferences. We find that a cue, such as repetition, of an otherwise identical performance can lead to different assessments of performer authenticity and differential consumer intentions towards the performer.

## The Upside of Immorality: The Signal Value of Offensive Producer Behavior

### EXTENDED ABSTRACT

*“Every great work of art is offensive to someone.”*  
—Gerald W. Johnson

Woody Allen. Louis CK. Ernest Hemingway. Steve Jobs. John Lennon. Hunter S. Thompson. Richard Wagner. Kanye West. His-

tory is littered with luminaries as infamous for their personal transgressions as they are famous for their creative accomplishments. How does morally offensive behavior by producers affect consumers’ evaluations of their work?

A large body of work on halo effects demonstrates that moral assessments of producers often affect the perceived value of their products (Chernev and Blair 2015; Lee and Kwak 2016). Moreover, the negative effects of morally offensive producer behavior tend to be substantially stronger than the positive effects of morally praiseworthy behavior (Trudel and Cotte 2009). Beliefs about contagion further contribute to these effects: objects are thought to assume the essence of their owners, making people willing to pay enormous sums for golf clubs used by JFK but reluctant to try on a sweater worn by Adolf Hitler (Nemeroff and Rozin 1994; Newman Diesendruck and Bloom 2011). Both of these mechanisms may be especially influential in creative domains, where product value depends heavily on the identity of the creator (Bar-Hillel et al. 2012; Newman and Bloom 2012).

In stark contrast to these past findings, we propose that morally offensive behavior by producers can *enhance* the perceived value of their work. While transgressing social norms indicates poor moral character, it might also indicate a strong commitment to honesty (cf. Feldman et al. 2017; Jay 2009). We present four studies demonstrating that a willingness to offend signals authentic producer motives for unfiltered self-expression and a lack of concern for audiences. Accordingly, offensive behavior by producers can increase consumers’ evaluations of their creative output.

In Study 1 (N=166), participants evaluated a painting by an artist known for either mildly offensive sexist behavior or severely offensive racist behavior. In one condition, they read this biography before seeing the painting, coloring their evaluations of the work. In another condition, they saw the painting first, thus forming their initial judgments before learning of the artist’s offensive personal behavior. Participants who knew about the artist’s immoral behavior beforehand evaluated the painting more favorably, compared to those who learned this information afterwards ( $M=6.33$  vs.  $5.71$ ,  $F(1,162)=4.43$ ,  $p=.037$ ), regardless of the severity of the transgression ( $F(1,162)=1.64$ ,  $p=.202$ ). Moreover, participants who knew about the artist’s immoral behavior before seeing the painting were more willing to visit a gallery show featuring the artist (53.0% vs. 32.5%,  $\chi^2(1)=7.11$ ,  $p=.008$ ) and more willing to hang a poster of the painting in their home (59.0% vs. 38.6%,  $\chi^2(1)=6.97$ ,  $p=.008$ ).

We conducted a follow-up study (N=180) to explore individual differences in the willingness to visit a gallery show featuring an immoral artist. Responses were strongly correlated with participants’ beliefs about the importance of a unique artistic perspective ( $r=.41$ ,  $p<.001$ ), their beliefs about the importance of art ( $r=.33$ ,  $p<.001$ ), and the extent to which they personally cared about art ( $r=.37$ ,  $p<.001$ ). These results provide preliminary evidence that individuals’ support for immoral artists is related to the value they place on creative expression.

Study 3 (N=204) further investigated the extent to which offensive behavior is thought to signal creativity. Participants read a description of a high school student and evaluated his aptitude across a variety of subjects. In one condition, he was described as having a history of offensive, disruptive, and problematic social behavior. In another condition, he was described as well-adjusted with no history of behavioral problems. Participants then indicated how they expected the student to perform on standardized tests for logical reasoning and creative expression. Compared to well-adjusted behavior, offensive behavior was thought to indicate worse logical reasoning abilities ( $M=54.14$  vs.  $71.94$ ,  $t(202)=6.82$ ,  $p<.001$ ), but a signifi-

cantly better aptitude for creative expression ( $M=70.89$  vs.  $58.72$ ,  $t(202)=4.82$ ,  $p<.001$ ). While the offensive student was perceived as less moral ( $M=3.08$  vs.  $5.46$ ,  $t(202)=17.66$ ,  $p<.001$ ), he was also perceived as more interesting ( $M=5.31$  vs.  $2.80$ ,  $t(202)=12.52$ ,  $p<.001$ ).

Finally, Study 4 ( $N=305$ ) examined producers' willingness to include offensive product characteristics rather than immoral personal behavior, and sought more conclusive evidence that offensiveness is thought to signal authentic motives. Participants evaluated a movie producer who planned to adapt either a fiction or non-fiction book about a Neo-Nazi gang leader. In the baseline condition, the producer chose to include morally offensive scenes depicting violence, sexism, and racism. In another condition, the producer chose to tone down these scenes by removing offensive content, while in a third condition, he chose to add inoffensive elements (admirable female and minority characters) to make the movie less offensive. There were no differences between these ways of reducing offensiveness, and these conditions are collapsed below for ease of reporting.

Compared to reducing offensiveness, including offensive content increased perceptions of the producer's authentic motives ( $M=4.86$  vs.  $3.87$ ,  $F(1,301)=79.66$ ,  $p<.001$ ), honesty ( $M=5.19$  vs.  $4.61$ ,  $F(1,301)=13.39$ ,  $p<.001$ ), and creativity ( $M=4.27$  vs.  $5.03$ ,  $F(1,301)=43.23$ ,  $p<.001$ ). Only perceptions of authenticity mediated the effects of offensiveness on participants' expected enjoyment of the movie (indirect effect =  $-0.562$ , 95%CI[- $0.850$ ,  $-0.307$ ]). Interestingly, there was no main effect of the fiction manipulation and no significant interaction ( $F_s<1$ ). Regardless of whether the movie concerned true or fictional events, a willingness to incorporate offensive content served as a signal of the producer's commitment to authentic, unfiltered creative expression, thus enhancing the perceived value of their work.

These findings highlight the moral virtue consumers associate with authenticity (cf. Gino Kouchaki and Galinsky 2015). A willingness to transgress other moral norms may signal a commitment to truth, enhancing the value of creative work. Upholding other moral standards, such as concerns about objectionable content or consideration for audiences, may involve direct trade-offs for artistic producers.

## So-Bad-It's-Good: When Consumers Prefer Bad Options

### EXTENDED ABSTRACT

Understanding why consumers seek to consume good content (e.g., movies, TV shows, books) is trivial, even if definitions of good vary considerably and expectations often go unmet. But why would consumers seek to consume content precisely *because* they expect it to be bad? Why did Tommy Wiseau's movie *The Room* become a cult classic for its extreme badness? Why did Rebecca Black's song "Friday" and its disastrous lyrics garner over 100 million views on YouTube? And why did William Hung's atrocious rendition of "She Bangs" on American Idol become a viral sensation?

The phenomenon of "so-bad-it's-good" (SBIG) movies, songs, and other content is almost universally recognized by consumers. Between major media outlets and user-generated sites like BuzzFeed and FAIL Blog, compilations of SBIG content and spectacular failures attract ample attention. In a pilot study ( $N=158$ ), 96% of participants had little difficulty generating multiple examples of SBIG content, and over a third indicated having been sent such content by others.

Yet, the SBIG phenomenon has received little attention beyond initial investigations by humanities scholars (e.g., descriptions of ironic enjoyment of "trash" movies by cinema enthusiasts; Sarkhosh and Menninghaus 2016), and virtually none from consumer

researchers. Prior work on *schadenfreude* over product failures from high-status entities (Sundie et al. 2009), preferences for polarized products (Rozenkrantz, Wheeler, and Shiv 2017), or enjoyment of norm violations (McGraw and Warren 2010; McGraw et al. 2012) appears conceptually similar, but none directly examines when or why people would choose to consume content they expect to be bad over better alternatives.

In what domains and why do consumers exhibit preferences for SBIG options? Though offerings within taste domains are often thought to be horizontally differentiated, consumers also readily perceive and discuss vertical differences in quality in these domains (Spiller and Belogolova 2017). But why would people deliberately choose content that they themselves expect to be inferior in quality?

We examine when and why people may be more likely to pick a very bad option over a mediocre option. We expect that a majority of people will pick the best option available over both bad or mediocre alternatives. But given these alternatives, any choices of very bad options whatsoever (and especially more choices of these options over mediocre options) would serve as a proof-of-concept of the SBIG phenomenon.

To determine which content domains are most characterized by SBIG choices, an initial laboratory study ( $N=173$ ) simply asked consumers where their SBIG preferences are strongest. Participants reported their agreement with the statement "Some \_\_ are so bad they're good" for a wide variety of domains (1 = strongly disagree, 4 = neither agree nor disagree, 7 = strongly agree). While there was overwhelming agreement that certain domains were especially likely to produce SBIG content (e.g., talent show auditions, pickup lines, jokes, reality TV), others were mentioned by only about half the participants (e.g., crime shows, rap songs), and SBIG was seen as particularly unlikely in others (e.g., cakes, cookies).

Next, eight studies examined whether people were indeed more likely to choose very bad content over very good content across these various domains. In all of these studies, participants indicated which option what they'd prefer to consume based on quality ratings we provided.

In domains highly characteristic of SBIG (e.g., American Idol auditions,  $n=100$ ), more participants picked a very bad option (average rating of 1.5/9.0 stars; 36%) than a mediocre option (5.0/9.0 stars; 22%), though a very good option was chosen most frequently (8.5/9.0 stars; 42.0%). This was not true in domains seen as less characteristic of SBIG (e.g., rap,  $n=94$ ; 14.9% vs. 21.3% vs. 63.8%). However, SBIG preferences emerged in both domains in another study asking participants to rank nine options corresponding to each star rating ( $N=194$ ; first-ranked options: 20.1% vs. 6.2% vs. 73.7%). We replicated these results in several other studies: for instance, people were more likely to choose a 1-star option over a 5-star option for both American Idol auditions ( $n=95$ ; 20.0% vs. 8.4%,  $\chi^2=4.21$ ,  $p=.040$ ) and Game of Thrones fan-fiction ( $n=105$ ; 13.3% vs. 3.8%,  $\chi^2=4.88$ ,  $p=.027$ ).

What distinguishes domains that are especially likely to have SBIG content? Initial evidence suggests that the domains most associated with SBIG consumption are perceived as more low-brow ( $F(1,192)=73.64$ ,  $p<.001$ ), with content more focused on immediate hedonic enjoyment than learning or other utilitarian benefits ( $F(1,192)=316.76$ ,  $p<.001$ ). Indeed, a within-subjects study found that these domain differences significantly predicted the proportion of 1.2-star choices ( $N=156$ ,  $z=3.09$ ,  $p=.002$ ).

Two subsequent studies tested whether choices of low-rated options depend on their status as the worst option available, as well as the extremity of their badness. Participants ( $N=241$ ) asked to select an Olympic ski run to watch based on judges' ratings selected a



low-rated run more frequently when no worse options were available (25.0% vs. 1.3%), and choices of the worst option increase when it was extremely bad rather than somewhat bad ( $\chi^2=7.23, p=.007$ ). We replicated these results with choices of clips of the reality show "So You Think You Can Dance" (N=193): low-rated options were chosen more when they were the worst option, and extreme badness increased choices of the worst option ( $\chi^2=6.07, p=.014$ ).

Our findings are the first to quantitatively document SBIG preferences, as characterized by systematic choices of bad over mediocre content. The variation we observe across domains, as well as evidence from a variety of measures, provides initial insights about what drives SBIG and how enjoyment of bad content differs from enjoyment of good content. However, it is worth noting that these effects are apparent both within domains evaluated in terms of quality as well as those evaluated in terms of taste (Spiller and Belogolova 2017). Given the prevalence of this phenomenon, as well as the lack of relevant research, we hope these initial findings can lay a solid foundation for future research.

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# Perspectives on Consumer Trust in Artificial Intelligence

Chair: Chiara Longoni, Boston University, USA

## Paper #1: Consumers' Trust in Algorithms

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Maarten Bos, Disney Research USA  
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## Paper #2: Robo-Advising: Algorithm Appreciation

Jennifer M. Logg, Harvard University, USA  
Julia A. Minson, Harvard University, USA  
Don A. Moore, University of California, Berkeley, USA

## Paper #3: Consumer Reluctance Toward Medical Artificial Intelligence: The Underlying Role of Uniqueness Neglect

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Andrea Bonezzi, New York University, USA  
Carey K. Morewedge, Boston University, USA

## Paper #4: Psychological Reactions to Human Versus Robotic Job Replacement

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Christoph Fuchs, Technical University of Munich, Germany  
Stefano Puntoni, Erasmus University, The Netherlands

### SESSION OVERVIEW

Artificial intelligence (AI) is becoming ubiquitous in our society. AI-based technologies are manifold and pervade just about every aspect of consumers' lives. Dating sites use algorithms to match people looking for love. Hospitals use IBM's Watson to diagnose cancer and heart disease. Companies use chatbots to deliver customer care. Financial institutions use algorithms to automate trading and investment decisions.

What are the implications of AI-based applications for consumer trust? This session features research offering a wide range of perspectives on this question. In particular, this session showcases the most up-to-date research that examines what factors hinder versus foster consumers' trust in AI and what psychological processes are at play when consumers interact with AI.

The topics covered in this session include: (1) when do consumers prefer the input of an algorithm over the input of a human; (2) when do consumers rely on algorithmic advice, (3) what is consumer receptivity to artificial intelligence providing medical care; and (4) what are the psychological consequences of robotic replacement of human labor.

Castelo, Bos and Lehmann investigate when and why consumers trust algorithms more than expert humans. Trust in algorithms depends on three main factors: objectiveness of the task, performance of the algorithm, and reliance on feelings versus reason.

Logg shows that algorithm aversion might not be as pervasive as we thought, as people are willing to rely on algorithms depending on factors such as the role of the self and the expertise of the decision maker.

Longoni, Bonezzi and Morewedge examine consumer receptivity to a AI as provider of medical care. Consumers exhibit a robust reluctance toward medical AI, which is driven by *uniqueness neglect*, a concern that AI providers cannot account for a person's unique characteristics as well as human providers.

Granulo, Fuchs and Puntoni investigate the psychological repercussions of robotic job replacement. Whereas observers prefer human job replacement to robotic job replacement, workers whose jobs are threatened prefer robotic to human job replacement, as the former is viewed as a stronger long-term threat to one's profession.

Overall, the research featured in this session examines a timely and important topic: the multi-faceted impact of AI on consumer trust. These papers raise and answer questions that are both practically relevant and theoretically interesting, such as: How does AI influence choices and behaviors across various consumer contexts? What processes explain these influences? Under what conditions can policy makers ensure that A.I. improves consumer and social welfare? We hope that this session will spur new research delving deeper into how AI affects consumer trust.

We expect this special session to attract a wide audience, including scholars whose theoretical interests fall at the intersection of prediction, attitudes, advice giving/taking, and medical decision making. Due to the breadth of the domains investigated (i.e., AI, recommendations, robotics), this session is also likely to attract researchers interested in innovation.

None of the papers here included have been presented at ACR before, and they are all at an advanced stage of completion.

### Consumers' Trust in Algorithms

#### EXTENDED ABSTRACT

Prior research suggests that consumers rely on algorithms less than on humans, even when algorithms outperform humans. We explore when and why this is true and show how to increase trust in and use of superior algorithms.

#### Study 1

387 MTurk users indicated how much they would trust an algorithm or an expert human for 26 tasks, using 0–100 scales. Overall, participants trusted algorithms ( $M = 52.8$ ) less than humans ( $M = 70.2, p < .001$ ). However, was not true for all tasks.

250 separate participants rated how objective and consequential each task seems, and how much the use of algorithms for each task seemed to blur the line between humans and machines (i.e. human distinctiveness threat). Trust in algorithms was higher for tasks that seemed more objective,  $\beta = .77, p < .001$ , for tasks that seemed less consequential,  $\beta = -.34, p = .054$ , and for threatened human distinctiveness less,  $\beta = -1.49, p = .004$ .

#### Study 2

Can trust be increased simply by providing data showing that algorithms outperform humans? 404 participants reported whether they would rather use an algorithm or a human for 9 tasks, using a scale with 0 labeled as "prefer algorithm," 100 as "prefer human more," and 50 as "trust both equally." In the "performance data" condition, participants read about a real study demonstrating that the algorithm could outperform humans for each of the 9 tasks. We provided links to each study and specified how much better the algorithm performed compared to the humans. In the "no performance data" condition, this information was not provided.

Preference for using algorithms was higher when performance data was provided ( $M = 50.48$ ) compared to when it was not ( $M = 70.95, p < .001$ ). Note that preference for humans was observed for only 2 tasks when performance data was provided: predicting personality and joke funniness, two of the most subjective tasks.

### Study 3

Can framing subjective tasks as being objective increase trust in algorithms? 756 participants reported trust in algorithms vs. humans for the two tasks where participants trusted humans more than algorithms. The tasks were either described neutrally, as in Study 2, or as being objective (i.e. quantifiable, data-driven.) The objective frame increased trust in algorithms (collapsing across both tasks,  $M_{\text{control}} = 63.4$  vs.  $M_{\text{objective}} = 58.3$ ,  $p = .008$ ; lower numbers indicate greater trust in algorithms relative to humans).

### Study 4

To apply these findings, 14,997 Facebook users were exposed to 1 of 2 ads for algorithm-based dating advice: either a neutral ad that simply presented “algorithm-based dating advice,” or one describing dating as benefiting from objective, quantifiable data. Click-through-rate was higher for the objective ad (0.87%) compared to the control ad (0.39%,  $p = .053$ ). Advertising algorithm-based advice for a subjective task was therefore improved by framing the task as being objective.

### Study 5

To confirm the effects of task objectiveness and performance data in an incentive-compatible paradigm, 601 participants estimated the market share that a new product had captured after one year, then saw the same estimate from a marketing expert or from an algorithm and could then revise their initial estimate. The difference between their two estimates provides a measure of reliance the algorithm or human’s estimate. A bonus was given to the most accurate participants.

We informed some participants that the algorithm was 80% more accurate than expert humans, and we framed the task as either objective or subjective. When the task was framed subjectively, there were no differences in reliance on advice ( $M_{\text{algorithm}} = 10.5$ ,  $M_{\text{algorithm+performance}} = 11.2$ ,  $M_{\text{human}} = 10.7$ , all  $p$ 's  $> .65$ ). When the task was framed objectively, participants relied more on the algorithm than the human when they were aware of the algorithm’s performance ( $M_{\text{algorithm+performance}} = 14.5$ ,  $M_{\text{human}} = 10.6$ ,  $p < .001$ ) but not when they were unaware ( $M_{\text{algorithm}} = 10.4$ ,  $p = .871$ ). Thus, participants relied on an algorithm more than a human only when the task was framed objectively and they were aware of the algorithm’s performance. In all other conditions, participants relied on algorithms and humans equally.

### Study 6

Beyond objectiveness, the consequentialness of a task also correlates negatively with trust in algorithms, as does the algorithm’s perceived threat to human distinctiveness.

Changing the latter is more feasible for marketers and may also improve trust in algorithms for consequential tasks. In this study, 351 participants reported trust in and preference for algorithms vs. humans for creating a treatment plan for a complex disease. In the high threat condition, the algorithm was said to create the treatment plan and also “takes care of the human aspects of medicine, like answering patient’s questions.” In the low threat condition, the algorithm was said to create the treatment plan which “frees the doctor to take care of the human aspects of medicine...” Participants trusted the algorithm more in the low threat condition ( $M_{\text{low}} = 67.7$  vs.  $M_{\text{high}} = 61.3$ ,  $p = .020$ ), and preferred to use the algorithm vs. the human more ( $M_{\text{low}} = 52.2$  vs.  $M_{\text{high}} = 58.4$ ,  $p = .058$ ). Trust mediated the effect of condition on preference ( $\beta = 4.79$ , 95% CI = .95–9.06).

Consumers are increasingly presented with a novel choice: should they rely more on another human, or on an algorithm? Algo-

ritms often outperform humans, but algorithm aversion sometimes persists. We identified three sources of this aversion and showed the effectiveness of three interventions for overcoming it.

## Robo-Advising: Algorithm Appreciation

### EXTENDED ABSTRACT

Algorithms, scripts for sequences of mathematical calculations, are powerful. As humans interact more with algorithmically programmed agents in their cars, homes, and workplaces, we need to understand their “theory of machine.” By theory of machine, I refer to lay perceptions of how algorithms and humans differ in their input, process, and output, a flavor of theory of mind (Dennett, 1987). This tests when people are willing to rely more on algorithmic than human advice. Anecdotal evidence has led to a widespread idea that people are resistant to allowing a numerical formula to make decisions for them, even though algorithms often outperform human judgment in accuracy (e.g., Dawes, Faust, & Meehl, 1989). Yet, the empirical evidence is mixed and complicated (e.g., Dietvorst, et al., 2014; Dzindolet, et al., 2002; Yeomans, et al., 2017 vs.: Dijkstra et al., 1998; Dijkstra, 1999). In eight experiments, I test whether people are as distrustful of algorithms as prior work suggests.

Experiments 1A (N = 202) and 1B (N = 77 MBAs) tested if people are willing to rely on algorithmic advice. In Experiment 1A, participants guessed someone’s weight in a photograph answered the Numeracy Scale (Schwartz, et al., 1997). Participants were more influenced by advice when they thought that it came from an algorithm (M = .45, SD = .37) than from other people (M = .30, SD = .35),  $F(1, 200) = 8.86$ ,  $p = .003$ ,  $d = .39$ . Higher numeracy correlates with greater reliance on algorithmic advice,  $r(100) = .21$ ,  $p = .037$ . 1B replicated the effect with MBAs,  $F(1, 72) = 13.21$ ,  $p = .001$ , and two geopolitical forecasts,  $F(1, 72) = 5.52$ ,  $p = .022$ . Algorithm aversion may not be as widespread as prior work suggests.

Experiments 2A (N = 276 decisions) and 2B (N = 555) tested a mechanism of reliance on algorithmic advice: subjectivity of the decision. Participants provided three decisions for which they expected reliance on an algorithmic and three for reliance on a human advisor. Decisions were coded by assistants. Participants listed more objective decisions for the algorithmic advisor,  $\chi^2(1, N = 144) = 87.11$ ,  $p < .001$ ,  $r = 0.78$ , and more subjective decision for the human advisor,  $\chi^2(1, N = 136) = 16.03$ ,  $p < .001$ ,  $r = 0.34$  (Overall:  $\chi^2(1, N = 276) = 92.66$ ,  $p < .001$ ,  $r = 0.58$ ). Subjectivity of the domain appears to explain why people are willing to rely on algorithmic advice for objective estimates and forecasts.

Experiment 2B tested how subjectivity interacted with expertise of the human advisor. The experiment had a 2 (subjectivity: subjective vs. objective) X 2 (expertise of person: expert vs. non-expert) mixed design where participants imagined making twelve decisions. Subjectivity was within-subjects and expertise was between-subjects. Controlling for importance, there is an interaction between subjectivity and expertise,  $F(1, 550.98) = 124.98$ ,  $p < .001$ . Perceived subjectivity of the decision mediates the relationship (sober for between:  $z = -3.18$ ,  $p = .001$ ). Expert advice was preferred, regardless of subjectivity,  $F(1, 719.23) = 0.87$ ,  $p = .352$ . These results suggest that although subjectivity mediates reliance algorithmic advice, expertise of the human advisor moderates it.

Experiment 4 examined how the expertise of the decision maker influenced perceptions of algorithmic advice. Experiment 4 (N = 301 lay, 77 experts) compared how lay people and experts who worked in National Security for the U.S. Government (who made geopolitical forecasts regularly) differed in their response to algorithms. Participants made an estimate, one business forecast (the



samples were expected to have low expertise on both) and two new geopolitical forecasts (the experts were expected have more expertise). Controlling for familiarity with what an algorithm is, there is a main effect of advisor,  $F(1, 338) = 9.46, p = .002$ , and expertise,  $F(1, 338) = 32.39, p < .001$ . The effect of advisor is driven by the lay sample, as evidenced in the interaction,  $F(1, 338) = 5.05, p = .025$ .

### Consumer Reluctance Toward Medical Artificial Intelligence: The Underlying Role of Uniqueness Neglect

#### EXTENDED ABSTRACT

Artificial Intelligence is revolutionizing healthcare. IBM's Watson diagnoses heart disease, chatbots dispense medical advice for the United Kingdom's National Health Service, and smartphone apps detect skin cancer with expert accuracy. With AI pervading all facets of healthcare, gauging consumer receptivity to medical AI bears important implications for consumer welfare. However, whereas much is known about medical AI's efficacy, cost-efficiency, and scalability, little is known about consumers' receptivity to medical AI. Across eight studies we show that consumers exhibit a robust reluctance toward medical AI, and that such reluctance is driven by *uniqueness neglect*, a concern that AI providers cannot account for a person's unique characteristics and circumstances as well as human providers.

A first set of four studies examined consumer preferences for medical care provided by AI as compared to care provided by a human physician. Consumers were reluctant to utilize medical care delivered by AI providers, relative to their propensity to utilize comparable care delivered by human providers. Furthermore, consumers were more reluctant to choose an objectively superior medical provider, if that provider was automated than human.

Study 1 (N=228) showed that consumers were less likely to utilize medical care when the provider was automated than human, even if the providers' performance was objectively equivalent. In an incentive-compatible setting and separate evaluations, participants chose whether to use a diagnostic service carried out by either a human or an automated provider. Whereas 39.8% of participants chose to utilize the service when it was carried out by a human, only 26.7% chose to utilize it if carried out by an automated provider ( $c^2=4.4, p=.03$ ).

Studies 2A-2C (N=744) showed that consumers were less prone to choose an AI provider when a human provider was available, even if the former was more accurate than the latter, and this difference in accuracy was explicit. We selected existing applications of AI to various types of preventive (i.e., AI analyzing images for early detection of skin cancer), diagnostic (conversational chatbots triaging an emergency) and treatment care (robotic-assisted surgery to implant a pacemaker) and investigated consumer choice of care provider in joint evaluations (i.e., choice between two human providers vs. choice between a human and an automated provider). Robust across medical decisions and framing of accuracy as success or failure, participants were more reluctant to choose an objectively superior medical provider if that provider was automated than human.

Additional four studies provided empirical support for *uniqueness neglect* as a psychological mechanism underlying reluctance toward medical AI. Building on the notion that consumers perceive automated providers to be rigid, inflexible, and capable of operating only in a standardized fashion (e.g., Haslam 2006; Loughnan and Haslam 2007), we propose that the prospect of being cared for by AI providers results in a concern that a person's unique symptoms, circumstances, and characteristics will be neglected. We refer to this concern as *uniqueness neglect*. We provide converging evidence of

uniqueness neglect as a psychological driver of reluctance toward medical AI via mediation and moderation.

Study 3 (N=286) showed that reluctance toward medical AI was moderated by the extent to which a consumer perceives herself to be unique (measured using the Sense of Uniqueness scale, Simsek and Yalınçetin 2010): greater perceptions of self-uniqueness were associated with greater reluctance to choose an AI provider ( $p=.01$ ).

Study 4 (N=215) showed that concern that an AI provider cannot account for a consumer's unique symptoms and circumstances—*uniqueness neglect*—mediated reluctance toward medical AI. Participants rated the likelihood to use a diagnostic service that allowed them to chat with either a human or an automated nurse to diagnose an emergency. A 3-items scale measured uniqueness neglect (beliefs about the ability of the provider to accommodate a person's uniqueness). Participants were more likely to use the service when the provider was human ( $M=4.15$ ) than automated ( $M=3.16, p < .001$ ) and uniqueness neglect mediated the effect (LLCI=-0.70 ULCI=-0.18, Sobel  $z=-3.2, p=.001$ ).

Studies 5 and 6 provided further converging evidence for uniqueness neglect via moderation. Study 5 (N=222) shows that when uniqueness neglect is curbed (e.g., when medical care is framed as personalized to one's unique needs), reluctance to choose AI is attenuated (process evidence via moderation). Participants rated the likelihood to use a preventive service carried out by either a human or an automated provider. Half of the participants read that care was personalized to "each patient's biological characteristics." When care was not personalized, participants were more reluctant to use the service if the provider was automated ( $M=3.77$ ) than human ( $M=4.80, p = .005$ ). However, such effect disappeared when care was tailored to one's unique circumstances ( $p = .79, F_{int}=4.9, p=.02$ ).

Finally, study 6 (N=333) showed that when uniqueness concerns do not apply (e.g., when choosing a provider for another person), reluctance to choose A.I. was curbed (process evidence via moderation). Participants rated the likelihood to use a diagnostic service either for themselves or for somebody else. When choosing for themselves, participants were less likely to use the service if the provider was automated ( $M=5.64$ ) than human ( $M=6.31, p=.002$ ). However, when choosing for somebody else, stated likelihood was the same irrespective of provider ( $p=.70; F_{int}=4.7, p=.03$ ).

Together, our findings demonstrated a consequential reluctance to medical AI likely to influence several medical decisions consumers make, identified uniqueness neglect as psychological underlying driver of reluctance toward AI, and revealed how to curb such reluctance. As such, we contribute to research on the psychology of automation by extending its scope to the study of consumers in medical settings. Second and more broadly, our research advances our theoretical understanding of consumer decision making in the medical domain by identifying a novel psychological mechanism that shapes an increasingly common class of medical decisions related to consumer utilization of healthcare. Finally, our research provides timely and reaching insights for industry and policy efforts aimed at increasing acceptance of AI-based technological advancements that greatly benefit people's health.

### Psychological Reactions to Human Versus Robotic Job Replacement

#### EXTENDED ABSTRACT

Today's advances in robotics and artificial intelligence increasingly enable firms to fully replace employees with intelligent machines and algorithms. Forecasts predict that, in the coming years, these new technologies will have a major impact on society and will



affect millions of workers in a wide range of occupations (Brynjolfsson and McAfee, 2014). Despite the intense debate around these issues within economics, sociology, and other social sciences, research has not examined how people—both employees and society at large—react to technological replacement of human labor. We address this gap by examining how people react to losing their jobs to modern technology (e.g. robots or algorithms).

In Study 1A (N = 90), we experimentally test whether people prefer human over robotic job replacement. Half of the student participants read that a firm needed to cut costs and therefore had the option to replace existing employees either by other (new) employees or by robots. We find that more participants preferred the employees to be replaced by new employees than by robots (67% vs. 33%,  $Z = 2.20, p < .05$ ). The other half read the same text but adopted the perspective of the employees about to lose their own job. This subtle manipulation of perspective taking, from an observer to an employee perspective, shifted participants' preferences: when participants were told that their own job was at risk, only 40% of the respondents (vs. 67% in the observer condition) preferred being replaced by humans rather than by robots ( $\chi^2(1) = 6.59, p < .05$ ).

In Study 1B (N = 86), we replicated these findings with a sample of qualified workers from an online labor market: 63% of the participants preferred human replacement in the observer perspective condition, whereas only 40% preferred human replacement in the employee perspective condition ( $\chi^2(1) = 4.65, p < .05$ ).

We posit that this effect of perspective taking occurs because being replaced by robots (vs. other humans) is less threatening to one's self-identity, i.e. how individuals evaluate their self-worth and capabilities (Tesser, 1988). This is because being replaced by, or "losing" against "infallible", robots (vs. other humans) should trigger less identity-relevant social comparisons. Thus, to avoid this self-threat and maintain a positive self-image, people have a short-term psychological incentive to prefer being replaced by a robot (vs. another human). However, while comparing to an "infallible" robot might offer little information for people to evaluate their self-worth, people nevertheless evaluate whether differences in capabilities can be reduced (Arnkellson and Smith, 2000). Thus, if people are replaced by robots, and predict that the gap in abilities is permanent, they should be more concerned about one's future professional prospects.

In Study 2 (N = 85), we test these predictions empirically. We used a "white-collar" working context. Participants were asked to imagine working as lawyers for a reputable law firm. The firm was reorganizing its business processes and they were going to lose their job. In line with our predictions, we find that participants rated robotic replacement as less threatening to their self-identity than human replacement ( $t(84) = -10.70, p < .001$ ) but more threatening to their economic future ( $t(84) = 2.26, p < .05$ ). Moreover, a linear regression of preferences on self-threat ( $\beta = -.845, SE = .104, p < .001$ ) and on future concerns ( $\beta = -.196, SE = .091, p < .05$ ) reveals that participants preferred the replacement option that induced less self-threat, namely robotic replacement.

In Study 3 (N = 89), we examine feelings of self-threat and future concerns in a between-subjects design and a different occupational context. In one condition, participants were asked to imagine working for a logistics firm and read that, in the course of a reorganization, the firm had decided to replace them with modern robots. Participants in the other condition read that the firm had decided to replace them with other warehouse workers. Consistent with our results from Study 2, being replaced by a robot (vs. by another warehouse worker) led to less self-threat ( $t(87) = -3.78, p < .001$ ) but

greater concerns regarding one's own economic future ( $t(87) = 3.0, p < .01$ ).

In Study 4 (N = 216), we test whether the effects documented in the previous experiments replicate in a correlational design among people who recently lost their job. Therefore, we recruited workers from an online labor market who indicated to have lost their job within the last two years. We measured the extent to which these workers attributed their job loss to robotic or human replacement, as well as job-loss related self-threat and future economic concerns. To test how the latter two are related to attributions of human and robotic replacement, we ran a series of linear regressions, including a set of control variables (e.g. other reasons for job loss, duration of unemployment, former and current income). Consistent with our previous findings, self-threat was consistently related to perceptions of human replacement (all  $p$ 's  $< .05$ ) but not to perceptions of robotic replacement. Conversely, future economic concerns were only consistently related to perceptions of robotic replacement (all  $p$ 's  $< .05$ ).

Despite the societal importance of workplace automation in the coming decades, no prior research has investigated how people – both employees and society at large – react to technological replacement of human labor. We show that, while the public tends to prefer human workers to be replaced by other human workers than robots, the workers whose jobs are threatened might prefer to be replaced rather by robots. This is because technological (vs. human) job replacement has unique psychological consequences, which support programs for the unemployed should take into account. Our findings may also inspire novel predictions regarding broader societal consequences of technological unemployment. For example, based on our results, it is conceivable that customers react particularly negative towards companies automating tasks they believe could and should be done by workers (Waytz and Norton, 2014). On the other hand, organized resistance among workers to job losses might be weaker when the job losses are attributed to automation than to human replacement.

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# Relationship between Visual Perception and Consumer Behavior: Identifying Effects of Visual Stimulus Characteristics on Product Evaluations

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## **Paper #1: Communicating a Promise of Change: Visual Steps Enhance Process Imagery**

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## **Paper #2: A Simple Step to Go Beyond Present: How Visual Entropy Cues Influence**

### **Temporal Focus and Consumer Behavior**

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## **Paper #3: How Eyes Pull on the Heartstrings: Averted Eye Gaze Enhances Narrative Transportation and Self-Brand Connection**

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## **Paper #4: Visual Perceptual Research in Marketing**

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visual. To and Patrick research the visual characteristic of gaze direction, hypothesizing that when an ad's model has an averted, versus direct, gaze, consumers feel as if they are part of the narrative in the ad. As such, averted gazes enhance narrative transportation, which in return boosts self-brand connection. Finally, Sample, Hagtvedt, and Brasel develop a conceptual model for understanding consumer visual perception. Their synthesized framework indicates three primary constructs to visual perceptual research: visual processing, visual stimulus dimensions and holistic visual perception. This model combined with a synthesis of extant literature identifies considerable opportunities for future research in this realm.

In summary, the papers in this session (all in advanced stages): (1) examine the impact of several characteristics of visual stimuli—presence of intermediate steps (Cian, Krishna and Longoni), level of disorderliness (entropy) (Biliciler-Unal, Raghunathan and Ward), and gaze direction (To and Patrick)—on product evaluations, and (2) suggest a framework for synthesizing the visual perception literature (Sample, Hagtvedt and Brasel). Overall, the session offers important theoretical insights in understanding how visuals affect consumer behavior—a topic that is likely to be of substantial interest to a broad audience at ACR.

## SESSION OVERVIEW

The world is witnessing an unprecedented explosion of visual images (Kane and Pear 2016). This rising importance of visuals in daily life and their heightened use for marketing purposes necessitates further research into how various characteristics of visual stimuli influence consumer behavior. The literature on visual perception has steadily grown over the last two decades; however, many links between visual perception, cognition, and consumer behavior remain to be explored (Krishna 2012). Thus, the goal of this session is to both explore characteristics of visual stimuli that influence consumer behavior and construct a conceptual framework to understand developments in this area of the field.

The four papers in this session examine how visual stimulus characteristics, including presence of visuals showing the intermediate steps in advertisements promising change, level of disorder (entropy) in visual content, and gaze direction of an ad model, impact evaluations of associated products. Specifically, in the context of advertisements promising change, Cian, Krishna and Longoni examine the effect of including visuals of the intermediate steps between visuals of the before and after states (e.g., a person at the beginning and at the end of a weight loss program). The authors propose that including these intermediate steps facilitates mental imagery of the change process. Results demonstrate that presence of intermediate steps increases ad credibility and leads to more favorable attitudes toward the product. Biliciler-Unal, Raghunathan and Ward study how the level of disorder (entropy) in visuals affects temporal focus (i.e., whether consumers think of the past or the future) and thereby, product evaluations. They show that visuals with high levels of disorder (e.g., a crumbled cookie) make consumers focus on the past, while those with low levels of disorder (e.g., a full cookie) make them focus on the future. Therefore, consumers evaluate past (vs. future) related products more positively when presented with a high (low) entropy

## Communicating a Promise of Change: Visual Steps Enhance Process Imagery

### EXTENDED ABSTRACT

Humans often desire change: we want to be thinner, look younger, have more hair. Marketers respond to such desires by offering products promising to deliver the corresponding changes: weight-loss programs, wrinkle removers, hair regrowth solutions. The visuals in the advertisements (ads) for these products typically focus on the desired final outcome by featuring a before and an after visual (e.g., a person at the beginning and at the end of a weight loss program; *before-after ads*). Very few *change-ads* include visuals of the intermediate steps between the before and the highly desirable after (e.g., a person gradually slimming down throughout the weight loss program; *progression ads*).

Although neglected in the marketplace and by future marketers, across seven studies we show that progression ads are superior to before-after ads across multiple consumer domains. We theorize that, to be effective, ads promising transformation should facilitate mental imagery of the trajectory of the change, i.e., the consumer should be able to imagine herself going through the transformation from “before” to “after.” Progression ads (but not before-after ads) evoke this kind of spontaneous process *imagery* -- thoughts and images about the means and ways leading to a change. In turn, spontaneous process imagery increases the credibility of the ad and leads to more favorable attitudes toward the product (serial mediation).

Through a content analysis of 250 ads of the top five weight-loss programs in the US (source: Consumer Affairs) we show that before-after ads are more common than progression ads: 36% were “before-after” whereas only 0.8% were “progression.” Another a pilot study asked participants (N=122) to draw the ad for a weight loss program. While 22.95% of participants drew before-after ads, only 1.64% drew progression ads ( $z = 5.07, p < .001$ ; remaining ads coded

as “others”). Overall, these pilot studies show that progression ads are neglected by both current and future marketers.

In studies 1a (N=116) and 1b (N=139), we show that adding intermediate steps to a before-after ad increases the credibility of the ad. In both studies and using different stimuli (stylized figures and actual photographs), the progression ad was more credible than the before-after ad. One pretest ensured that the stimuli used did not differ on visual appearance, informativeness, complexity, familiarity, and novelty (all  $p$ 's > .1).

In study 2 (N=134), we test the downstream consequences of credibility on attitudes toward the product. Participants rated credibility and reported their attitudes toward one of two versions of an ad for a fictitious hair growth product. The before-after ad featured a drawing of a person before using a hair growth treatment and a drawing of the same person at the end of the treatment. The progression ad contained an identical drawing with the addition of drawings of four intermediate outcomes. As predicted, the progression ad was associated with higher credibility ( $M_{\text{before-after}}=2.91$ ,  $M_{\text{progression}}=3.79$ ;  $F(1, 132)=5.99$ ,  $p < .05$ ) and more positive attitudes ( $M_{\text{before-after}}=3.71$ ,  $M_{\text{progression}}=4.73$ ;  $F(1, 132)=7.35$ ,  $p < .05$ ) than the before-after ad. In a mediation model, credibility fully accounted for the effect of ad type on attitudes (95% CI: .16, 1.43).

Studies 3a (N=143) and 3b (N=80) we use open-ended and close-ended responses to show that progression ads evoke greater process imagery than before-after ads, even though both ads only have visuals of outcomes. In study 3a we coded the content of the spontaneous thoughts and images that either a before-after or a progression ad evoked in participants. Indeed, the progression ad generated more spontaneous process imagery than the before-after ad ( $z=5.11$ ,  $p < .01$ ). The two ads did not differ on outcome imagery ( $p > .5$ ) or amount of imagery (i.e., response length,  $p > .5$ ). In study 3b participants rated the extent to which a before-after ad or a progression ad evoked process and outcome imagery (through six randomly presented statements, three reflecting process imagery ( $\alpha = .89$ ) and three reflecting outcome imagery ( $\alpha = .70$ ) adapted from Taylor et al. 1998; Escalas and Luce 2004; Zhao et al. 2007; 2011. Again, the progression ad led to higher process imagery than the before-after ad ( $M_{\text{before-after}}=4.11$ ,  $M_{\text{progression}}=6.92$ ;  $F(1, 78)=41.53$ ,  $p < .01$ ) and to the same outcome imagery ( $p > .5$ ).

Study 4 (N=142) tests the links between the constructs investigated in the previous studies. Results show how the progression ad leads to greater process imagery than the before-after ad, which then results in higher credibility and consequently more positive attitudes toward the product (full serial mediation, 95% CI: .18 and .89).

Study 5 tests a boundary condition and shows that ambiguity (operationalized through size of change) moderates the effect of ad type on attitudes. We expected to replicate study 4 in the large change condition (high ambiguity because the transformation is large), with a full serial mediation whereby the progression ad leads to greater process imagery, credibility, and ultimately better attitudes than the before-after ad. However, when the change is small (low ambiguity because the transformation is trivial), the progression ad should no longer be more persuasive than the before-after ad. Indeed, within the large change condition, there was a full serial mediation (95% CI: .45 and 1.86). However, and as predicted, within the small change condition, the serial mediation was not significant (95% CI: -1.00 and .20). Importantly, the full mediations in studies 2, 4, and 5 via process imagery indicated that the process mechanism driving the observed effect is not the amount of information contained in the ad (or these mediations would be partial).

Theoretically, and differently from prior research on mental simulation, we bring attention to an understudied yet important ty-

pology of mental imagery: spontaneous mental simulation of process (*process imagery*), and highlight its critical role in the persuasiveness of advertised change. Second, we add to the literature on process versus outcome focus by showing how process imagery can be spontaneously generated through outcome visuals. Substantively, we show that before-after ads, currently prevalent in the market place, may be an ineffective way to credibly promise positive change.

## A Simple Step to Go Beyond Present: How Visual Entropy Cues Influence Temporal Focus and Consumer Behavior

### EXTENDED ABSTRACT

With the rising importance of social media as a marketing platform, marketers have begun to use more visual content. In 2017, 85% of marketers indicated that they use visual images in their social media marketing (Stelzner 2017). A growing body of research indicates that even subtle visual cues such as orientation of the objects (Elder and Krishna 2012) and dynamism of the icons (Cian, Krishna and Elder 2015) can influence consumer attitudes and behavior.

In this research, we explore how a particular aspect of visuals—the degree of (dis)order in them—affects evaluations and preferences for products. We merge insights from physics—in particular, the concept of “entropy” (operationalized in our studies as the level of disorder)—with insights from the psychological literature on time perception to frame our investigation of how entropy cues (the degree of (dis)order in an image) can influence customers’ (i) temporal focus and (ii) product evaluations.

The second law of thermodynamics states that the level of disorder (entropy) in a closed system can only increase with time. As such, with time, things (e.g., a bookshelf, a cookie) become less orderly. Interestingly, even 8-month-old infants appear to be intuitively aware of some of the manifestations of this law (Friedman 2001; 2002). For example, when 8-month-olds are presented with forward and backward versions of videos showing objects falling apart, they prefer the forward version better. Since people learn from very early on that entropy increases with time, we hypothesize that they will expect a high entropy state to follow a low entropy one. Further, because people find a sense of meaning in connecting points in time (Sarial-Abi et al. 2017), we suggest that when people are shown a low entropy picture (e.g., a full cookie), their thoughts automatically focus on future—high entropy state (a crumbled cookie). Likewise, when people are shown a high entropy picture (e.g., a crumbled cookie), their thoughts focus on past—low entropy state (a full cookie).

Because of these effects of entropy on temporal focus, and based on the idea that people find it easier to process images that match, we expect evaluation of a past-related product (e.g., a vintage product) to be more positive when it’s paired with a high entropy visual, since such visuals prompt people to become past-oriented, and vice versa. Similarly, we expect participants to report higher interest in visiting a store which is presented with high (vs. low) entropy visuals when looking to buy a past-related product (e.g., an old book), and vice versa.

Study 1 provides evidence that people expect entropy to increase with time. Participants ( $n=56$ ) were presented with 8 pairs of visuals where one image was more disorderly than the other. For each pair, participants selected the visual that came first in time. As hypothesized, the low entropy images were, on average, judged to have preceded the high entropy ones ( $t(55)=5.659$ ,  $p < .001$ ).

Studies 2a and 2b show that participants exposed to high (vs. low) entropy visuals are more likely to focus on the past (vs. future),



and vice versa. In study 2a, participants ( $n=71$ ) were presented with 6 visuals differing in level of entropy. After each visual, they were shown a 100-point slider scale with end-points marked as “past” and “future” and the middle-point marked as “present”. Using the slider, they indicated whether the image made them think of past, present or future. As predicted, we found that while high entropy visuals make people think about past ( $t(70)=5.14, p<.001$ ), low entropy visuals make them think about future ( $t(70)=3.44, p<.001$ ). Study 2b replicated these results using a between-subjects entropy manipulation and non-student sample.

After establishing that entropy cues influence temporal focus, we turn our attention to exploring whether past (future) oriented products are evaluated more positively when displayed alongside high (low) entropy visuals. In study 3a, we manipulated both the level of entropy in background visuals and the time orientation of products. Participants ( $n=175$ ) saw a low or high entropy poster; after a brief delay, either vintage or futuristic piece of furniture appeared in front of the poster. Participants then indicated how much they liked the furniture. As hypothesized, there was a significant interaction between entropy and time orientation ( $F(1,694)=5.51, p=.019$ ). When paired with high entropy posters, futuristic furniture was evaluated less positively than vintage furniture, ( $M_{\text{futuristic}}=3.50, M_{\text{vintage}}=4.00, F(1,346)=5.55, p=.019$ ); conversely, when paired with low entropy posters, the same futuristic furniture was rated, not significantly but directionally, more positively than vintage ones ( $M_{\text{futuristic}}=4.10, M_{\text{vintage}}=3.95$ ). Study 3b replicated study 3a’s results using a subtler manipulation of time orientation of products.

Study 4 demonstrated that the hypothesized match between entropy and product’s time orientation works in a different product category. It showed that when considering purchasing an old (vs new) book, participants are more interested in visiting a bookstore promoted with high (vs low) entropy visuals ( $F(1,436)=12.46, p<.001$ ).

Study 5 established that shifts in temporal focus mediate the link between visual entropy cues and product evaluations. Participants ( $n=170$ ) saw high or low entropy visuals of bookstores and reported their temporal focus while looking at them. Later, they indicated how willing they would be to purchase a book from that store that will be published in future relative to a book that was published in past. Last, they estimated how old the bookstore is. Results revealed that participants in the high (vs. low) entropy condition focused significantly more on past ( $M_{\text{high}}=41.99, M_{\text{low}}=46.10, F(1,168)=6.25, p=.013$ ), but not judged bookstore as older. Moreover, participants in low (vs. high) entropy condition were more interested in buying a future-oriented book ( $M_{\text{low}}=5.25, M_{\text{high}}=4.55, F(1,168)=6.176, p=.014$ ). Mediation analysis revealed a significant indirect effect of entropy on product preference through temporal focus, 95% CI[-.3131, -.0126].

Across seven studies, we explored how visual entropy cues influence temporal focus and product evaluations, and found that high (low) entropy visuals lead to focusing on past (future), and thereby, elicit higher evaluations for past (future) related products. The paper thus contributes to the literature on visual perception and consumer behavior, and to that on temporal focus.

### How Eyes Pull on the Heartstrings: Averted Eye Gaze Enhances Narrative Transportation and Self-Brand Connection

#### EXTENDED ABSTRACT

Narrative transportation is defined as the extent to which an individual is immersed and absorbed into a visual narrative (adapted from Green and Brock 2000). We propose that the averted gaze (vs. direct gaze) of a model in an advertisement heightens the viewing

experience by facilitating greater narrative transportation, which helps forge a stronger consumer self-brand connection (henceforth SBC). In order to provide theoretical support for our hypothesis, we next discuss how gaze enhances narrative transportation in the arts and theatre domain. In the following exposition, we will use the term ‘audience’ to refer to the viewers or spectators of an artwork or theatrical performance.

In theatre, when performing a narrative on stage, performers on stage often avert their gaze away from the audience in order to create an authentic dramatic world (Gray 1964). By averting their gaze from the audience, the performers create the existence of an invisible imaginary wall (i.e., the fourth wall) that separates the audience from the staged performers. This imaginary wall works to heighten the naturalism of the fiction being presented on stage by letting the audience engage with the fictional world as if they were observing real events. On the other hand, when performers direct their gaze towards the audience, the imaginary fourth wall is momentarily suspended and the audience is made aware of their role as spectators observing the performers’ enactment of fictional events (Wallis and Shepherd 1998). Thus, the averted gaze (vs. direct gaze) of performers in a theatrical performance appears to influence the degree to which the audience is immersed in the work presented. Similarly, gaze also manifests in the domain of fine art, particularly in how portrait paintings engage with the audience (Kern 1996). When analyzing historical portrait paintings, art historians have documented the gaze of the art subject and how such gaze influences the way the audience’s engagement (Simons 1988).

Compared to direct gaze, averted gaze is often considered an aesthetic feature that absorbs the viewers in “the act of looking” (Morgan 2005, p. 4). In contrast, direct gaze of an art subject is considered to be a signal from within the image that the audience is on the outside of the visual narrative (Alpers 1983). These analyses on the role of gaze (direct vs. averted) in both the domains of theater and art suggest that averted gaze is more likely than direct gaze to immerse and engage the audience to feel as if they are part of the narrative, and as such generates greater narrative transportation. Thus, we hypothesize that an ad model’s averted gaze (vs. direct gaze) will enhance narrative transportation, which in turn will facilitate greater SBC (Escalas 2004).

Because of the differences in social perceptions elicited by direct vs. averted gaze, we propose that the visual effect hypothesized will be moderated by the verbal appeal of the ad (rational vs. emotional). Since direct gaze is associated with increased perceptions of trustworthiness (Argyle and Cook 1976), we hypothesize direct gaze will lead to greater transportation when rational appeals are featured. On the other hand, we expect that averted gaze is associated with greater affective responses (van der Weiden et al. 2010) and thus, averted gaze will lead to greater transportation under emotional appeals are featured.

In Study 1, we examined the influence of gaze on SBC and transportation as the underlying mechanism. Participants were randomly assigned to one of the two gender-appropriate ad conditions in which they were shown a fictional perfume/cologne advertisement that featured a female/male model with a direct or averted gaze. Results revealed that participants in the averted gaze condition felt significantly higher self-brand connection ( $M_{\text{averted}} = 4.18$ ) than participants in the direct gaze condition ( $M_{\text{direct}} = 3.65, F(1,174) = 7.53, p < .01$ ). Further, participants in the averted gaze condition also felt significantly more transported ( $M_{\text{averted}} = 4.41$ ) than participants in the directed gaze condition ( $M_{\text{direct}} = 3.19, F(1,175) = 66.82, p < .001$ ). Mediation analysis revealed a significant indirect effect of



gaze on self-brand connection through ad transportation,  $b = -.40$ , 95% CI [-.67, -.15].

Study 2 was designed to replicate the hypothesized role of narrative transportation, but via manipulating narrative transportation. Specifically, in one condition we present no explicit instructions to encourage narrative transportation (similar to Study 1), but in the other condition, we facilitate narrative transportation using ad instructions to encourage participants to imagine themselves as part of the advertisement. Our results revealed that when participants are encouraged to 'transport' themselves into the ad, direct gaze will also enhance self-brand connection, thus mimicking the effects of averted gaze on self-brand connection seen in Study 1.

In Study 3, we examined the moderating role of ad appeals (rational vs. emotional) in the influence of gaze on transportation. Participants were randomly assigned to one of the two gender-appropriate ad conditions in which they were shown a fictional watch advertisement that featured a female/male model with a direct or averted gaze. Each ad also featured either rational/emotional tagline. Results yielded a significant interaction between gaze and ad appeals on transportation ( $F(1, 189) = 10.58, p < .001$ ). When the ad featured a rational appeal, participants felt significantly more transported when the model's gaze was direct ( $M_{\text{direct}} = 4.39$ ) than averted ( $M_{\text{averted}} = 3.86, p < .05$ ). When the ad featured an emotional appeal, participants felt significantly more transported when the model's gaze was averted ( $M_{\text{averted}} = 4.38, p < .05$ ). Our mediated-moderation analysis revealed that when rational appeals are featured, transportation mediates the influence of direct gaze on SBC (95% CI: [-.60, -.08]). When emotional appeals are used, transportation mediates the influence of averted gaze on SBC (95% CI: [.05, .57]).

From a theoretical perspective, this research contributes to the extant literature by 1) demonstrating the novel influence of gaze on narrative transportation and SBC and 2) introducing the interplay between ad appeals and gaze in enhancing consumer transportation when viewing print advertisements.

## Visual Perceptual Research in Marketing

### EXTENDED ABSTRACT

The visual perception of products, places, and promotions is critically important to understanding consumer behavior in the marketplace (Krishna 2012). Despite considerable research focusing on consumer cognitive functioning regarding visual stimuli, our field lacks a unifying framework for understanding the nuances of visual perception. We provide a conceptual model and systematic review of visual perceptual research within marketing, focused on what occurs during perception and which dimensions influence consumer behavior and are consequently important to marketing researchers. By so doing, we present practical and theoretical insights and identify avenues for future research that draw upon the centrality of vision to the consumer experience.

To develop our conceptual framework, we systematically reviewed approximately twenty high-quality marketing and marketing-related journals since 1970, including JCR, JCP, JM, JMR, and JAMS. Papers were chosen that contained an exploration of visual sensory processing; articles exploring imagery only as a prime, or manipulation, were excluded, as were papers that solely focused on the back-end cognitive effects of vision. Additionally, relevant articles from core disciplines bridged gaps and provided synthesis.

Across the literature and over 375 articles, no consistent definition of visual perception emerged, and the term is applied to quite varied stages in the act of vision, perception, cognition, and memory. Thus, we provide the following definition: the processing and

comprehension of focal and non-focal visual stimuli within the perceptual field as influenced by context and experience. Though the perceptual field of figure (i.e., the focal area of interest) and ground (Wagemans et al. 2012) is constantly updated as consumers navigate the world around them (Mace 1977; Rock 1983; Uttal 1981), we provide a momentary snapshot of this process, which fits with most marketing research conducted to date.

When considering this model and the act of consumer visual perception, three primary constructs of interest to marketing emerge: visual processing, visual stimulus dimensions, and holistic visual perception. We define visual processing as the internal comprehension of visual stimuli through the visual cortex as it is informed by cognition. There are numerous research endeavors examining aspects of visual processing, such as attention (Janiszewski 1998; Pieters, Rosbergen, and Wedel 1999; Rosbergen, Pieters, and Wedel 1997). Visual versus verbal processing is another area of interest (Childers, Houston, and Heckler 1985; McQuarrie and Mick 2003; Mitchell 1986; Townsend and Kahn 2013). However, relatively few researchers have examined cross-modal processing, such as how sound influences visual focus (Hagtvedt and Brasel 2016) or how haptics can alleviate erroneous visual estimations (Krishna 2006). Though many papers explore effects of stimulus attributes on processing by the consumer, little research explores the effects of consumer attributes, such as location, on the processing of the stimulus (Raghubir and Krishna 1996).

The second construct of interest is visual stimulus dimensions (Bloch 1995). Shape differences can alter perceptions of prototypicality (Veryzer and Hutchinson 1998), volume (Ordabayeva and Chandon 2013), brand judgments (Jiang et al. 2016), and the innovativeness and trustworthiness of firms (Hagtvedt 2011). Color can influence outcomes ranging from bidding behavior (Bagchi and Cheema 2012) to size estimations (Hagtvedt and Brasel 2017), and research has uncovered stark differences between colored versus black-and-white stimuli (Lee et al. 2014; Meyers-Levy and Peracchio 1995). Lighting can exacerbate default affective responses (Xu and Labroo 2014) and increase consumer retention in stores (Summers and Hebert 2001). Furthermore, the interaction between figure and ground (Meyers-Levy and Tybout 1997; Zhu and Meyers-Levy 2009), the glossiness of products (Meert, Pandelaere, and Patrick 2014), and the motion of visual stimuli (Brasel and Hagtvedt 2016; Roggeveen et al. 2015) play a substantial role in consumer perceptual determinations and consequently behavior.

The third and final construct of interest is holistic, or Gestalt, visual perception. A considerable amount of marketing research has focused on holistic perception of packaging, products, or the environment. For instance, holistic package design shapes consumer brand impressions (Orth and Malkewitz 2008). Holistic product perceptions influence consumer word of mouth engagement and purchase intentions (Bloch 1995; Homburg, Schwemmler, and Kuehl 2015). Furthermore, holistic perception of environments can result in varying behavioral influences (Bitner 1992; Mattila and Wirtz 2001), although much research in this area focuses on general cognition rather than visual perception per se.

Despite the existing literature, we argue that the sensory aspect of vision remains under-explored, and much work remains to better understand the process whereby visual inputs are transformed into perceptual outputs. Our framework, which incorporates visual processing, stimulus dimensions, and holistic perception, provides a useful synthesis of the current literature on consumer visual attention and reveals numerous avenues for future work.

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# Do you Think Maybe They're Compensating for Something? But Why and How? New Insights into Compensatory Consumption

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## **Paper #1: Identity Threats, Compensatory Consumption and Working Memory Capacity: When and Why Feeling Threatened Leads to Heightened Evaluations of Identity-Relevant Products**

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## **Paper #2: The Interdependent Self: High Identity Holism Facilitates Fluid Compensation**

Qin Wang, Arizona State University, USA  
Monika Lisjak, Arizona State University, USA  
Naomi Mandel, Arizona State University, USA

## **Paper #3: Embracing Experiential over Material Consumption as a Compensatory Response: Thinking about Death Increases Consumer Preferences for Experiences**

Yoonji Shim, University of British Columbia, Canada  
Katherine White, University of British Columbia, Canada

## **Paper #4: Tough Crowd! How Observers Influence Compensatory Consumption**

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### SESSION OVERVIEW

Recently, a growing body of research has suggested that threatening self-discrepancies can motivate consumers to reduce or eliminate the discrepancy via compensatory consumption (see Mandel et al. 2017). This session examines threatening self-discrepancies and their impact on consumption via several different perspectives. In so doing, the session seeks to understand: What are the psychological processes that drive compensatory consumption? And, what are the different paths through which consumers choose to compensate?

The first paper examines the cognitive implications of self-discrepancies that lead to compensatory consumption. Most research in this domain has treated compensatory consumption as evidence for the unobserved internal process associated with threat. In contrast, this paper directly investigates the intervening psychological processes that drive compensation. Results suggest that threatening self-discrepancies reduce working memory capacity. These decrements further cause consumers to selectively attend to and process identity-relevant products more quickly and positively than neutral products, resulting in heightened attitudes toward items within the domain of the threatened self.

The second paper investigates when consumers cope with a threatened self via fluid compensation processes, which affirm the self in important domains unrelated to the threat. Little research to date has examined when consumers are more likely to choose one type of compensation over another. This paper finds evidence that cultural differences in self-identity lead to a greater tendency to make use of fluid compensation. They find that when interdependent individuals experience a self-threat, holistic thinking about their many different identities is activated, leading them to better see the relations among those identities as sources of global self-esteem, and thus offering paths for fluid compensation processes. This paper

identifies cultural psychology as an important predictor of the paths consumers take to compensate in response to a self-discrepancy.

The third paper examines mortality salience as a threat to personal meaning. Consistent with the view that mortality salience leads to a heightened desire to maintain and restore a sense of personal meaning, they argue that it will also lead consumers to prefer market-place options that imbue one's life with a sense of meaning. Experiential goods have been found to be more self-defining and more socially connecting. Thus, they find that mortality salience will prompt compensatory consumption via experiential choices, while also showing that individuals who can restore meaning via another path do not show preferences for experiential over material goods.

Finally, the fourth paper examines inter-personal effects on processes of compensatory consumption. Prior work has largely focused on compensation in individual decision-making settings, devoid of social context. This research examines how compensatory consumption varies in the presence of observers who are perceived to be judgmental and critical versus those who are benevolent and accepting. They find that judgmental observers drive consumers to compensate in an important domain unrelated to the threatening self-discrepancy, whereas benevolent observers motivate within-domain compensation, offering insights to both the processes driving compensatory consumption and the paths available for such compensation.

Collectively, these four papers provide a deeper understanding about when, why and how consumers compensate through their consumption choices.

## **Identity Threats, Compensatory Consumption and Working Memory Capacity: When and Why Feeling Threatened Leads to Heightened Evaluations of Identity-Relevant Products**

### EXTENDED ABSTRACT

Despite the abundance of papers documenting consumers' reliance on symbolic self-completion after experiencing a self-discrepancy (Mandel et al. 2017), surprisingly little research has investigated the underlying psychological processes that drive this type of compensatory consumption. We address this gap by demonstrating that self-discrepancies triggered by identity threats reduce working memory capacity (WMC), and these reductions in WMC mediate compensatory consumption.

We test our conceptual model using identity-threatening negative emotions as the source of threat (Coleman and Williams 2013), thereby also demonstrating that negative emotions can be critical inputs into the identity maintenance system. We show that individuals experiencing identity-threatening negative emotions express higher evaluations of identity-relevant products (Experiment 1), that identity threats lower WMC (Experiment 2), that lower WMC mediates identity-relevant product evaluations (Experiment 3) because identity-relevant products are processed faster (Experiment 4), and that global self-affirmation can prevent the reductions in WMC resulting from identity threats (Experiment 5).

In Experiment 1 (N = 296), participants were assigned to an athlete, volunteer or romantic partner identity and engaged in an autobiographical writing task to elicit anger, sadness, guilt or a neutral emotion. Then, participants rated twenty products, three relevant to



each identity, and ten filler products. In a repeated measures ANOVA, the predicted three-way interaction of product type, identity and emotion emerged. As predicted, athlete identity participants who experienced the identity-threatening negative emotion of sadness ( $M = 6.55$ ) and guilt ( $M = 6.11$ ) had higher attitudes toward athlete-relevant products compared to those experiencing anger ( $M = 5.26$ ,  $ps < .051$ ) or a neutral ( $M = 5.53$ ,  $ps < .03$ ) emotion. Volunteer identity participants who experienced the identity-threatening negative emotion of anger ( $M = 6.87$ ) and guilt ( $M = 6.00$ ) expressed more favorable attitudes toward volunteer-relevant products than those who experienced sadness ( $M = 5.56$ ,  $ps < .03$ ) or neutral ( $M = 5.73$ ,  $ps < .05$ ). Romantic-partner participants who experienced anger ( $M = 7.07$ ) or sadness ( $M = 6.85$ ) expressed higher attitudes than those who experienced guilt ( $M = 5.42$ ;  $ps < .05$ ) and neutral emotions ( $M = 5.73$ ,  $ps < .03$ ). This study demonstrates that identity-threatening emotions can be a source of identity threat.

Experiment 2 ( $N = 176$ ), a 3 identity (athlete, volunteer, control) x 3 emotion (anger, sadness, neutral) between-subjects design, examines the impact of these identity-threatening emotions on WMC, using the operation-span task (OSPAN; Turner and Engle 1989). In the OSPAN, participants complete two simultaneous activities: solving math problems and maintaining a list of words to recall. Accurate word recall is the primary measure of WMC. Results reveal the predicted two-way interaction ( $F(4, 167) = 9.432$ ,  $p < .001$ ). Athlete identity participants experiencing sadness had lower OSPAN scores ( $M = 14.29$ ) than those experiencing no emotion ( $M = 21.17$ ;  $F(1, 167) = 5.923$ ,  $p = .016$ ) or anger ( $M = 28.35$ ,  $F(1, 167) = 11.22$ ,  $p < .001$ ). Similar results emerged for volunteers experiencing identity-threatening or identity-affirming emotions (v. neutral). We also find a facilitation effect; athletes experiencing anger ( $F(1, 167) = 6.303$ ,  $p = .013$ ) and volunteers experiencing sadness ( $F(1, 167) = 8.518$ ,  $p < .005$ ) had higher OSPAN scores than those in the neutral emotion conditions.

Experiment 3 ( $N = 523$ ) is a 3 identity (environmentalist, volunteer, control) x 3 (emotion (disgust, sadness, neutral) between-subjects design and directly links the reductions in WMC with compensatory consumption. A two-way ANOVA reveals the same pattern of results on WMC as in E2, wherein identity-threatening emotions result in worse OSPAN scores compared to the neutral and identity-affirming emotion conditions. We further replicate the results of E1, such that experiencing an identity-threatening emotion leads to enhanced evaluations for identity-consistent products. Importantly, we find, using Model 8, 10,000 bootstrap samples and a 95% confidence interval that the OSPAN scores in response to identity-threatening emotions mediate evaluations of identity-relevant products.

Experiment 4 ( $N = 488$ ), a 3 identity (athlete, romantic partner, control) by 3 emotion (anger, guilt, neutral) design, examines how these decrements in WMC result in more favorable attitudes toward identity-relevant products. Specifically, we examine processing fluency, finding that after experiencing an identity-threatening emotion, identity-relevant products receive an ease-of-processing boost, which increases evaluations (Bornstein and D'Agostino 1992; Winkielman et al 2003). We predict that response times will be faster for identity-affirming items, particularly when respondents are experiencing an identity-threatening emotion and are therefore seeking opportunities for compensatory consumption. Results reveal a significant interaction of identity, emotion and product type ( $F(8, 946) = 3.005$ ,  $p < .002$ ); across both identities, contrasts reveal individuals experiencing an identity-threatening emotion were faster in recognizing identity-relevant products than individuals experiencing identity-affirming or neutral emotions.

Finally, Experiment 5 ( $N = 508$ ) examines the impact of global self-affirmation on these cognitive processes. Prior work suggests that global self-affirmation can protect individuals from a domain-specific threat (Kim and Gal 2014). However, self-affirmation may merely create the opportunity for fluid compensation across other identity domains, thus negating the need for compensatory compensation, without eliminating the threat itself. Using a single (athlete) identity, E5 is a 2 self-affirmation (yes/control) x 3 emotions (anger, sad, neutral) design, with the OSPAN (WMC) as DV. Results reveal the predicted two-way interaction ( $F(2, 453) = 22.589$ ,  $p < .001$ ). The non-self-affirmation conditions replicate the results found in E2 and E3. However, after self-affirmation, we find no significant differences in WMC across the emotion conditions (all  $p > .09$ ), suggesting that global self-affirmation buffers and eliminates the cognitive costs associated with the domain specific threat.

In sum, we investigate the intervening basic cognitive processes that lead consumers experiencing self-discrepancies to evaluate identity-relevant products more favorably. In five studies, we demonstrate a causal chain linking self-threats, WMC, heightened attention toward identity-consistent stimuli, and compensatory consumption. In addition, rather than being only a consequence of self-threat as in prior work (e.g., Burke and Stets 1999), this research shows emotions can also serve as an important source of self-threat that is not only impactful, but easily manipulated by managers through advertisements.

## The Interdependent Self: High Identity Holism Facilitates Fluid Compensation

### EXTENDED ABSTRACT

A growing body of research suggests that people often purchase products and services as a means to fill the void created by a self-threat (Rucker and Galinsky 2008; Mandel et al. 2017). Consumers may seek products or activities that signal success in the domain in which they experienced the threat, known as within-domain compensation (Lisjak et al. 2015). For example, consumers whose self-perception of intelligence feels "shaken" might want to purchase an intelligence-related book or magazine to bolster their sense of intelligence (Gao, Wheeler and Shiv 2009). Alternatively, they may seek products or activities that signal success in an important domain unrelated to the threat, known as fluid compensation (Steele 1988). To illustrate, Sobol and Darke (2014) found that after experiencing a threat to their appearance, consumers engaged in more effortful decision making to signal their intelligence.

Little is known about when people would actively take the advantage of fluid compensation when available. In this research, we try to address this gap. Specifically, we propose that following a threat (vs. control), people with an interdependent (vs. independent) self-construal would be more likely to use fluid compensation. We propose that this happens because the motivation to mitigate the threat activates interdependents' holistic thinking about their different identities, so that they are better able to see the relations among their different identities as sources of global self-esteem. This higher level of identity holism should lead interdependents to affirm aspects of the self unrelated to the threat.

In Experiment 1, we operationalized interdependence via differences in nationality (Chinese vs. North American). Participants in the threat condition recalled a time in which they felt incompetent in their professional career, and participants in the control condition recalled a neutral episode. Then participants indicated their willingness to engage in three activities that were pretested to represent either within-domain compensation (give professional career tips to others, buy professional clothing, and engage in continuing job edu-



cation) or fluid compensation (have a spa treatment, participate in volunteer activities, and donate money to a charity). A 2 (threat)  $\times$  2 (culture)  $\times$  2 (compensation) ANOVA revealed a marginal three-way interaction ( $F(1,507) = 3.67, p = .056$ ). Following a self-threat (vs. control), Chinese participants reported higher willingness to engage in both within-domain and fluid compensation ( $F(1,507) = 2.72, p = .10$ ), whereas American participants reported higher willingness to engage in within-domain ( $F(1,507) = 2.91, p = .088$ ), but not fluid compensation ( $F(1,507) = 1.66, ns$ ).

In Experiment 2, we measured interdependence among US participants recruited from M-Turk, and we focused only on fluid compensation. We first manipulated self-threat and measured participants' willingness to engage in the same three fluid compensation activities from Experiment 1. We then measured self-construal (Singelis 1994) and subtracted independence from interdependence score so that higher numbers indicate more interdependence (Hong and Chang 2015). There was a predicted 2 (threat)  $\times$  continuous (interdependence) interaction ( $\beta = -.28, SE = .11, t(117) = -2.49, p = .014$ ). Following a self-threat (vs. control), interdependents were more willing to engage in fluid compensation ( $t(117) = 3.04, p = .003$ ). In contrast, there was no such effect for independents ( $t(117) = -.50, ns$ ).

Experiment 3 examined the impact of manipulated self-construal, using the Sumerian warrior story (Trafimow, Triandis and Goto 1991). Next, our undergraduate participants recalled a time when they felt incompetent in the academic domain versus a neutral episode. Finally, we asked participants to report their willingness to engage in three new activities that represent fluid compensation (shop for a pair of running shoes, shop for an activity tracker, and go to the hair salon/barber). A 2 (threat)  $\times$  2 (interdependence) ANOVA revealed the predicted two-way interaction ( $F(1,416) = 4.61, p = .032$ ). After self-threat (vs. control), participants primed with interdependence were more willing to engage in fluid compensation ( $F(1,416) = 7.21, p = .008$ ). There was no such effect for those primed with independence ( $F(1,416) = .13, ns$ ).

Experiment 4 provides initial evidence for the underlying role of identity holism by showing that following a threat (vs. control), interdependents exhibit higher level of identity holism than independents. We manipulated self-threat of academic competence as in Experiment 3 and measured interdependence as in Experiment 2. Afterwards, participants rated the extent to which they associated six identities (e.g., athletic, creative, and friendly) to their sense of self. The average of these ratings forms an index of identity holism, with higher scores indicating participants viewing different aspects of the self as more connected to their global self-esteem. There was a 2 (threat)  $\times$  continuous (interdependence) interaction ( $\beta = .21, SE = .11, t(115) = 1.89, p = .06$ ) on identity holism. Following a self-threat (vs. control), interdependents had a more holistic view of the self ( $t(115) = 1.94, p = .05$ ). There was no such effect for independents ( $t(115) = -.72, ns$ ).

Experiment 5 provides further evidence for our proposed mechanism by showing that following an identity threat (academic competence), interdependents are more likely to affirm an unrelated identity (altruism) because they perceive this identity as being more connected to their global self-esteem. We first manipulated self-threat and measured interdependence as in Experiment 4. Afterwards, participants indicated the amount of money they would like to donate to a charity if they were selected to get \$20 bonus in the lab. Finally, we measured the extent to which participants connected their moral identity with their global self-esteem. Specifically, we asked participants to indicate the extent to which they associated altruism with their sense of self using a four-item scale ( $\alpha = .85$ ).

We found a 2 (threat)  $\times$  continuous (interdependence) interaction on moral identity ( $\beta = .22, SE = .06, t(371) = 3.69, p < .01$ ) and donation ( $\beta = .87, SE = .43, t(371) = 2.04, p = .04$ ). Importantly, a moderated mediation analysis (Model 7, Hayes 2013) showed significant mediation ( $\beta = .40, CI_{95\%}: .12, .72$ ).

In sum, the current research contributes to the literature on compensatory compensation by investigating whether and how cultural differences influence consumers' propensity to engage in fluid compensations.

### Embracing Experiential over Material Consumption as a Compensatory Response: Thinking about Death Increases Consumer Preferences for Experiences

#### EXTENDED ABSTRACT

Past research on compensatory consumption finds that when consumers experience threat, they tend to seek out and value products that symbolize the specific dimension of the threat such as intelligence (Gao, Wheeler, and Shiv 2009; Kim and Rucker 2012), personal freedom (Levav and Zhu 2009), and power (Rucker and Galinsky 2008). In the current research, we pose the question of whether consumer preferences for experiences (vs. material goods) can be used to cope with threat to a particular domain: a sense of meaning in one's life.

Interest in the pursuit of meaning dates back at least to existential philosophers who claimed that one of the core aspects of human nature is the motivation to create the perception that one's existence is significant and purposeful (Becker 1973; Frankl 1963; Sartre 1947). This insight that people have an innate drive to find meaning in their lives was further elaborated upon by Terror Management Theory (TMT; Greenberg, Pyszczynski, and Solomon 1986). TMT suggests that reminders of one's own eventual death (i.e., mortality salience) create existential anxiety, leading people to endorse and adhere to their existing cultural worldviews (e.g., self-relevant beliefs, values, norms) in order to maintain and restore a sense of meaning (e.g., Arndt, Greenberg, and Cook 2002; Pyszczynski et al. 2006). Building on this, we suggest that mortality salience (i.e., threat to meaning) will lead to meaning restoration in the consumer domain such as seeking out options that imbue one's life with a sense of meaning. Specifically, we propose that morality salience will lead to preferences for experiential options (i.e., those made with the primary intention of acquiring a life experience) over material options (i.e., those made with the primary intention of acquiring a tangible material good; Van Boven and Gilovich 2003) because experiential options are more likely to be a source of meaning for individuals.

There are good reasons to hypothesize that experiential consumption is a source of meaning in life. Compared to material goods, experiences are more important in forming, defining, and representing one's true self, which refers to one's intrinsic sense of who one is (Carter and Gilovich 2012). In addition, compared to material options, experiences are more likely to facilitate social connections (Caprariello and Reis 2013; Howell and Hill 2009). This component is likely to constitute a driving force for one's sense of meaning, in that social relationships are primary sources of personal meaning in life (Baumeister 1991).

Drawing on this, we argue that mortality reminders will lead to the selection of relatively more experiential (vs. material) options due to a desire to seek out meaning. We test for this proposed mechanism in two ways. First, we examine whether a reported desire to seek out meaning mediates the observed effect. In addition, we demonstrate the role of meaning by testing a theoretically relevant boundary condition for the predicted effects. We examine whether or

not the individual has had the opportunity to restore meaning through some other means. For example, if the individual has had the opportunity to fulfill the desire for meaning via an alternative route (e.g., recalling a past meaningful experience), this should satiate the desire to seek out meaning, and the tendency to prefer experiential over material purchases in response to mortality salience will be mitigated.

A series of four studies provided support for our predictions. In Study 1, we sought direct causal evidence in support of our prediction by conducting a consequential choice study in which we asked participants to make a real choice between receiving a bookstore gift card or cash following mortality salience (vs. control). We held the product category constant (e.g., gift card) and manipulated the degree to which it is positioned as being relatively more experiential versus material. We found a significant interaction ( $\chi^2(1) = 3.40, p < .05$ ), indicating that participants who focused on thoughts about their own death (vs. control) were more likely to choose a gift card rather than cash when the gift card was positioned as being experiential versus material ( $\chi^2(1) = 4.15, p < .05$ ). However, this tendency was not observed among participants who thought about grocery shopping ( $\chi^2(1) = .06, p > .49$ ). In Study 2, we asked participants to focus on thoughts of their own death (vs. social rejection vs. physical pain vs. a neutral topic) and measured their willingness to pay (WTP) for future experiential and material purchases. We found that participants who thought about their own death indicated higher WTP for experiential than material purchases, and this tendency was only caused by mortality salience but not by social rejection, physical pain, or the control condition ( $F(3, 388) = 3.99, p < .01$ ). In Study 3, we investigated the underlying mechanism by demonstrating that an activated desire for meaning mediated the effect ( $b = .0744, SE = .0555, 95\% CI [.0040, .2516]$ ). Lastly, in Study 4, we demonstrated the moderating role of meaning-fulfillment. We found that the tendency to pay more for experiential than material purchases in response to mortality salience was mitigated when people were given an opportunity to fulfill their meaningfulness via an alternative route (i.e. recalling a past meaningful experience;  $F(1, 226) = 5.88, p < .05$ ).

The present research provides evidence for compensatory consumption by demonstrating that people prefer and choose relatively more experiential (vs. material) options when their sense of meaning is threatened by mortality salience. Furthermore, the implications of our research point to the possibility of subtly reminding people of the limited amount of time left to them to do everything they ever wanted to do when marketers promote more experiential (vs. material) options. Taken together, we would like to summarize the takeaway from this research with a quote from Brazilian novelist Paulo Coelho on his Twitter (@paulocoelho; 2012): “One day, you will wake up and there won’t be any more time to do the things you’ve always wanted. Do it now.”

## **Tough Crowd! How Observers Influence Compensatory Consumption**

### **EXTENDED ABSTRACT**

Ample research has found that symbolic consumption is a means for consumers to offset their insecurities (Wicklund and Gollwitzer 1981; Mandel et al. 2017). However, prior work on compensatory consumption has largely utilized settings devoid of social context (e.g., Gao, Wheeler, and Shiv 2009; Rucker and Galinsky 2008). This limited focus seems surprising given that observers often play a significant role in consumer decision-making (Argo, Dahl, and Manchanda 2005; Ashworth, Darke, and Schaller 2005). Moreover, prior research has proposed that the effectiveness of products and other symbols in resolving self-discrepancies depends on others acknowledging and pro-

viding “social validation” of their intended meaning (Wicklund and Gollwitzer 1982).

To fill this social vacuum, the current research examines how compensatory consumption varies in the presence of others. We draw on past research in personality psychology to distinguish between observers who are perceived to be judgmental and critical in their evaluation of others versus those who are benevolent and accepting (Ashton and Lee 2007; Lee and Ashton 2004). Building on this distinction, we investigate how judgmental and benevolent observers influence consumers’ compensatory consumption. With respect to this question, one possibility is that the presence of judgmental observers might motivate consumers with a self-discrepancy to redouble their compensation efforts in order to elicit social validation from such a “tough crowd” (Wicklund and Gollwitzer 1981). On the other hand, it is also possible that the presence of judgmental others might have the opposite effect, prompting consumers to refrain from compensating for concern of revealing their compensatory motive and thus preventing social validation (Ferraro, Kirmani, and Matherly 2013; Lisjak et al. 2015; Wicklund and Gollwitzer 1981).

We propose that the impact of observers on compensatory consumption depends not only on their characteristics but also on the type of compensatory consumption opportunity available. Specifically, we posit that judgmental (vs. benevolent) observers lessen efforts to compensate in the same domain as the self-discrepancy (within-domain compensation) but not in important domains unrelated to the self-discrepancy (across-domain compensation). This is because the direct relation of the product to the self-discrepancy in within-domain compensation increases concerns that others will suspect a compensatory motive. By contrast, the lack of direct relation in across-domain compensation makes it relatively unlikely that observers would suspect compensation. We test our predictions in five experiments.

Experiment 1 ( $n = 205$ ) examined people’s within-domain compensatory consumption in front of judgmental (vs. benevolent) others. Participants recalled either a time when they felt incompetent (self-discrepancy) or a neutral episode (control). Next, participants in a shopping scenario task reported their willingness to purchase three competence-signaling products (museum gift card, fountain pen, Newsweek magazine) when observed by a benevolent or judgmental other. A self-discrepancy  $\times$  observer interaction was significant ( $p = .05$ ). As predicted, threatened participants (vs. control) reported greater willingness to purchase competence-signaling products when the observer was benevolent ( $p < .01$ ) but not when the observer was judgmental.

Experiment 2 ( $n = 155$ ) examined this effect in a live social context. First, participants recalled a time when they felt incompetent versus a neutral episode. Then, all participants interacted individually with an observer (i.e., research assistant) who was unaware of their reported self-discrepancy. The observer followed a script to act in either a judgmental or benevolent manner. Finally, we offered participants an opportunity to compensate within-domain asking them whether they wanted to sign-up for a research newsletter and by measuring their willingness to pay for a \$10 gift card for a local museum. A self-discrepancy  $\times$  observer interaction was significant ( $p = .012$ ). Replicating experiment 1, threatened participants (vs. control) engaged in more competence-signaling behavior when they interacted with a benevolent observer ( $p = .019$ ), but not when they interacted with a judgmental other.

Experiment 3 ( $n = 197$ ) tested our proposition that consumers refrain from within-domain compensation in the presence of judgmental (vs. benevolent) others due to concerns that they will suspect compensatory motive. After recalling a time when they felt incompetent,

participants indicated their willingness to purchase a competence-signaling gift card in front of a benevolent or judgmental observer. Finally, they reported whether they thought that the observer would think they were compensating by purchasing the gift card. Consistent with our theorizing, participants were less willing to purchase a competence-signaling product ( $p = .049$ ) and more concerned about being labeled a compensator ( $p < .01$ ) when the observer was judgmental (vs. benevolent).

Experiment 4 aimed to show that when consumers were presented with an opportunity to compensate across-domain, they would engage in compensatory consumption regardless of whether the observer was judgmental or benevolent. The procedure was identical to experiment 2 with one exception: our dependent measure was participants' decision to sign-up for a newsletter that signaled compassion (across-domain compensation). As predicted, threatened participants (vs. control) were more likely to sign-up for the compassion-signaling newsletter ( $p < .01$ ). Importantly, the self-discrepancy  $\times$  observer interaction was non-significant ( $p = .78$ ), suggesting that participants compensated across-domain regardless of whether the observer was judgmental or benevolent.

Finally, Experiment 5 ( $n = 197$ ) sought to replicate the within- and across-domain findings in a single experiment and show the effect could occur spontaneously without directly manipulating the observer. We first manipulated self-discrepancy. Then, participants imagined shopping in front of an observer and reported their willingness to purchase three competence-signaling (within-domain) or three creativity-signaling (across-domain) products. Finally, participants rated how benevolent or judgmental the observer was. The three-way interaction was significant ( $p < .01$ ). When compensating within-domain, threatened participants (vs. control) reported greater purchase intentions for competence-signaling products when the observer was less judgmental ( $p < .01$ ), but not when the observer was more judgmental (interaction:  $p < .01$ ). When compensating across-domain, we observed only a main effect of self-discrepancy ( $p = .03$ ), such that threatened participants (vs. control) were more likely to purchase creativity-signaling products.

These findings expand the literature via a recognition of the role others play in compensatory consumption and through the demonstration that within- and across-domain compensation are not used as interchangeable strategies to resolve self-discrepancies.

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# Palates, Portions, and Plates: Contextual Cues Shaping Consumers' Food Intake and Enjoyment

Chairs: Nitika Garg, UNSW Sydney, Australia  
Rhonda Hadi, University of Oxford, UK

## **Paper #1: Don't Stop! Partitioning Increases Satiation to Food**

Cammy Crolic, University of Oxford, UK  
Yang Yang, University of Florida, USA  
Yangjie Gu, HEC Paris, France

## **Paper #2: Snack Portion Size Choice, Expectations and Actual Experiences in Children: The Interplay of Healthiness, Hunger, and Sensory Food Imagery**

Pierre Chandon, INSEAD, France  
Celia Hacheffa, Systeme U, France  
Yann Cornil, University of British Columbia, Canada  
Sophie Nicklaus, Centre des Sciences du Goût et de l'Alimentation, AgroSup Dijon, CNRS, INRA, Université Bourgogne Franche-Comté, France  
Camille Schwartz, Centre des Sciences du Goût et de l'Alimentation, AgroSup Dijon, CNRS, INRA, Université Bourgogne Franche-Comté, France  
Christine Lange, Centre des Sciences du Goût et de l'Alimentation, AgroSup Dijon, CNRS, INRA, Université Bourgogne Franche-Comté, France

## **Paper #3: More Than Meets the Eye: The Influence of Tableware Aesthetics on Food Consumption**

Chi Pham, UNSW Sydney, Australia  
Nitika Garg, UNSW Sydney, Australia

## **Paper #4: Flavor Fatigue: How Cognitive Depletion Reduces Enjoyment of Complex Flavors**

Rhonda Hadi, University of Oxford, UK  
Dan Rubin, St. John's University, USA  
Diogo Hildebrand, Baruch College, CUNY, USA  
Thomas Kramer, University of California, Riverside, USA

### **SESSION OVERVIEW**

With abundant food and increasing choices available in today's developed societies, a paradox has emerged for consumers. While on the one hand, they seek to maximize their enjoyment from consumption experiences, on the other hand, they seek to minimize the negative effect of potential overconsumption in such episodes. This difficult balance is exacerbated by the fact that food consumption is susceptible to contextual factors (e.g., packaging, advertising, affect). This motivates research to better understand the factors influencing consumers' enjoyment of food, the antecedents driving consumption volume, and how these two might interact. Understanding such drivers and addressing them is not only of concern to practitioners in the food industry, but also of great interest to policy makers, health professionals, and consumers themselves.

Our special session addresses these concerns by exploring a range of factors influencing consumers' consumption and enjoyment of food, and thus presenting a more holistic view of the research in this domain. Across four papers, all involving actual food consumption, we document how various contextual conditions shape not only consumers' enjoyment of various consumption experiences but also, the types of foods they prefer and how much they actually consume. The papers examine various dimensions of the consumption experience, including partitioning (Paper 1), portion size (Paper 2), tableware aesthetics (Paper 3) and flavor complexity (Paper 4). Accord-

ingly, while each paper individually documents the importance of a specific contextual variable, collectively the session demonstrates that the behavioral outcomes and contingencies linked to food consumption can vary widely. Further, we demonstrate the manifestation of such effects on a wide range of audiences, spanning three continents and a broad age distribution- including children (Paper 2), undergraduate students (Papers 1 and 3), and a broader adult population (Paper 4).

In the first paper, Crolic and colleagues demonstrate that people satiate more quickly to hedonic food experiences when the experience is more (versus less) partitioned. In the second paper, Chandon and colleagues demonstrate that while children are moderately accurate forecasters of how portion size will impact their food enjoyment, they neglect to account for its effects on a snack's healthiness. However, sensory imagery can reduce unhealthy snack consumption. In the third paper, Pham and Garg find that while aesthetically pleasing tableware increases consumption of hedonic food among men, it reduced food intake among women. Finally, Hadi and colleagues demonstrate that cognitive depletion decreases consumers' evaluations for complex (but not simple) flavored foods.

Importantly, these papers highlight the different mechanisms through which situational cues might influence consumption experiences. We accordingly draw upon various theoretical processes to explain the behavioral outcomes, including feelings of repetitiveness (Crolic et al.), sensory imagery (Chandon et al.), self-monitoring (Pham and Garg), and perceived interestingness (Hadi et al.). All papers are in advanced stages of completion with multiple studies completed. The novel results and consequential nature of this research is sure to induce a lively discussion and is likely to appeal not only to researchers interested in food, but to a broader audience interested in either hedonic appreciation and/or consumer health.

## **Don't Stop! Partitioning Increases Satiation to Food**

### **EXTENDED ABSTRACT**

Three experiments demonstrate that people satiate more quickly to hedonic food experiences when the experience is more partitioned (versus less partitioned). This effect is driven by a feeling of repetitiveness resulting from identical partitions. Reducing the feeling of repetitiveness mitigates the effect of partitioning on satiation.

Hedonic food experiences occur frequently, yet, people rarely engage in these experiences all at once. People purchase individually-wrapped or bite-sized foods and food manufacturers frequently introduce mini versions of their flagship products such as mini M&Ms, mini cans of soda, and fun-sized chocolate bars. Yet little is understood about how partitioning, or dividing a continuous experience into multiple parts, influences the consumption experience. Take for example the simple pleasure of eating a piece of chocolate. Some may choose to pop the entire chocolate into their mouth and others may nibble at the chocolate and partition the hedonic experience into multiple smaller parts. This research explores who enjoys the experience more.

Prolonged or repeated consumption usually leads to satiation, or a decrease in enjoyment (Coombs and Avrunin 1977). The rate of satiation can be slowed when the consumption episodes are categorized more specifically (Redden 2008), by introducing variety (Ep-



stein et al. 2009; Galak, Redden, and Kruger 2009), and when the rate of consumption is slowed (Galak et al. 2013), and when what to consume is randomly selected (Redden, Haws and Chen 2017).

In the current research, we explore another critical antecedent to satiation – the extent to which a stimulus is partitioned. Specifically, we compare situations where people experience a stimulus as a whole to situations where the food is partitioned into smaller portions. Contrary to the notion that partitioning may interrupt the satiation process and cause dishabituation (Nelson and Meyvis 2008; Nelson, Meyvis, and Galak 2009), we argue that partitioning a food experience with frequent, brief breaks leads to more satiation. Across three experiments, we find that people satiate more when the hedonic food experience is more partitioned (versus less partitioned). We further show that this effect is not driven by partitioning per se, but rather by the feeling of repetitiveness resulting from identical partitions. When the feeling of repetitiveness is mitigated, the effect of partitioning on satiation disappears.

Study 1 is an initial demonstration of the partitioning effect on satiation to food stimuli. 108 students participated in a between-subjects design (degree of partition: low, high) with repeated measures. The low-partitioned condition had .49 ounces (15) of regular-sized M&Ms. The high-partition condition had .49 ounces (45) of mini M&Ms. Note that one regular M&M is equivalent in weight to three mini M&Ms. Participants in the low-partitioned condition were told to eat one M&M. Participants in the high-partitioned condition were told to eat three mini M&Ms one at a time. Participants were asked, “To what extent was it pleasant or unpleasant to eat the chocolate candy, just now?” (-4=extremely unpleasant, 4=extremely pleasant; Time 1 measure). Next, participants ate the remaining candies one at a time. Participants answered the Time 2 measure and reported repetitiveness (Redden 2008; “How repetitive was your experience in the study?” 1=not at all repetitive, 7=extremely repetitive). Time 2 was subtracted from Time 1 to determine hedonic change. Results showed that participants in the high-partitioned condition showed greater hedonic satiation (reflected by greater hedonic change,  $M=1.55$ ) than the low-partitioned condition ( $M=.44$ ;  $t(106)=-3.19$ ,  $p<.001$ ). The feeling of repetitiveness mediated the effect (indirect effect=.09, 95% CI: .002, .28). Thus, partitioning hedonic experiences increases satiation (greater decline in pleasantness) driven by feelings of repetitiveness.

Study 2 tests the proposed mechanism by manipulating the similarity (i.e., evenness) of the food consumption episodes. Notably, this study manipulates the evenness of the partitions while holding the number of partitions constant, showing that the effect is not driven by partitioning per se, but rather by the feeling of repetitiveness resulting from even partitions. This study rules out alternative explanations such as distraction and annoyance. 102 students participated in a between-subjects design (low-partition, high-partition-even, high-partition-uneven) with repeated measures. The low-partition condition had .69 ounces (7) jumbo M&Ms. The two high-partition conditions had .69 ounces (63) of mini M&Ms. Note that one jumbo M&M is equivalent in weight to nine mini M&Ms. Participants in the low-partition condition were told to eat one jumbo M&M. Participants in the high-partition-even condition ate three mini M&Ms at a time, three times. Participants in the high-partition-uneven condition ate five mini M&Ms at a time, then one, and then three at a time. Thus the high-partition conditions ate the same amount but varied in their evenness. After giving their Time 1 rating, participants ate the remaining candies. Those in the high-partition-even condition always ate three M&Ms together whereas those in the high-partition-uneven condition ate between one and five M&Ms each time. Participants gave their Time 2 rating. Consistent with our predic-

tion, participants in the high-partition-even condition satiated more quickly than the low-partition condition (Bonferroni post-hoc mean difference=1.32,  $p<.05$ ). There was no difference in satiation rate between the high-partition-uneven condition and low-partition condition (mean difference=.64,  $p>.05$ ).

Study 3 demonstrates that mental partitioning can influence satiation. Specifically, if the person perceives the experience as a series of identical parts (versus part of a whole) it leads to greater satiation to the experience. This study holds the actual consumption experience constant to rule out the possibility that annoyance, perceived quantity or higher variety, or differences in attention increased satiation. 228 students participated in a between-subjects design (focus on repetition: high, low) with repeated measures. Both conditions had .98 ounces (30) of regular M&Ms. Participants in the low-focus condition were told that the candy was “one serving of M&M candies”. Participants in the high-focus condition were told that the candy was “30 pieces of M&M candies”. Thus in the low-focus (high-focus) condition, the 30 M&M candies were framed as unpartitioned (partitioned) which decreases (increases) the focus on repetitiveness. All participants ate one M&M and gave their Time 1 rating. Then participants ate the remaining 29 candies and gave their Time 2 rating. As predicted, participants in the high-focus condition satiated more quickly to the food ( $M=1.41$ ) than the low-focus condition ( $M=.94$ ;  $t(226)=-2.10$ ,  $p<.05$ ).

Three studies demonstrate that partitioning decreases enjoyment of hedonic food experiences. Partitioned (versus unpartitioned) experiences increase focus on the uniformity of the parts, increase repetitiveness, hasten satiation, and decrease enjoyment to food.

### Snack Portion Size Choice, Expectations and Actual Experiences in Children: The Interplay of Healthiness, Hunger, and Sensory Food Imagery

#### EXTENDED ABSTRACT

8-11 year-old children can anticipate the effects of portion size accurately when it comes to post-intake hunger, moderately accurately for eating enjoyment, and not at all for perceived healthiness. Food sensory imagery reduces how much energy-dense snacks these children choose and eat, without affecting their intake of a healthier alternative.

Consumers generally view sensory pleasure and portion size as complements, expecting that larger portions will increase eating enjoyment, especially if the food is palatable (Sorensen et al. 2003). However, some studies suggest that larger quantities of food do not necessarily increase eating enjoyment (Rode, Rozin, and Durlach 2007; Rolls et al. 1981). Errors in anticipating the effects of portion size on eating enjoyment may explain why people eat more when they are served larger portions and why they choose portions that are too large from a pure eating enjoyment perspective (Cornil and Chandon 2016). This raises the question of how we can help people—especially children—better anticipate the effect of portion size on enjoyment and realize that they will be happier with less food.

Recent research has investigated the effect of food sensory imagery (creating a mental image of the multi-sensory experience of eating) on portion size choice (Cornil and Chandon 2016). Consistent with research on mindful eating, sensory imagery helps adults better anticipate the effect of sensory-specific satiety, and thus leads them to choose smaller portions while anticipating greater enjoyment from these smaller portions. However, the evidence is mostly limited to adults and calorie-dense foods, whereas a recent study has shown that people are actually well calibrated when it comes to predicting how they will feel after consuming varying amounts

of fruits or vegetables but not after consuming energy-dense foods (Brunstrom et al. 2018).

In the current research, we aim to further investigate the interplay between portion size and both expected and experienced eating enjoyment in young children, as well as the effect of food sensory imagery on their portion size and eating decisions. We also extend past research by testing whether the effect of sensory imagery replicates across two foods that vary in energy-density, and in their symbolic value. Funding was provided by ANR (ANR-15-CE21-0014).

In Study 1, we recruited 91 children (54% female) aged 8 to 11 years old from three primary schools in France. Following pretests, we selected two products familiar and similarly liked by children for afternoon snacks: Brossard® chocolate brownie (high calorie density) and Andros® applesauce (low calorie density). Three portions were selected for each food: the recommended serving size by the manufacturer, a 50% larger portion size, and a 125% larger portion size, so that each portion is 50% bigger than the preceding one. During a first afternoon session, we measured children's expected food enjoyment, post-intake hunger, and healthiness for each portion of each product using validated scales. In six further afternoon sessions, children evaluated actual eating enjoyment, post-intake hunger, and healthiness after eating one portion of each food. We also measured initial hunger during all seven sessions (ranging from moderate to very high).

We found a significant interaction between initial hunger and portion size for both expected and experienced eating enjoyment for brownies (respectively  $p < .05$  and  $p < .01$ ), but only for the latter for applesauce (respectively  $p = .20$  and  $p = .05$ ). Among moderately hungry children, portion size was unrelated to either expected or experienced eating enjoyment (respectively  $p = .09$  and  $p = .96$  for brownie and  $p = .29$  and  $p = .10$  for applesauce). Among very hungry children however, portion size increased both the expected and experienced enjoyment for brownie ( $p < 0.01$  for both), but only increased expected (not experienced) enjoyment for applesauce (respectively  $p < 0.01$  and  $p = .43$ ). The effects of portion size on the other measures were not moderated by hunger nor snack type: both anticipated and experienced post-intake hunger decreased with portion size, for both snacks (all  $p$  values  $< 0.01$ ). Finally, the perceived healthiness of eating each portion was not influenced by its size, either before or after intake (except after eating the brownie).

We examined the effects of food sensory imagery in a second pre-registered study. For Study 2, we relied on the cohort of 91 children who had participated in Study 1 and added 82 additional children of the same age recruited from one of the same school and three other similar schools. The sample size was determined based on a power analysis of the results of Study 1 in Cornil and Chandon (2016). A total of 173 children were randomly assigned to one of two conditions. In the food sensory imagery condition, children were reminded of the five senses and were asked to imagine the multisensory experience of eating three hedonic foods shown on pictures (chocolate candies, waffles, and cereals). In the control (non-food sensory imagery) condition, children were also asked to engage in multisensory imagery but following exposure to non-food pictures (building a sandcastle, making a snowman, playing with dead leaves). After measuring initial hunger, both groups were then asked to choose between the recommended serving size, a 50% larger portion, and a 125% larger portion of either brownie or applesauce. One week later, the children went through the same procedure (with three different images) but were asked about the second food. Eaten quantities were also measured.

We found a significant interaction between the intervention and the type of snack ( $p < 0.01$ ). Compared to the control condition, sen-

sory food imagery led children to choose 7.1 % less brownie ( $p < 0.01$ ) and reduced intake by 8% (about 22 calories,  $p < 0.01$ ). However, it had no effect on either the quantity of applesauce chosen or consumed ( $p = 0.32$  for both). In addition, hungrier and heavier children chose and ate more, but there no differences between boys and girls. Overall, Study 1 shows that 8-11 years old children are accurate forecasters of the effects of portion size on their post-intake hunger of two common snacks (brownies and applesauce) and relatively accurate forecasters for eating enjoyment. Study 1 further shows that eating enjoyment is unrelated to portion size, but only when children are moderately hungry. When they are very hungry, both expected (pre-intake) and experienced (post-intake) eating enjoyment increases with portion size. Importantly, the children neglected the effects of consumption quantity when rating the health impact of eating a snack, only considering its average nutritional quality. In addition, Study 2 further demonstrates the effectiveness of food sensory imagery may be a useful tool to nudge children towards healthier eating since it reduces intake of a hedonic snack, without reducing the consumption of a healthier one.

### **More Than Meets the Eye: The Influence of Tableware Aesthetics on Food Consumption**

#### **EXTENDED ABSTRACT**

This research examines the influence of tableware aesthetics on food consumption. A series of four studies suggest that while aesthetically pleasing tableware increases food salience which increases hedonic consumption among men but triggers monitoring among women, reducing their intake. Plate type, food type, and goal primes moderate these effects.

Obesity has become an alarming global issue. More than 39% of adults are overweight, 13% are obese, and the prevalence of obesity has more than doubled between 1980 and 2014, worldwide (WHO 2016). Past research on food consumption has examined various contextual factors including assortment variety, food shape, labeling, emotions, and packaging, among others. Given that aesthetics of the tableware used in consumption episodes is closely tied to the consumption experience, there is a surprising dearth of research linking the two. Thus, the current research seeks to examine the relationship between tableware aesthetics and food consumption and the different moderators and mediator of this relationship. Particularly, it studies the influence of tableware aesthetics (aesthetically pleasing versus plain tableware) on food consumption, and whether this relationship is moderated by gender, food type (hedonic versus less hedonic food), and eating goal (healthy versus hedonic). The mediating role of self-monitoring is also examined.

Our research makes three important contributions. First, we contribute to the growing literature on the effect of contextual factors on food consumption by linking it to tableware aesthetics and establishing the process underlying this relationship. Current research often focuses on the utilitarian aspects of the tableware, such as its size, color contrast, and weight (e.g., Piqueras-Fiszman et al. 2011), while neglecting its aesthetic aspects. Second, we establish gender as an important moderator of the aesthetics-consumption relationship. While prior research in aesthetics does not highlight gender differences in response to product form or aesthetics, more recent studies have highlighted the need for further examination of gender effects in this domain (Patrick and Hagtvedt 2011). Finally, our findings lead to important implications, which will be of interest to marketers and health professionals, as well as consumers who are interested in balancing hedonic and health goals in their consumption.

In the current research, we argue that tableware aesthetics presents two opposing effects on consumption. Aesthetics has the ability to draw attention; greater attention to food can increase the desire to eat and stimulate greater level of consumption. In contrast, tableware aesthetics can also direct consumers' attention toward monitoring their intake. The amount of food consumed depends largely on whether consumers monitor their consumption – that is, whether they pay attention to how much they are eating (Polivy et al. 1986). Males and females process information related to product designs differently (Meyers-Levy and Maheswaran 1991). Females treat design as an environmental cue and react more strongly to it than males. Further, existing research finds that women are more concerned with dieting and healthy eating than men (Rozin, Bauer, and Catanese 2003) and that they often feel the obligation to eat according to social norms, making them more cautious of their eating habits (Chaiken and Pliner 1987).

Taken together, we predict that gender will moderate the relationship between tableware aesthetics and consumption. Specifically, when hedonic food is presented on aesthetically pleasing tableware, the heightened attention will lead females to monitor their consumption, depressing their food intake. In contrast, aesthetically pleasing tableware will draw the attention of males to the attractiveness of the hedonic food, leading them to consume more.

Study 1 employed a one factor, two levels (plate type: more versus less aesthetically pleasing) between-subjects design to test the relationship. Results found a significant interaction of gender and plate type on consumption ( $F(1,67)=8.79, p<.01$ ). As predicted, while the aesthetically pleasing tableware increased consumption among males ( $M_{\text{aesthetic}}=33.42, M_{\text{plain}}=24.30, p<.05$ ), it had the opposite effect on females ( $M_{\text{aesthetic}}=20.54, M_{\text{plain}}=28.58, p<.05$ ). Further, while males eat more than females, they enjoy the consumption experience less ( $M_{\text{male}}=4.77, M_{\text{female}}=5.50, p=.04$ ).

Study 2 replicated the results of Study 1 and further investigated the underlying mechanism driving the relationship. As predicted, a one-way ANOVA revealed that females (vs males) monitored their consumption to a greater extent, when using aesthetically pleasing (versus less pleasing) tableware. Mediation analysis confirmed that monitoring mediated the influence of tableware aesthetics on consumption among females ( $b=2.48, SE=1.85; 95\% CI=.0915$  to  $5.7975$ ), but not among males.

Study 3 assessed whether eating goals moderated the effect. Hedonic, healthy or neutral goal were primed first, followed by an opportunity for food consumption (presented as a taste test). Results show that among males, consumption was higher under hedonic ( $M_{\text{hedonic}}=31.53$  vs.  $M_{\text{healthy}}=20.62, p=.01$ ) and neutral goals ( $M_{\text{neutral}}=31.19$  vs.  $M_{\text{healthy}}=20.62, p=.01$ ), when using the aesthetically pleasing tableware. In contrast, females consumed less under hedonic ( $M_{\text{hedonic}}=19.15$  vs.  $M_{\text{neutral}}=27.32, p<.05$ ) as well as healthy goals ( $M_{\text{healthy}}=14.10$  vs.  $M_{\text{neutral}}=27.32, p<.001$ ), when using plain tableware. Further analyses revealed that females monitored to a greater extent in the hedonic ( $M_{\text{hedonic}}=3.48$  vs.  $M_{\text{neutral}}=2.72, t=2.1, p<.05$ ) and healthy goal ( $M_{\text{healthy}}=3.64$  vs.  $M_{\text{neutral}}=2.72, t=2.45, p=.01$ ) conditions, which correlated with lower quantities consumed. Among females, mediation analyses comparing neutral goal with hedonic (or health) goal confirmed increased monitoring as the underlying mechanism driving the influence of tableware aesthetics on food consumption. Finally, increased consumption with plain tableware among females was attenuated when either hedonic or healthy goal, was active.

Study 4 aimed to test the potential moderating effect of food type (hedonic vs less so). A three-way ANOVA showed a significant interaction between plate type, food type, and gender ( $F(1,107)=4.36,$

$p<.05$ ). Importantly, while the results replicated findings from Studies 1-3 for the hedonic food product, these differences in consumption across gender and tableware were non-significant with the less hedonic food product; thus, establishing an important boundary condition.

Our findings not only advance the theoretical understanding of the relationship between tableware aesthetics and consumption but also, have important implications for stakeholders such as consumers and policy makers. While aesthetically pleasing tableware help women monitor their consumption of unhealthy foods, it backfires among males. By reinforcing different goals, one might intervene in the consumption process and nudge consumers toward healthier consumption habits.

## Flavor Fatigue: How Cognitive Depletion Reduces Enjoyment of Complex Flavors

### EXTENDED ABSTRACT

This research examines how cognitive depletion influences consumer enjoyment of complex-flavored foods. We find that depleted individuals show decreased evaluations for complex (but not simple) flavored foods due to a reduction in perceived interestingness that can otherwise be derived from flavor complexity and establish substantive boundary conditions for the effect.

Food options often exhibit multi-dimensional flavor profiles: mint chocolate and strawberry cheesecake are as commonly encountered as plain chocolate and cheesecake. In fact, trends in the food and beverage industry suggest that consumers' palatal preferences are becoming progressively more intricate, and "flavor layering" is now prevalent among bartenders, restaurant chefs, and food manufacturers alike (Crawford, 2016). However, taste appreciation is largely a cognitive activity (e.g., Lee, Frederick, & Ariely, 2006; Elder & Krishna, 2010), and complex stimuli can be especially cognitively demanding to process (Carbon & Albrecht, 2016). Therefore, a question that naturally arises is if, or more specifically, under which conditions, consumers actually enjoy complex-flavored food.

We propose that the enjoyment of complex-flavored foods depends on the degree to which consumers are cognitively depleted. While research has demonstrated that cognitive constraints lead individuals to choose indulgent over healthy foods (Baumeister & Vohs, 2007; Bruyneel et al., 2006), we are the first to test if and how depletion influences enjoyment of foods regardless of their hedonic or utilitarian characteristics, focusing on their flavor composition instead. We argue that because depletion reduces the reward value consumers assign to cognitively demanding tasks (Inzlicht & Schmeichel, 2012), it should impose momentary constraints on consumers' willingness to engage in the cognitive processing required to derive interestingness and extract pleasure when tasting complex flavors. Thus, we expect cognitive depletion to reduce enjoyment of complex-flavored (but not simple-flavored) foods. We test our hypotheses in three experiments with actual food consumption and manipulate flavor complexity by varying the number of distinct flavor components in foods (Levy et al; Olabi et al. 2015).

Study 1 ( $N=106$ ) was a 2 (cognitive depletion: low vs. high) x 2 (flavor: simple vs. complex) between-subjects design. Cognitive depletion was manipulated using a standard protocol (Neal, Wood, & Drolet, 2013): participants in the low depletion condition retyped a short passage, while those in the high depletion condition retype the same passage without using the letter "e" or spacebar. Participants then sampled a square of either dark chocolate (simple condition) or dark chocolate with mint (complex condition). Both chocolates were unwrapped, visually indistinguishable, and did not differ in



perceived healthiness, calorie content, novelty, or familiarity (as per pretest results). Participants then indicated their enjoyment of the chocolate (on a 4-item scale, e.g., "I enjoyed tasting this chocolate,"  $\alpha = .89$ ). As predicted, ANOVA results revealed a significant interaction of cognitive depletion and flavor complexity on enjoyment ( $F(1, 102) = 8.80, p < .01$ ). Depletion reduced enjoyment of the complex-flavored chocolate ( $F(1, 102) = 5.00, p < .05$ ). Interestingly, cognitive depletion also increased enjoyment of the simple-flavored chocolate ( $F(1, 102) = 6.57, p < .05$ ).

Study 2 ( $N=86$ ) was a 2 (cognitive depletion: low vs. high)  $\times$  2 (flavor: simple vs. complex) between-subjects design. Mental depletion was manipulated via an anagram-solving task (Park, Glaser, & Knowles, 2008). Afterwards, participants were asked to taste either simple-flavored (salt) or complex-flavored (salt and vinegar) potato chips. As in study 1, the stimuli were pretested to insure the foods differed in their flavor complexity, but not on other potentially confounding dimensions (including perceived novelty, familiarity, and healthiness). After tasting the chips, participants indicated their enjoyment using the same measures as in study 1 ( $\alpha = .93$ ). Next, they rated the interestingness of the chips using two semantic differential items (1 = uninteresting, boring; and 7 = interesting, exciting; Silvia 2005), averaged to form an interestingness index ( $r = .83$ ). As expected, ANOVA results revealed a significant interaction of cognitive depletion and flavor complexity on enjoyment ( $F(1, 82) = 4.53, p < .05$ ). Participants in the high depletion condition preferred the simple-flavored (vs. complex-flavored) chips ( $F(1, 82) = 6.62, p < .05$ ), whereas complexity did not impact evaluations among those in the low depletion condition ( $F(1, 82) = .10, p > .10$ ). Results also revealed a significant cognitive depletion  $\times$  flavor complexity interaction on perceived interestingness ( $F(1, 82) = 7.44, p < .01$ ), mirroring the results on enjoyment. A moderated mediation analysis (model 8; Hayes 2013) demonstrated that the indirect effect of depletion on enjoyment through interestingness was significant among those who tasted the complex-flavored chips ( $\beta = -.51, CI: [-1.09, -.12]$ ), but not among those who tasted the simple-flavored chips ( $\beta = .44, CI: [-.06, 1.01]$ ). Thus, findings from study 2 demonstrate that cognitive depletion reduces enjoyment of complex-flavored foods, and that the decrease in enjoyment is due to lower derived interestingness.

Study 3 ( $N=114$ ) was a 2 (cognitive depletion: low vs. high)  $\times$  2 (tasting speed: fast vs. slow) between-subjects design. Participants completed the cognitive depletion task from study 2. Next, all participants tasted a complex-flavored juice (a blend of mango, orange, apple, and passion fruit). Tasting speed was manipulated by instructing participants to take either a quick sip of the juice, or to slowly savor the juice (Crolic & Janiszewski, 2016). Research suggests that speeding up the act of consumption prevents people from having discriminating taste experiences (Peron and Allen 1988). Therefore, we only expected to see the effect of cognitive depletion on enjoyment in the slow condition. Consistent with this expectation, results revealed a significant interaction on enjoyment ( $F(1, 109) = 6.43, p < .05$ ). As predicted, depletion reduced enjoyment of the juice in the slow speed condition ( $F(1, 109) = 4.04, p < .05$ ), replicating the effect found in studies 1 and 2. Interestingly, for participants in the fast condition, cognitive depletion marginally increased juice enjoyment ( $F(1, 109) = 2.89, p = .09$ ). Consistent with our theorizing, lower processing opportunity significantly reduced enjoyment among those low in depletion ( $F(1, 109) = 4.71, p < .05$ ), but did not affect highly depleted individuals, who did not have the motivation to derive interest from the experience regardless of processing constraints ( $F(1, 109) = 2.24, p > .10$ ).

This research offers practical implications for food establishments (e.g. consumers may prefer simpler food items at the end of

a mentally exhausting workday) and invites additional research on how consumer responses to particular flavor characteristics might be circumstantially determined.

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# Uncovering Empirical Generalizations in Consumer Research: Creating New and Synthesizing Accumulated Knowledge

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## **Paper #1: How Well Do Consumer-Brand Relationships Drive Customer Brand Loyalty? Generalizations from a Meta-Analysis of Brand Relationship Elasticities**

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Xin Wang, Ivey Business School, Western University, Canada  
Matthew Thomson, Ivey Business School, Western University, Canada

## **Paper #2: Is Congruity Desirable for Brand Extensions? A Conceptual and Meta-Analytic Review**

Qian Deng, University of Prince Edward Island, Canada

Paul Richard Messenger, University of Alberta, Canada

## **Paper #3: The Experiential Advantage: A Meta-Analysis**

Evan Weingarten, University of California, San Diego, USA

Joe Goodman, Ohio State University, USA

## **Paper #4: Using a Meta-Analysis to Unravel Relative Importance of Postulated Explanations for the Endowment Effect**

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### SESSION OVERVIEW

Much of consumer research has focused on developing theories of consumer behavior (Rapp and Hill 2015; Wang et al. 2015) and testing theoretically-derived predictions by examining novel consumer-relevant phenomena (Dahl et al. 2015). However, the field lacks a concerted integration of accumulated consumer-relevant findings (Grewal et al. 2018). Despite sheer magnitude and richness of consumer research, scant efforts have been made by consumer researchers to synthesize extant research on focal phenomena and provide novel empirical generalizations. By abstracting from clusters of related empirical findings, consumer researchers can contribute to ongoing debates, and perhaps more importantly, generate new theoretical directions moving forward.

The aim of this session is to move beyond a narrative summary of extant empirical work and generate novel empirical generalizations in consumer research. Specifically, the four papers in this session address the following questions: 1) What empirical generalizations can be uncovered from extant research on specific consumer-relevant phenomenon, and 2) how does the nature of these generalizations vary as a function of theoretically important moderators and boundary conditions? Session attendees will learn about novel insights generated from four large-scale consumer research meta-analyses in this session, factors nuancing and/or influencing these insights as well as current best practices related to application of meta-analytic method to tackling important consumer-relevant phenomena.

The first two papers aim to generate empirical generalizations related to the domain of consumers' connections with brands. The authors of the first paper examine how well different consumer-brand relationships (CBRs) drive customer brand loyalty. They show that while affective CBRs emerged the strongest drivers of loyalty overall, identity CBRs yielded stronger effects using behavioral, retrospective loyalty, and non-students while trust CBRs dominated among

Americans. In terms of the second paper, researchers meta-analyze and review the congruity literature for brand extensions. They document a consistent positive effect of congruity on consumers' responses to brand extensions and a series of factors that interact with and moderate congruity to influence consumers' responses (e.g. parent brand characteristics, flexibility of the categorization process).

The last two papers strive to provide empirical generalizations with respect to two classic topics in consumer research: experiential consumption and endowment effect. The third paper meta-analyzes the experiential advantage literature comparing material purchases to experiential purchases, and show that while measures of happiness had a "small-to-medium" effect size overall, measures of impressions and personal identity had directionally larger effect sizes. Lastly, the authors of the final paper meta-analytically test the relative explanatory power of drivers of the endowment effect, finding that biased information processing is the leading explanatory account, relative to ownership and misrepresentation accounts.

Taken together, this session provides multifaceted insights into how the field of consumer research can systematically synthesize existing findings and generate new insights. Exploring important consumer-relevant phenomena through application of powerful meta-analytic method can enrich consumer theories. We expect this session to be of interest to consumer researchers across different areas (branding, experiential consumption, BDT), consumer methodologists, and practitioners who want to use academic empirical generalizations and apply them to practice.

## **How Well Do Consumer-Brand Relationships Drive Customer Brand Loyalty? Generalizations from a Meta-Analysis of Brand Relationship Elasticities**

### EXTENDED ABSTRACT

Customer brand loyalty is one of the most important concepts to consumer researchers

and marketing practitioners. A considerable amount of research over the last 20 years documents

that different consumer-brand relationship constructs (CBR), such as those characterized as primarily affective (e.g. attachment and love), identity-based (e.g. self-brand connection and identification), and trust-based, are positive predictors of customer brand loyalty. For instance, it has been demonstrated that brand attachment predicts a brand's purchase share (Park et al. 2010), brand identification impacts behavioral intentions (Einwiller et al. 2006) and brand trust leads to repurchase intentions (Mazodier and Merunka 2012). CBRs can hence be portrayed as invaluable assets that develop and solidify customer brand loyalty.

Given the importance of consumer-brand relationship constructs as a customer brand loyalty-solidifying mechanism, it is not surprising that branding scholars and practitioners want to know what CBRs to focus on and what performs best and when. However, there is little consensus on what CBR constructs are superior predictors of loyalty and under what conditions each construct performs relatively better. Theoretically speaking, while there is a general understanding that all CBR constructs that we examine are positively associated with customer brand loyalty, there is no systematic understanding regarding what CBR construct is the most effective driver of loyalty, and

even more critically, under what specific circumstances and settings. For example, research focused on the *same* CBR construct (e.g. attachment) has revealed relatively small ( $= .09$ ; Goode, Khamitov and Thomson 2015), medium ( $= .30$ ; Thomson 2006) and large ( $= .64$ ; Hudson et al. 2016) estimates of the path to customer brand loyalty. At the same time, research on *different* CBR constructs (i.e. love, identification and trust) has documented nearly equally powerful paths to customer brand loyalty (Bergkvist and Bech-Larsen 2010; He et al. 2012; Hudson et al. 2016). Relatedly, in light of differing tactical objectives in the field of solidifying customer brand loyalty (e.g. repeat purchase vs. attitudinal loyalty), it is unclear which CBR construct is likely to be superior driver of customer brand loyalty. From a practical standpoint, marketers invest billions into fostering relationships with consumers in the absence of a solid understanding of their actions (Avery, Fournier, and Wittenbraker 2014). Clearly, as a field we do not yet know the answer.

In response, we start to address this gap. To advance understanding of how well different consumer-brand relationship constructs drive customer brand loyalty and to help companies improve the effectiveness of their relationship building investments, we conduct a meta-analysis of the link between three CBR constructs and customer brand loyalty. To generate our database, we undertook a search of all relevant literature that touched on the linkage between CBRs and customer brand loyalty. We initially identified relevant papers through a search of multiple electronic databases, such as ProQuest, Google Scholar, PsycINFO, ABI/Inform, Business Source Complete, Web of Science, JSTOR, and Science Direct using keywords (e.g. brand relationship, brand attachment, brand love, self-brand connection etc... and combinations of these terms) related to customer brand loyalty and the focal antecedents. For inclusion in our meta-analysis, we retained articles published in a journal that appeared on the *Financial Times* (i.e. FT 50) or *UT Dallas' Research Rankings* list or rated in the *Academic Journal Guide* (Chartered Association of Business Schools 2015) as a 2 or higher (out of 4\*). We used this 2+ criteria to ensure a broad range of publication outlets while maintaining quality control. In addition, other criteria for inclusion required that (1) a study measured one or more CBR constructs using a multi-item scale, (2) the study included a measure that was interpretable as customer brand loyalty (e.g. attitudinal loyalty, behavioral loyalty, "mixed" loyalty, etc...), and (3) the study presented empirical consumer-level responses (typically based on survey and/or experimental data). Finally, the results had to enable the unambiguous estimation of effect sizes linking one or more pairs of variables of interest or report other statistical information from which we could calculate effect sizes.

We also identified a series of control variables corresponding to brand, sample, consumer, journal and methodological characteristics, and performed several checks to ensure the robustness of the results. To account for a nested or hierarchical structure of meta-analytic data (i.e. subjects nested within studies; Denson and Seltzer 2011) and associated within-study error correlations between effect sizes, we conduct the meta-analysis with hierarchical linear modeling (HLM) (Bijmolt and Pieters 2001; You et al. 2015). In line with prior meta-analyses in marketing (e.g. Rubera and Kirca 2012; You et al. 2015), we estimate the model employing the maximum likelihood estimation method.

The analysis of 304 effect sizes from 143 studies reported in 127 publications over 21 years ( $n = 179,395$  across 35 countries) reveals that all three consumer-brand relationship constructs positively drive customer brand loyalty and that the aggregate CBR elasticity is .404. More importantly, our results demonstrate under what conditions various CBR constructs increase loyalty. For example, the links

between CBR constructs and customer brand loyalty are generally highest for affect-based CBR constructs and when customer brand loyalty is operationalized in attitudinal (vs. behavioral), absolute (vs. relative) or retrospective (vs. prospective) terms. Additionally, identity-based CBR constructs are stronger predictors of customer brand loyalty when such loyalty is measured behaviorally, retrospectively, or among non-student consumers, while trust-based CBR constructs are better drivers of American consumers' customer brand loyalty.

Drawing on these findings, we advance implications for scholars and managers. We make three main contributions. First, we identify the average elasticity between consumer-brand relationship constructs and customer brand loyalty. In so doing, we extend the field's knowledge base by quantifying the link between various CBR constructs and customer brand loyalty. Second, we identify which of three CBR constructs (i.e. primarily affect-based vs. identity-based vs. trust-based) are relatively better at boosting loyalty. Third, we identify a series of variables (e.g. brand type, sample and consumer characteristics) that moderate these effects, providing important information about when and where each CBR construct appears to be relatively more effective, which implies a series of actionable recommendations for marketing managers.

### Is Congruity Desirable for Brand Extensions? A Conceptual and Meta-Analytic Review

#### EXTENDED ABSTRACT

The literature on brand extensions has come a long way since 1990. In this literature, a key question is how to maximize the success of brand extensions, and an important part of this question involves choosing a product category for a brand to extend to. The extensive literature on congruity suggests that consumers will more readily accept an extension of a brand if the extension product is congruent (or fits) with the parent brand (or category). This is a powerful idea that has stood the test of time.

With growth of this literature, researchers have pushed the boundaries of research on the congruity effect by discussing and examining various moderators of the congruity effect, and various alternative effect patterns (e.g., the moderate incongruity effect pattern). Given the range of results from this large body of literature, a systematic and comprehensive review and synthesis can help organize the various findings to date to facilitate future work and to provide a resource for practitioners.

This paper addresses three sets of research questions: (1) *How large is the congruity effect for brand extensions? And how much variation is there?* (2) *What are the relevant factors, in addition to congruity, that influence the success of brand extensions? And how do they interact with congruity?* (3) *Can moderate incongruity generate more favorable responses to brand extensions from consumers than congruity? And under what circumstances?*

Our theoretical review summarizes the work on congruity since 1990, including various factors studied that work together with congruity to influence consumer reactions to brand extensions. We provide a conceptual framework that synthesizes this work, by putting a focus on the theoretical mechanism of categorization theory and affect transfer, which has frequently been argued to underlie the congruity effect. This theoretical review provides necessary background for our empirical analysis.

Our empirical analysis consists of a meta-analysis to measure the impact of congruity (between a parent brand and an extension category) on consumers' reactions in the brand extension research. This method is particularly useful here, because it can directly contrast and combine different study results via effect sizes, so that pat-

terns, relationships, and even source of variation among studies' results can be identified. After conducting an extensive literature search, screening and coding the data, and applying meta-analysis methods, we generated 269 effect sizes of congruity, each of which represents an effect size arising from a comparison of two levels of congruity. The data came from 37 journal articles in 11 academic journals in fields related to marketing or business.

Our findings help answer some fundamental questions about this topic.

(1) Our review of the literature on congruity in brand extensions shows a consistent positive effect of congruity on consumers' responses, and our meta-analysis reveals that the overall mean effect size of congruity ( $=0.211$ ) is of small to medium size. There is also support for the *Congruity Hypothesis* effect pattern (consumers respond better to congruity than to moderate incongruity, which they respond better to than to extreme incongruity), particularly when the dependent variable is consumer attitudes toward the brand extension. But the variation of the congruity effect sizes across studies is large. This directly speaks to the relative importance of congruity. Although congruity is significant and very relevant from a managerial perspective, it is far from being the sole determinant of success for brand extensions.

(2) Our conceptual review of moderators of the congruity effect identifies and proposes some key factors that may interact with congruity to influence consumers' responses. Our meta-analysis finds a very significant positive effect of congruity for attitudinal dependent variables, that negative information about the parent brand nullify the congruity effect, and that parent brand attitude and brand familiarity positively interact with congruity. For practitioners, these results suggest that parent brand characteristics are important factors interacting with congruity to influence consumers' responses.

(3) Our conceptual review and meta-analysis together identify two important sets of factors that may moderate the congruity effect into a *Moderate Incongruity* effect pattern (consumers respond better to moderate congruity than to congruity, which they respond better to than to extreme incongruity): those factors that increase elaboration to resolve incongruity, and those that increase flexibility of the categorization process. These results provide an alternative brand extension strategy for practitioners. Other than the simple "more congruent, the better" strategy, the company could extend to a moderately incongruent product category, and employ marketing campaigns designed to induce flexibility of categorization or greater elaboration about any perceived incongruity.

(4) In addition, larger effect sizes of congruity are identified for studies using general consumers as samples (vs. student samples) and for studies with a successful manipulation check (vs. unsuccessful or no manipulation checks). These findings have methodological implications for this research area. In particular, the use of student samples may lead to under-estimation of the congruity effect sizes, which suggests that general consumer samples may lead to a more realistic estimation of the congruity effect. Moreover, the use of manipulation checks may be an important element in research design.

Overall, as guidance for managers and researchers in this area, congruity alone is not enough to drive the success of a brand extension, but it can tip the balance together with other factors.

## The Experiential Advantage: A Meta-Analysis

### EXTENDED ABSTRACT

The types of purchases consumers make and the way they perceive those purchases

matters. They affect a consumer's happiness and wellbeing, and they have important implications for satisfaction and repeat pur-

chase. For instance, more than a decade of research suggests calling purchases hedonic or utilitarian can influence happiness (Dhar and Wertenbroch 2000; Khan and Dhar 2010), and many studies demonstrate how consumers trade off products they perceive as vices and virtues (Dhar, Huber, and Khan 2007; Kivetz and Simonson 2002). More recently, studies have focused on another continuum on which consumer expenditures may differ: whether a purchase is more experiential (i.e., for obtaining an experience) or material (i.e., for obtaining a tangible object; Van Boven and Gilovich, p. 1194).

An expanding literature argues that in terms of happiness, there is an "experiential advantage." Experiential purchases lead to more consumer happiness than comparable material purchases (Van Boven and Gilovich 2003). Further, there is evidence that experiences can have other positive benefits beyond happiness. Experiences have been shown to be better for forming bonds with gift givers and receivers (Chan and Mogilner 2017), providing insight into our true self (Carter and Gilovich 2012; Kim et al. 2016), giving off positive impressions (Valsesia and Diehl 2017), and increasing the enjoyment of discussions (Kumar and Gilovich 2015). However, some research has argued that these effects might have boundaries. The benefit of experiential purchases is limited to those that turn out positively in retrospective studies (Nicolao, Irwin, and Goodman 2009), and this advantage may not always hold in day to day life (Weidman and Dunn 2016).

In this research we meta-analyze the literature on the experiential advantage to study what types of factors affect the strength of this benefit and its applicability. We examine whether different procedures and methodologies might affect the effect size of the experiential advantage, and test whether certain dependent measures (e.g., hedonics, social factors, or identity) lead to a larger experiential advantage. Researchers have used several different procedures to test the experiential advantage, which provides a natural experiment to investigate potential moderators. In perhaps the most common procedures, participants are asked to recall a purchase that was either experiential or material in nature (Van Boven and Gilovich 2003). Other procedures have asked participants to think of a product in more experiential or material terms (e.g., a 3D television; Mann and Gilovich 2016), or present participants either an experiential or material good (Van Boven et al. 2010). Researchers have also used varying dependent measures, and little attention has been given to the nuances of what the experiential advantage means. For instance, researchers have asked participants to respond to questions about happiness (Nicolao et al. 2009), impressions of people with said goods (Van Boven et al. 2010), relationships with others (Chan and Mogilner 2017), or several other related, but distinct, dependent measures about hedonics or social elements (Kumar and Gilovich 2015).

We included any comparison between an experience and material condition in which the measure could be construed as the outcome being better in terms of happiness, building social bonds, leading to greater donations, improving perceptions of yourself/your identity, and related measures. We divide the dataset into those about hedonics and those about social/identity types of dependent measures to test primary explanations of the experiential advantage (i.e., social currency, identity centrality, and positive reinterpretation; Van Boven and Gilovich 2003). We excluded studies in which the dependent measure was not interpretable as having an "advantage" (e.g., discount factors; Goodman et al. 2018).

We searched for literature in January through July 2017 on PsycINFO and Proquest Dissertations and Theses, and through a forward search of citations of Van Boven and Gilovich (2003) on Web of Science. We used the following search terms: (experiential OR



material OR material-experiential OR experiential-material) AND (gift OR consumption OR product OR products OR purchase OR purchases OR possessions OR possession). We also searched conference proceedings from SCP, SJDM, ACR, and SPSP. Further, we e-mailed 42 authors for unpublished materials and to verify effect sizes, and we reached out for unpublished materials through the ACR and SJDM listservs and the SCP website.

We use standard formula for computation of effect sizes in terms of Hedges  $d$  with its correction factor (Borenstein et al. 2009; Lipsey and Wilson 2001). We also employ a calculator to account for multiple correlated effect sizes within a study (Hedges et al. 2010; Tanner-Smith and Tipton 2014).

We coded studies based on several criteria. First, we coded studies based on several procedural variables: whether they were run on Amazon Mechanical Turk or not, whether they originated from published or unpublished studies, whether participants were asked to recall a material or experiential good (Van Boven and Gilovich 2003), whether participants were asked to view one or both of two different goods (Van Boven et al. 2010), whether participants were presented a product described in terms of its material or experiential qualities (Mann and Gilovich 2016). Second, we coded studies based on whether the dependent measure was more about hedonics (Nicolaio et al. 2009) or about social (Chan and Mogilner 2017) or identity factors (Kim et al. 2016). Finally, we explored other potential moderators (e.g., year).

The results consistently found evidence for the experiential advantage and we discuss other publication bias methods. We build a  $p$ -curve on the underlying published literature from which we draw effect sizes and find evidential value for the literature (Simonsohn et al. 2014). We find an effect size for the hedonic measures that is smaller ( $d = .26$ , 95% CI [.20, .32],  $t = 8.41$ ,  $Q = 600.25$ ) than for the social and identity measures ( $d = .45$ , 95% CI [.37, .53],  $t = 11.09$ ,  $Q = 322.58$ ) from 129 studies contributing 429 effect sizes. Mturk studies had slightly smaller effect sizes, while other methodological factors only had a weak impact on effect sizes. This result may point to social and identity dimensions being a critical component of the experiential advantage, consistent with the seminal paper's contentions (Van Boven and Gilovich 2003).

## Using a Meta-Analysis to Unravel Relative Importance of Postulated Explanations for the Endowment Effect

### EXTENDED ABSTRACT

The endowment effect (EE) is the tendency for people to value goods that they own disproportionately more than those that they do not. The effect is demonstrated in the valuation paradigm, where sellers' willingness-to-accept (WTA) price is consistently higher than buyers' willingness-to-pay (WTP) price (Kahneman et al. 1990). The effect is important in marketing because it explains many psychologically-based sales tactics, such as free samples and trial periods, and is especially relevant to the burgeoning area of the peer-to-peer economy, where individuals are both buyers and sellers and are subject to the asymmetric price dichotomy associated with the EE.

The EE has been studied for over 40 years. Researchers have theorized and demonstrated various explanations for the effect. The traditional explanation for the effect is loss aversion (Kahneman and Tversky 1979; Thaler 1985), but recent research favors other explanations based on experimental tests. These include psychological ownership (Morewedge et al. 2009; Strahilevitz and Loewenstein 1998), biased information processing (Carmon and Ariely 2001; Morewedge and Gliblin 2015), and strategic misrepresentation (Plott and Zeiler 2005, 2007). The research on the EE suggests that the

phenomenon is *multi-determined*; that is, multiple factors typically work in concert to trigger the effect. However, what remains unclear is the *relative impact* of these factors; rarely has more than one factor been tested at a time.

Further, variations in conceptualizations and manipulations of explanatory accounts have been used across studies. For instance, the psychological ownership account has traditionally been conceptualized in terms of a *possession-self link* (Strahilevitz and Loewenstein 1998; Peck and Shu 2009), but more recently has also been conceptualized in terms of an *implicit self-threat* (Chatterjee et al. 2013; Dommer and Swaminathan 2013). Biased information processing has been experimentally tested with *direct-specific* and *indirect-general* manipulations. Direct manipulations focus on a specific component of the information processing "chain" postulated to be involved in the EE (Irmak et al. 2013; Johnson et al. 2007; Nayakankuppam and Mishra 2005), whereas indirect manipulations do not focus on a specific component, but rather affect information processing holistically (Saqib, Frohlich, and Bruning 2010; Shu and Peck 2011). It is unclear whether and how differences in conceptualizations and manipulations affect the endowment effect.

To deal with these shortcomings, we compiled a comprehensive list of articles on the EE, coded each study within the articles along a number of factors, and conducted a meta-analysis, based on hierarchical modeling and bootstrapping. The hierarchy comprises specific experiments nested within studies in published articles. Bootstrapping is conducted to control for variation in the number of observations associated with each explanatory factor.

In our meta-analysis, we ask two main questions: (i) Of the EE explanatory accounts that have been tested in experimental studies, which is the leading one? (ii) How do the different conceptualizations and manipulations of the ownership and information processing accounts differentially affect the EE?

*Method.* Our data come from articles studying the EE using the valuation paradigm, published in refereed journals in psychology, marketing, and economics, among others. The data consists of 471 observations derived from 188 studies published in 104 separate articles. The dependent variable for our analysis is the natural logarithm of the WTA/WTP ratio. There are two main groups of independent variables: (i) factors hypothesized to trigger the EE, which we label "causal factors", and (ii) moderating factors, which include product-, consumer-, and method-related features.

We use a three-level mixed effects model, in which the first two levels capture variation due to effect sizes across studies and observations and the third level captures variation due to experiments that are cohorts in the same article. Estimates are obtained by maximum likelihood, which facilitates model testing (Hox et al. 2010). Because differences in the number of observations associated with each of the causal factors may influence the observed relative order of the causal factors on the WTA-WTP disparity, we implement a *bootstrapping approach* that maintains a fixed and equal number of observations across each of the causal factors while still using each factor's full range of data.

*Results.* Our model explains 71% of the variance in the WTA-WTP ratio (Nakagawa and Schielzeth 2013). When all moderators are controlled for and causal factors are set to their neutral points, we find that the WTA/WTP ratio is 1.89 ( $p < .01$ ).

According to the mixed effects model, all three factors hypothesized to cause the EE – psychological ownership ( $\beta_1 = 0.090$ ,  $p < .01$ ), biased information processing ( $\beta_2 = 0.126$ ,  $p < .01$ ), and strategic misrepresentation ( $\beta_3 = -0.065$ ,  $p < .01$ ) significantly influence the WTA/WTP asymmetry. To test the idea that biased information processing account might be the leading factor in influencing the

intensity of the endowment effect (Morewedge and Giblin 2015), its estimated beta is compared with those of psychological ownership and strategic misrepresentation. We find that  $\beta_2$  is significantly larger than either  $\beta_1$  or  $\beta_3$  ( $p < .05$ ).

Subsequent analysis of the components of the psychological ownership account reveals that both the *implicit self-threat* ( $\beta = 0.083, p < .01$ ) and *possession-self link* components ( $\beta = 0.051, p < .01$ ) drive the disparity between WTA and WTP. Contrasting beta values, we find the *implicit self-threat* component to play a marginally more extensive role in driving the endowment effect than the *possession-self link* component ( $\beta_{\text{implicit self-threat}} - \beta_{\text{possession-self link}} > p < .13$ ).

Analysis of manipulation types for the biased information processing account show that both *indirect-general* manipulations ( $\beta = 0.115, p < .01$ ) and *direct-specific* manipulations ( $\beta = 0.050, p < .01$ ) influence the WTA-WTP gap. In this case, *indirect-general* manipulations generate significantly larger gaps than do *direct-specific* manipulations ( $\beta_{\text{indirect-general}} - \beta_{\text{direct-specific}} > p < .05$ ).

**Conclusions.** Consistent with existing research, our results validate the multi-determined nature of the EE; however, our results show biased information processing as the leading explanatory account of the effect. The results challenge the traditional conceptualization of the ownership account in terms of a possession-self link and bring to light how different manipulations of biased information processing – direct versus indirect – can systematically affect the WTA-WTP disparity.

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# Uncovering Empirical Generalizations in Consumer Research: Creating New and Synthesizing Accumulated Knowledge

Chair: Mansur Khamitov, Nanyang Technological University, Singapore

## **Paper #1: How Well Do Consumer-Brand Relationships Drive Customer Brand Loyalty? Generalizations from a Meta-Analysis of Brand Relationship Elasticities**

Mansur Khamitov, Nanyang Technological University, Singapore

Xin (Shane) Wang, Western University, Canada

Matthew Thomson, Western University, Canada

## **Paper #2: Is Congruity Desirable for Brand Extensions? A Conceptual and Meta-Analytic Review**

Qian (Claire) Deng, University of Prince Edward Island, Canada

Paul Richard Messinger, University of Alberta, Canada

## **Paper #3: The Experiential Advantage: A Meta-Analysis**

Evan Weingarten, University of California, San Diego, USA

Joe Goodman, Ohio State University, USA

## **Paper #4: Using a Meta-Analysis to Unravel Relative Importance of Postulated Explanations for the Endowment Effect**

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### **SESSION OVERVIEW**

Much of consumer research has focused on developing theories of consumer behavior (Rapp and Hill 2015; Wang et al. 2015) and testing theoretically-derived predictions by examining novel consumer-relevant phenomena (Dahl et al. 2015). However, the field lacks a concerted integration of accumulated consumer-relevant findings (Grewal et al. 2018). Despite sheer magnitude and richness of consumer research, scant efforts have been made by consumer researchers to synthesize extant research on focal phenomena and provide novel empirical generalizations. By abstracting from clusters of related empirical findings, consumer researchers can contribute to ongoing debates, and perhaps more importantly, generate new theoretical directions moving forward.

The aim of this session is to move beyond a narrative summary of extant empirical work and generate novel empirical generalizations in consumer research. Specifically, the four papers in this session address the following questions: 1) What empirical generalizations can be uncovered from extant research on specific consumer-relevant phenomenon, and 2) how does the nature of these generalizations vary as a function of theoretically important moderators and boundary conditions? Session attendees will learn about novel insights generated from four large-scale consumer research meta-analyses in this session, factors nuancing and/or influencing these insights as well as current best practices related to application of meta-analytic method to tackling important consumer-relevant phenomena.

The first two papers aim to generate empirical generalizations related to the domain of consumers' connections with brands. The authors of the first paper examine how well different consumer-brand relationships (CBRs) drive customer brand loyalty. They show that while affective CBRs emerged the strongest drivers of loyalty overall, identity CBRs yielded stronger effects using behavioral, retrospective loyalty, and non-students while trust CBRs dominated among Americans. In terms of the second paper, researchers meta-analyze and review the congruity literature for brand extensions. They docu-

ment a consistent positive effect of congruity on consumers' responses to brand extensions and a series of factors that that interact with and moderate congruity to influence consumers' responses (e.g. parent brand characteristics, flexibility of the categorization process).

The last two papers strive to provide empirical generalizations with respect to two classic topics in consumer research: experiential consumption and endowment effect. The third paper meta-analyzes the experiential advantage literature comparing material purchases to experiential purchases, and show that while measures of happiness had a "small-to-medium" effect size overall, measures of impressions and personal identity had directionally larger effect sizes. Lastly, the authors of the final paper meta-analytically test the relative explanatory power of drivers of the endowment effect, finding that biased information processing is the leading explanatory account, relative to ownership and misrepresentation accounts.

Taken together, this session provides multifaceted insights into how the field of consumer research can systematically synthesize existing findings and generate new insights. Exploring important consumer-relevant phenomena through application of powerful meta-analytic method can enrich consumer theories. We expect this session to be of interest to consumer researchers across different areas (branding, experiential consumption, BDT), consumer methodologists, and practitioners who want to use academic empirical generalizations and apply them to practice.

## **How Well Do Consumer-Brand Relationships Drive Customer Brand Loyalty? Generalizations from a Meta-Analysis of Brand Relationship Elasticities**

### **EXTENDED ABSTRACT**

Customer brand loyalty is one of the most important concepts to consumer researchers and marketing practitioners. A considerable amount of research over the last 20 years documents that different consumer-brand relationship constructs (CBR), such as those characterized as primarily affective (e.g. attachment and love), identity-based (e.g. self-brand connection and identification), and trust-based, are positive predictors of customer brand loyalty. For instance, it has been demonstrated that brand attachment predicts a brand's purchase share (Park et al. 2010), brand identification impacts behavioral intentions (Einwiller et al. 2006) and brand trust leads to repurchase intentions (Mazodier and Merunka 2012). CBRs can hence be portrayed as invaluable assets that develop and solidify customer brand loyalty.

Given the importance of consumer-brand relationship constructs as a customer brand loyalty-solidifying mechanism, it is not surprising that branding scholars and practitioners want to know what CBRs to focus on and what performs best and when. However, there is little consensus on what CBR constructs are superior predictors of loyalty and under what conditions each construct performs relatively better. Theoretically speaking, while there is a general understanding that all CBR constructs that we examine are positively associated with customer brand loyalty, there is no systematic understanding regarding what CBR construct is the most effective driver of loyalty, and even more critically, under what specific circumstances and settings. For example, research focused on the *same* CBR construct (e.g. attachment) has revealed relatively small ( $= .09$ ; Goode, Khamitov and

Thomson 2015), medium (= .30; Thomson 2006) and large (= .64; Hudson et al. 2016) estimates of the path to customer brand loyalty. At the same time, research on *different* CBR constructs (i.e. love, identification and trust) has documented nearly equally powerful paths to customer brand loyalty (Bergkvist and Bech-Larsen 2010; He et al. 2012; Hudson et al. 2016). Relatedly, in light of differing tactical objectives in the field of solidifying customer brand loyalty (e.g. repeat purchase vs. attitudinal loyalty), it is unclear which CBR construct is likely to be superior driver of customer brand loyalty. From a practical standpoint, marketers invest billions into fostering relationships with consumers in the absence of a solid understanding of their actions (Avery, Fournier, and Wittenbraker 2014). Clearly, as a field we do not yet know the answer.

In response, we start to address this gap. To advance understanding of how well different consumer-brand relationship constructs drive customer brand loyalty and to help companies improve the effectiveness of their relationship building investments, we conduct a meta-analysis of the link between three CBR constructs and customer brand loyalty. To generate our database, we undertook a search of all relevant literature that touched on the linkage between CBRs and customer brand loyalty. We initially identified relevant papers through a search of multiple electronic databases, such as ProQuest, Google Scholar, PsycINFO, ABI/Inform, Business Source Complete, Web of Science, JSTOR, and Science Direct using keywords (e.g. brand relationship, brand attachment, brand love, self-brand connection etc... and combinations of these terms) related to customer brand loyalty and the focal antecedents. For inclusion in our meta-analysis, we retained articles published in a journal that appeared on the *Financial Times* (i.e. FT 50) or *UT Dallas' Research Rankings* list or rated in the *Academic Journal Guide* (Chartered Association of Business Schools 2015) as a 2 or higher (out of 4\*). We used this 2+ criteria to ensure a broad range of publication outlets while maintaining quality control. In addition, other criteria for inclusion required that (1) a study measured one or more CBR constructs using a multi-item scale, (2) the study included a measure that was interpretable as customer brand loyalty (e.g. attitudinal loyalty, behavioral loyalty, "mixed" loyalty, etc...), and (3) the study presented empirical consumer-level responses (typically based on survey and/or experimental data). Finally, the results had to enable the unambiguous estimation of effect sizes linking one or more pairs of variables of interest or report other statistical information from which we could calculate effect sizes.

We also identified a series of control variables corresponding to brand, sample, consumer, journal and methodological characteristics, and performed several checks to ensure the robustness of the results. To account for a nested or hierarchical structure of meta-analytic data (i.e. subjects nested within studies; Denson and Seltzer 2011) and associated within-study error correlations between effect sizes, we conduct the meta-analysis with hierarchical linear modeling (HLM) (Bijmolt and Pieters 2001; You et al. 2015). In line with prior meta-analyses in marketing (e.g. Rubera and Kirca 2012; You et al. 2015), we estimate the model employing the maximum likelihood estimation method.

The analysis of 304 effect sizes from 143 studies reported in 127 publications over 21 years ( $n = 179,395$  across 35 countries) reveals that all three consumer-brand relationship constructs positively drive customer brand loyalty and that the aggregate CBR elasticity is .404. More importantly, our results demonstrate under what conditions various CBR constructs increase loyalty. For example, the links between CBR constructs and customer brand loyalty are generally highest for affect-based CBR constructs and when customer brand loyalty is operationalized in attitudinal (vs. behavioral), absolute (vs.

relative) or retrospective (vs. prospective) terms. Additionally, identity-based CBR constructs are stronger predictors of customer brand loyalty when such loyalty is measured behaviorally, retrospectively, or among non-student consumers, while trust-based CBR constructs are better drivers of American consumers' customer brand loyalty.

Drawing on these findings, we advance implications for scholars and managers. We make three main contributions. First, we identify the average elasticity between consumer-brand relationship constructs and customer brand loyalty. In so doing, we extend the field's knowledge base by quantifying the link between various CBR constructs and customer brand loyalty. Second, we identify which of three CBR constructs (i.e. primarily affect-based vs. identity-based vs. trust-based) are relatively better at boosting loyalty. Third, we identify a series of variables (e.g. brand type, sample and consumer characteristics) that moderate these effects, providing important information about when and where each CBR construct appears to be relatively more effective, which implies a series of actionable recommendations for marketing managers.

## Is Congruity Desirable for Brand Extensions? A Conceptual and Meta-Analytic Review

### EXTENDED ABSTRACT

The literature on brand extensions has come a long way since 1990. In this literature, a key question is how to maximize the success of brand extensions, and an important part of this question involves choosing a product category for a brand to extend to. The extensive literature on congruity suggests that consumers will more readily accept an extension of a brand if the extension product is congruent (or fits) with the parent brand (or category). This is a powerful idea that has stood the test of time.

With growth of this literature, researchers have pushed the boundaries of research on the congruity effect by discussing and examining various moderators of the congruity effect, and various alternative effect patterns (e.g., the moderate incongruity effect pattern). Given the range of results from this large body of literature, a systematic and comprehensive review and synthesis can help organize the various findings to date to facilitate future work and to provide a resource for practitioners.

This paper addresses three sets of research questions: (1) *How large is the congruity effect for brand extensions? And how much variation is there?* (2) *What are the relevant factors, in addition to congruity, that influence the success of brand extensions? And how do they interact with congruity?* (3) *Can moderate incongruity generate more favorable responses to brand extensions from consumers than congruity? And under what circumstances?*

Our theoretical review summarizes the work on congruity since 1990, including various factors studied that work together with congruity to influence consumer reactions to brand extensions. We provide a conceptual framework that synthesizes this work, by putting a focus on the theoretical mechanism of categorization theory and affect transfer, which has frequently been argued to underlie the congruity effect. This theoretical review provides necessary background for our empirical analysis.

Our empirical analysis consists of a meta-analysis to measure the impact of congruity (between a parent brand and an extension category) on consumers' reactions in the brand extension research. This method is particularly useful here, because it can directly contrast and combine different study results via effect sizes, so that patterns, relationships, and even source of variation among studies' results can be identified. After conducting an extensive literature search, screening and coding the data, and applying meta-analysis



methods, we generated 269 effect sizes of congruity, each of which represents an effect size arising from a comparison of two levels of congruity. The data came from 37 journal articles in 11 academic journals in fields related to marketing or business.

Our findings help answer some fundamental questions about this topic.

(1) Our review of the literature on congruity in brand extensions shows a consistent positive effect of congruity on consumers' responses, and our meta-analysis reveals that the overall mean effect size of congruity ( $=0.211$ ) is of small to medium size. There is also support for the *Congruity Hypothesis* effect pattern (consumers respond better to congruity than to moderate incongruity, which they respond better to than to extreme incongruity), particularly when the dependent variable is consumer attitudes toward the brand extension. But the variation of the congruity effect sizes across studies is large. This directly speaks to the relative importance of congruity. Although congruity is significant and very relevant from a managerial perspective, it is far from being the sole determinant of success for brand extensions.

(2) Our conceptual review of moderators of the congruity effect identifies and proposes some key factors that may interact with congruity to influence consumers' responses. Our meta-analysis finds a very significant positive effect of congruity for attitudinal dependent variables, that negative information about the parent brand nullify the congruity effect, and that parent brand attitude and brand familiarity positively interact with congruity. For practitioners, these results suggest that parent brand characteristics are important factors interacting with congruity to influence consumers' responses.

(3) Our conceptual review and meta-analysis together identify two important sets of factors that may moderate the congruity effect into a *Moderate Incongruity* effect pattern (consumers respond better to moderate congruity than to congruity, which they respond better to than to extreme incongruity): those factors that increase elaboration to resolve incongruity, and those that increase flexibility of the categorization process. These results provide an alternative brand extension strategy for practitioners. Other than the simple "more congruent, the better" strategy, the company could extend to a moderately incongruent product category, and employ marketing campaigns designed to induce flexibility of categorization or greater elaboration about any perceived incongruity.

(4) In addition, larger effect sizes of congruity are identified for studies using general consumers as samples (vs. student samples) and for studies with a successful manipulation check (vs. unsuccessful or no manipulation checks). These findings have methodological implications for this research area. In particular, the use of student samples may lead to under-estimation of the congruity effect sizes, which suggests that general consumer samples may lead to a more realistic estimation of the congruity effect. Moreover, the use of manipulation checks may be an important element in research design.

Overall, as guidance for managers and researchers in this area, congruity alone is not enough to drive the success of a brand extension, but it can tip the balance together with other factors.

### The Experiential Advantage: A Meta-Analysis

#### EXTENDED ABSTRACT

The types of purchases consumers make and the way they perceive those purchases

matters. They affect a consumer's happiness and wellbeing, and they have important implications for satisfaction and repeat purchase. For instance, more than a decade of research suggests calling purchases hedonic or utilitarian can influence happiness (Dhar and

Werthenbroch 2000; Khan and Dhar 2010), and many studies demonstrate how consumers trade off products they perceive as vices and virtues (Dhar, Huber, and Khan 2007; Kivetz and Simonson 2002). More recently, studies have focused on another continuum on which consumer expenditures may differ: whether a purchase is more experiential (i.e., for obtaining an experience) or material (i.e., for obtaining a tangible object; Van Boven and Gilovich, p. 1194).

An expanding literature argues that in terms of happiness, there is an "experiential advantage:" Experiential purchases lead to more consumer happiness than comparable material purchases (Van Boven and Gilovich 2003). Further, there is evidence that experiences can have other positive benefits beyond happiness. Experiences have been shown to be better for forming bonds with gift givers and receivers (Chan and Mogilner 2017), providing insight into our true self (Carter and Gilovich 2012; Kim et al. 2016), giving off positive impressions (Valesia and Diehl 2017), and increasing the enjoyment of discussions (Kumar and Gilovich 2015). However, some research has argued that these effects might have boundaries. The benefit of experiential purchases is limited to those that turn out positively in retrospective studies (Nicolao, Irwin, and Goodman 2009), and this advantage may not always hold in day to day life (Weidman and Dunn 2016).

In this research we meta-analyze the literature on the experiential advantage to study what types of factors affect the strength of this benefit and its applicability. We examine whether different procedures and methodologies might affect the effect size of the experiential advantage, and test whether certain dependent measures (e.g., hedonics, social factors, or identity) lead to a larger experiential advantage. Researchers have used several different procedures to test the experiential advantage, which provides a natural experiment to investigate potential moderators. In perhaps the most common procedures, participants are asked to recall a purchase that was either experiential or material in nature (Van Boven and Gilovich 2003). Other procedures have asked participants to think of a product in more experiential or material terms (e.g., a 3D television; Mann and Gilovich 2016), or present participants either an experiential or material good (Van Boven et al. 2010). Researchers have also used varying dependent measures, and little attention has been given to the nuances of what the experiential advantage means. For instance, researchers have asked participants to respond to questions about happiness (Nicolao et al. 2009), impressions of people with said goods (Van Boven et al. 2010), relationships with others (Chan and Mogilner 2017), or several other related, but distinct, dependent measures about hedonics or social elements (Kumar and Gilovich 2015).

We included any comparison between an experience and material condition in which the measure could be construed as the outcome being better in terms of happiness, building social bonds, leading to greater donations, improving perceptions of yourself/your identity, and related measures. We divide the dataset into those about hedonics and those about social/identity types of dependent measures to test primary explanations of the experiential advantage (i.e., social currency, identity centrality, and positive reinterpretation; Van Boven and Gilovich 2003). We excluded studies in which the dependent measure was not interpretable as having an "advantage" (e.g., discount factors; Goodman et al. 2018).

We searched for literature in January through July 2017 on PsycINFO and Proquest Dissertations and Theses, and through a forward search of citations of Van Boven and Gilovich (2003) on Web of Science. We used the following search terms: (experiential OR material OR material-experiential OR experiential-material) AND (gift OR consumption OR product OR products OR purchase OR



purchases OR possessions OR possession). We also searched conference proceedings from SCP, SJDM, ACR, and SPSP. Further, we e-mailed 42 authors for unpublished materials and to verify effect sizes, and we reached out for unpublished materials through the ACR and SJDM listservs and the SCP website.

We use standard formula for computation of effect sizes in terms of Hedges  $d$  with its correction factor (Borenstein et al. 2009; Lipsey and Wilson 2001). We also employ a calculator to account for multiple correlated effect sizes within a study (Hedges et al. 2010; Tanner-Smith and Tipton 2014).

We coded studies based on several criteria. First, we coded studies based on several procedural variables: whether they were run on Amazon Mechanical Turk or not, whether they originated from published or unpublished studies, whether participants were asked to recall a material or experiential good (Van Boven and Gilovich 2003), whether participants were asked to view one or both of two different goods (Van Boven et al. 2010), whether participants were presented a product described in terms of its material or experiential qualities (Mann and Gilovich 2016). Second, we coded studies based on whether the dependent measure was more about hedonics (Nicolaio et al. 2009) or about social (Chan and Mogilner 2017) or identity factors (Kim et al. 2016). Finally, we explored other potential moderators (e.g., year).

The results consistently found evidence for the experiential advantage and we discuss other publication bias methods. We build a  $p$ -curve on the underlying published literature from which we draw effect sizes and find evidential value for the literature (Simonsohn et al. 2014). We find an effect size for the hedonic measures that is smaller ( $d = .26$ , 95% CI [.20, .32],  $t = 8.41$ ,  $Q = 600.25$ ) than for the social and identity measures ( $d = .45$ , 95% CI [.37, .53],  $t = 11.09$ ,  $Q = 322.58$ ) from 129 studies contributing 429 effect sizes. Mturk studies had slightly smaller effect sizes, while other methodological factors only had a weak impact on effect sizes. This result may point to social and identity dimensions being a critical component of the experiential advantage, consistent with the seminal paper's contentions (Van Boven and Gilovich 2003).

## Using a Meta-Analysis to Unravel Relative Importance of Postulated Explanations for the Endowment Effect

### EXTENDED ABSTRACT

The endowment effect (EE) is the tendency for people to value goods that they own disproportionately more than those that they do not. The effect is demonstrated in the valuation paradigm, where sellers' willingness-to-accept (WTA) price is consistently higher than buyers' willingness-to-pay (WTP) price (Kahneman et al. 1990). The effect is important in marketing because it explains many psychologically-based sales tactics, such as free samples and trial periods, and is especially relevant to the burgeoning area of the peer-to-peer economy, where individuals are both buyers and sellers and are subject to the asymmetric price dichotomy associated with the EE.

The EE has been studied for over 40 years. Researchers have theorized and demonstrated various explanations for the effect. The traditional explanation for the effect is loss aversion (Kahneman and Tversky 1979; Thaler 1985), but recent research favors other explanations based on experimental tests. These include psychological ownership (Morewedge et al. 2009; Strahilevitz and Loewenstein 1998), biased information processing (Carmon and Ariely 2001; Morewedge and Gliblin 2015), and strategic misrepresentation (Plott and Zeiler 2005, 2007). The research on the EE suggests that the phenomenon is *multi-determined*; that is, multiple factors typically work in concert to trigger the effect. However, what remains unclear

is the *relative impact* of these factors; rarely has more than one factor been tested at a time.

Further, variations in conceptualizations and manipulations of explanatory accounts have been used across studies. For instance, the psychological ownership account has traditionally been conceptualized in terms of a *possession-self link* (Strahilevitz and Loewenstein 1998; Peck and Shu 2009), but more recently has also been conceptualized in terms of an *implicit self-threat* (Chatterjee et al. 2013; Dommer and Swaminathan 2013). Biased information processing has been experimentally tested with *direct-specific* and *indirect-general* manipulations. Direct manipulations focus on a specific component of the information processing "chain" postulated to be involved in the EE (Irmak et al. 2013; Johnson et al. 2007; Nayakankuppam and Mishra 2005), whereas indirect manipulations do not focus on a specific component, but rather affect information processing holistically (Saqib, Frohlich, and Bruning 2010; Shu and Peck 2011). It is unclear whether and how differences in conceptualizations and manipulations affect the endowment effect.

To deal with these shortcomings, we compiled a comprehensive list of articles on the EE, coded each study within the articles along a number of factors, and conducted a meta-analysis, based on hierarchical modeling and bootstrapping. The hierarchy comprises specific experiments nested within studies in published articles. Bootstrapping is conducted to control for variation in the number of observations associated with each explanatory factor.

In our meta-analysis, we ask two main questions: (i) Of the EE explanatory accounts that have been tested in experimental studies, which is the leading one? (ii) How do the different conceptualizations and manipulations of the ownership and information processing accounts differentially affect the EE?

*Method.* Our data come from articles studying the EE using the valuation paradigm, published in refereed journals in psychology, marketing, and economics, among others. The data consists of 471 observations derived from 188 studies published in 104 separate articles. The dependent variable for our analysis is the natural logarithm of the WTA/WTP ratio. There are two main groups of independent variables: (i) factors hypothesized to trigger the EE, which we label "causal factors", and (ii) moderating factors, which include product-, consumer-, and method-related features.

We use a three-level mixed effects model, in which the first two levels capture variation due to effect sizes across studies and observations and the third level captures variation due to experiments that are cohorts in the same article. Estimates are obtained by maximum likelihood, which facilitates model testing (Hox et al. 2010). Because differences in the number of observations associated with each of the causal factors may influence the observed relative order of the causal factors on the WTA-WTP disparity, we implement a *bootstrapping approach* that maintains a fixed and equal number of observations across each of the causal factors while still using each factor's full range of data.

*Results.* Our model explains 71% of the variance in the WTA-WTP ratio (Nakagawa and Schielzeth 2013). When all moderators are controlled for and causal factors are set to their neutral points, we find that the WTA/WTP ratio is 1.89 ( $p < .01$ ).

According to the mixed effects model, all three factors hypothesized to cause the EE – psychological ownership ( $\beta_1 = 0.090$ ,  $p < .01$ ), biased information processing ( $\beta_2 = 0.126$ ,  $p < .01$ ), and strategic misrepresentation ( $\beta_3 = -0.065$ ,  $p < .01$ ) significantly influence the WTA/WTP asymmetry. To test the idea that biased information processing account might be the leading factor in influencing the intensity of the endowment effect (Morewedge and Gliblin 2015), its estimated beta is compared with those of psychological ownership

and strategic misrepresentation. We find that  $\beta_2$  is significantly larger than either  $\beta_1$  or  $\beta_3$  ( $p < .05$ ).

Subsequent analysis of the components of the psychological ownership account reveals that both the *implicit self-threat* ( $\beta = 0.083$ ,  $p < .01$ ) and *possession-self link* components ( $\beta = 0.051$ ,  $p < .01$ ) drive the disparity between WTA and WTP. Contrasting beta values, we find the *implicit self-threat* component to play a marginally more extensive role in driving the endowment effect than the *possession-self link* component ( $\beta_{\text{implicit self-threat}} - \beta_{\text{possession-self link}}$ ,  $p < .13$ ).

Analysis of manipulation types for the biased information processing account show that both *indirect-general* manipulations ( $\beta = 0.115$ ,  $p < .01$ ) and *direct-specific* manipulations ( $\beta = 0.050$ ,  $p < .01$ ) influence the WTA-WTP gap. In this case, *indirect-general* manipulations generate significantly larger gaps than do *direct-specific* manipulations ( $\beta_{\text{indirect-general}} - \beta_{\text{direct-specific}}$ ,  $p < .05$ ).

**Conclusions.** Consistent with existing research, our results validate the multi-determined nature of the EE; however, our results show biased information processing as the leading explanatory account of the effect. The results challenge the traditional conceptualization of the ownership account in terms of a possession-self link and bring to light how different manipulations of biased information processing – direct versus indirect – can systematically affect the WTA-WTP disparity.

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# Delineating the Role of Collaboration in Shaping Market Dynamics

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## **Paper #1: How Categories Transform Markets through Non-Collective, Non-Strategic Collaboration**

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## **Paper #2: Collaborative Work as Catalyst for Market Formation: The Case of the Ancestral Health Market**

Burçak Ertimur, Fairleigh Dickinson University, USA  
Steven Chen, California State University, Fullerton, USA

## **Paper #3: Exiting Etsy? When Collaboration Among Market Co-Creators Come Undone**

Daiane Scaraboto, Pontificia Universidad Católica de Chile, Chile  
Eileen Fischer, York University, Canada

## **Paper #4: Cultivating Collaboration and Value Cocreation in Consumption Journeys**

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Hope Jensen Schau, University of Arizona, USA

### **SESSION OVERVIEW**

Market system dynamics are constituted via “discursive negotiations among and the practices of multiple stakeholders” including “a market-shaping consumer” as well as “managers, entrepreneurs, media journalists, policy makers, scientists, technologists, religious authorities and political activists” (Giesler and Fischer 2017, p. 3). These systems encompass a wide range of formal collaborative arrangements such as joint ventures, alliances, and consortiums. There is a rich tradition in marketing of studying interorganizational relationships, and the nature, antecedents and consequences of collaborative partnerships. Studies in this area predominantly focus on relational-, revenue-, and innovation-related outcomes of collaborative relationships (e.g. Fang et al. 2008, Rindfleisch and Moorman 2001, Swaminathan and Moorman 2009). A few studies on market systems have also highlighted the collaborative relations within brand and heterogeneous consumption communities as well as between consumers and institutional entrepreneurs, and examined how such efforts contribute to market change (e.g. Scaraboto 2015, Scaraboto and Fischer 2013, Schau et al. 2009, Thomas et al. 2013). Still, how collaborations between different types of actors shape the dynamics of markets is an under-researched area. This special session seeks to address this gap by showcasing four interrelated studies that examine how collaborations among market actors are instituted, maintained, and disrupted, and in turn, shape dynamics of markets.

The first paper examines how collaborations among market actors can lead to long lasting market-level transformations within the context of the high fashion market. Drawing from framing and social movement theories, the authors introduce the concept of category-based field frame that mobilize actors to enact market-level change and demonstrate how ensuing collaborations result in asymmetric benefits for established versus subordinate market actors. The second paper focuses on the emergence of collaborative arrangements between actors residing in different institutional fields and illustrates how collaborative processes can serve as catalysts for market formation in the context of the ancestral health market. The authors catalogue strategic, learning-related and political types of collaborations and detail the influence of different institutional fields on collaboration dynamics. The third paper examines factors that may undermine continuing collaboration among interdependent, yet, heterogeneous

market actors in the context of the Etsy platform, an online marketplace for unique and primarily handmade goods. The authors identify barriers to collaborative efforts as the actors on the platform become more and more heterogeneous. The fourth paper explores how value is continually cocreated through collaboration in the context of consumption journeys that involve repeated engagement with a practice over extended periods of time. Viewing reflexivity as an important part of this process, the authors identify the kinds of reflexive outcomes that may be leveraged to cultivate collaboration among market actors.

Taken together, these four papers speak to the spirit of this year’s conference theme on “trust in doubt” as the management and building of trust is critical for the success of collaborations between market actors. This session will provide researchers with a theoretically grounded understanding of the role collaborations play in market systems and extend previous research on firm-level and producer-focused collaborations.

## **How Categories Transform Markets through Non-Collective, Non-Strategic Collaboration**

### **EXTENDED ABSTRACT**

A perennial question in social movement theory is how can a group of subordinate market actors foster the power necessary to enact market-level change. Social movement theory has proposed that movement actors resolve this problem by engaging in the creation and maintenance of meanings through the creation of “schemata of interpretation” (Goffman 1974, 21), or frames. These frames organize the world with the intent to “mobilize potential adherents and constituents, to garner bystander support, and to demobilize antagonists” (Snow and Benford 1988, 198). Such “action-oriented sets of beliefs and meanings that inspire and legitimate the activities of movement actors” have been termed collective action frames (Benford and Snow 2000, 614).

These ad-hoc, movement-specific frames are only temporary solutions to help muster the power necessary for subordinate actors to enact market-level change. Once change has been realized, groups of organized actors might dissolve, such as the U.S. civil rights movement, or their orientation might change, such as in the case of car clubs organized around reliability tests during the emergence of the automobile (Rao 2008), and so will the collective action frame. How is a change of frame maintained in a market, then?

To answer this shortcoming and explain how frames acquire durability and stickiness within a market, Lounsbury, Ventresca, and Hirsch (2003) conceptualized that long-lasting market-level transformations can result from field frames, an intermediate concept endogenous to market actors (vs. logics which are often conceptualized as exogenous). We contribute to this perspective by proposing that categories—the cognitive and normative structures that group and separate entities (e.g. actors, products) around common codes and attributes, and enable evaluations and exchanges in markets (Durand and Khaire 2017; Durand and Paoletta 2013)—can be worked upon and used by market actors as field frames to garner the support of market actors and collaborate towards market-level change. How, then, do categories differ from collective action frames when used to enact market-level transformations?

We examine this process and develop our theoretical insights based on an analysis of the changes in the high fashion market that



ensued from the legitimization of and acquisition of dominance by the luxury streetwear category in the mid-to-late 2010s. Findings are mainly based on an extensive archival dataset (3690 pages), and informed by 16 interviews with market actors and a netnography of high fashion and streetwear web forums (between 12 and 72 months).

Our findings highlight four main tensions with existing work on framing and social movements that question some of the main assumptions of collective action frames: (1) collective vs. self-interested collaboration; (2) strategic vs. non-strategic action from market actors; (3) discursive vs. material bases for frames and (4) advantageous vs. disadvantageous benefits for mobilized actors. Despite these tensions, we show that the result of non-strategic and materially-based frames that emerged from the conjoint yet self-interested work of actors is still collaborative work that strive for market-level transformation. First, we show how the conjoint work of market actors result from their respective self-interests, rather than their collective desire to transform a market. For example, we highlight how collaborative work between subordinate market actors—streetwear brands—and high fashion actors—fashion houses—both leverage an emerging category and amplify the field frame. These collaborations happen despite the important boundaries between both markets. Second, and related to our first set of findings, we highlight how the work of actors does not aim at transforming the market, but rather benefiting their market positioning. A consequence of their non-strategic work, that is, their lack of “deliberative, utilitarian, and goal-directed,” is the use of the emerging category-related field frame. This results in the amplification and extension of the frame. For example, we show how luxury retailers collaborate with streetwear brands during co-presentation events. During these events, subordinate and established market actors occupy the same space, which both legitimizes the frame by materializing it in a territorial space (Humphreys 2010a) and facilitates commensuration and comparison between subordinate and established market actors (see Khaire 2014). This has a consequence to extend the frame by mobilizing other, smaller retailers who mimic the practices of more established ones. Third, we show that these collaborative processes are not unfolding through discursive processes, as previously displayed in extant research (e.g. Humphreys 2010a, 2010b; Humphreys and Latour 2013; Humphreys and Thompson 2014; see also Benford and Snow 2000), but rather work at the level of product designs, events, award shows, human resources strategies, and retail stores. Lastly, we show that, when completed, the market-level changes supported by the category-based field frame are disadvantageous to many mobilized, established market actors, who ultimately collaborated against themselves. For example, established fashion houses who contributed to the transformation of the field frame are displaced as other, originally subordinate market actors take their place. Despite these contradictions, this shift in field frames still is supported by the conjoint, collaborative work of subordinate and established market actors who together transform the market.

We thus highlight how the collaborative efforts necessary to achieve market-level change might not demand strategic action and collective intent. It can even result from actors mobilize to a frame, sometimes despite this frame ultimately hindering their symbolic positioning and associated economic benefits. These contradictions with extant research on social movements and framing thus provide theoretical extensions that allow for a better understanding of the processes underlying market-level transformations.

## Collaborative Work as Catalyst for Market Formation: The Case of the Ancestral Health Market

### EXTENDED ABSTRACT

Research on how markets emerge, develop, and change has received increasing attention in recent years (Giesler and Fischer 2017). Work in this area focused on processes of legitimation in market formation (e.g. Humphreys 2010b), highlighted active roles consumers play in market maintenance and change (e.g. Dolbec and Fischer 2015, Martin and Schouten 2014), theorized market evolution as series of contestations and compromises among market actors (e.g. Giesler 2008, 2012), and examined links between competitive dynamics and market evolution (e.g. Ertimur and Coskuner-Balli 2015). In fact competitive forces and dynamics have been a hallmark for understanding development and growth of new markets. From a strategic marketing point of view, marketers are often conceptualized within an antagonistic relationship, in competition to lure consumers to their own products and services. Yet, researchers have also acknowledged and studied contexts within which market actors may compete and collaborate at the same time (e.g., Brandenburger and Nalebuff 1996). This paper focuses on the latter from of relationships and investigates how collaborative work among market actors emerge and serve as a catalyst for market formation/evolution.

We integrate ideas from strategic management literature and organizational network research with an institutional theoretic perspective to examine collaborative processes that contribute to market development. We define collaboration as a cooperative, negotiated relationship among market actors as well as organizations (Hardy, Phillips and Lawrence 2003; Phillips, Lawrence, and Hardy 2000). This definition includes a range of collaborative arrangements such as alliances and associations while distinguishing collaboration from exchange relations that characterize market and hierarchical mechanism of control. That is, collaborative activity is neither governed by the price mechanism, as in the case of a buyer-supplier arrangements, nor by some legitimate authority, as in the case of relations between private firms and state agencies (Phillips, Lawrence, and Hardy 2000). Literature on interorganizational domains examines collaborative formations as response to societal problems that are beyond the means of a single organization to solve. Trist (1983) defines interorganizational domains as “functional social systems that occupy a position in social space between the society as a whole and the single-organization.” These socially constructed cognitive and organizational structures form as individuals view themselves as connected to problems that are shared by others and recognize that they can be addressed collectively. Thus, by pooling expertise and resources, collaborative arrangement can address problems in ways that competition or confrontation cannot (Hardy and Phillips 1998).

The context of our inquiry is the paleo lifestyle movement in the United States, which is an instructive site of collaboration between academic scientists, healthcare professionals, and marketing agents. The premise of this movement is that we can optimize our health by emulating lifestyles of our Paleolithic predecessors. Because “at our biological core we are still largely hunters and gatherers” and our modern lifestyles that commonly involve eating processed foods, sitting in front of a computer all day, exercising in a monotonous manner and sleeping much less than we actually need contradict with how we have evolved as humans (Durant 2013, p. 2). The origins of this movement coincided with the emergence of ‘new health consciousness’ prompted by dissemination of epidemiological studies on chronic diseases and reports on ills of smoking, increasing attention drawn to environmental degradation as well as emergent evidence of carcinogens contained in food products (Crawford 2006). In this

research, we examine how the collaborative work among market actors, evident in the launch of joint projects and the negotiation of a shared meaning system fueled the paleo lifestyle movement and led to the creation of the ancestral health market. This thriving market encompasses products and services ranging from restaurants to vacation retreats, books, and clothing to name a few (Williams 2014).

We employ archival and netnographic data to help us understand the origins of the paleo lifestyle movement and how it contributed to the institutionalization of the ancestral health market. We collected articles from the top ten circulating newspapers in the U.S. that contained the terms “paleo,” “cavemen,” “stone age” and “Paleolithic” using LexisNexis Academic database (n=100). Using the WorldCat network of library content, we gathered the number of paleo related books published in English (n=693). We pulled applications for trademarks related to paleo from the U.S. Patent and Trademark Office (n= 387). We did a close reading of books on the paleo diet and ancestral lifestyle (n=5) written by the so-called “fathers” of the paleo movement and contemporary paleo celebrities (Johnson 2015), and supplemented these with academic paleo lifestyle articles (n=12). A top ranked podcast called *The Paleo Solution Podcast* also constituted a main archival source. The host Robb Wolf discusses topics of health, fitness, and dieting, and features guests that operate in the ancestral health market. Of the 85% of episodes we examined (n=246) over the 2010-2015 time period, 35% of them contained a guest speaker (n=109). We collected additional information on these individuals and recorded their professional and educational backgrounds, credentials, new organizations/brands they launched, and domains of their writings/publications. We supplemented these archival data with a netnography of paleo and ancestral health related websites, forums, and blogs (n=100). Overall, these data allowed us to identify key market actors, how they came to be a part of this lifestyle movement, and the social networks that they belong to.

Through our qualitative analysis, we formed a historical trajectory of the actors and their multiplex relationships. We then catalogued their strategic, learning-related, and political collaborative efforts that served as catalysts for the emergence of the ancestral health market. The findings reveal that the dynamics of these collaborative arrangements are shaped by actors’ institutional affiliations, which at times involve conflicting institutional rules and standards (Phillips, Lawrence and Hardy 2000). Our analysis also illustrates how collaborations amongst market actors are characterized by distributed brokerage and highlight the importance of developing and maintaining a collective identity amongst collaborators. Overall, the findings help us understand how market actors’ collaborative efforts help each actor to attain objectives that would be difficult to accomplish on their own and also serve as catalysts for market formation.

### **Exiting Etsy? When Collaboration Among Market Co-Creators Come Undone**

#### **EXTENDED ABSTRACT**

I know how very difficult life at Etsy has been for so many. I know the struggles are real. What I’m asking is: based on what we have here today, will you still be here a year from now? (Post from Sunny to Etsy Vendor Forum Jul 12, 2017)

Consumer researchers have shed considerable light on the conditions that foster collaboration and continuity among collections of heterogeneous but interdependent market actors in aggregations such as communities (e.g. Thomas, Price and Schau 2013) and hybrid economies (Scaraboto 2015). This research suggests that tensions between heterogeneous actors may be inevitable, but offers multiple possible means for navigating these tensions. These

include, for example, frame alignment practices (Thomas, Price and Schau 2013), negotiations, and collaborating to produce and access resources in ways that allow actors to successfully reconcile their diverse socioeconomic interests (Scaraboto 2015).

While these perspectives on continuing collaborations are invaluable, we as yet lack an understanding of factors that may undermine continuing collaboration among interdependent, heterogeneous market actors – even in the face of tactics to sustain it. In this paper, we attempt to shed light on these factors by an inductive analysis of qualitative data from a platform market from which some actors have exited and many are considering exiting, as the opening quotation suggests.

The Etsy platform is an ideal context in which to investigate this phenomenon because it is one where the market actors – the platform organizer, the clients of the platform who sell goods through it, and the clients who purchase goods through it – are intrinsically interdependent, yet deeply divergent in their interests and values. Using longitudinal netnographic observation methods, we have collected and analyzed data from various online sources, the most important of which is Etsy’s own discussion boards for sellers (<https://www.etsy.com/forums>), from which we have downloaded several thousand discussions archived since Etsy’s inception. Additionally, we collected media articles mentioning Etsy in the title or first paragraph, spanning the period from 2005 to the present.

Etsy was founded in 2005 as part of the “indie” movement and offered unique goods handcrafted by individuals as an alternative to corporate, mass-produced consumption goods. Initially, Etsy’s mission was to reconnect sellers and buyers, and to make commerce more social and fulfilling for its participants. Accordingly, Etsy only allowed participants to sell products they had made themselves or vintage items. It achieved over \$1 million U.S. in sales in its first year of operation.

While Etsy continues to try to honour its original indie ethos, many changes to the market have occurred. New sellers with less of a craft orientation began to place offerings on the platform, buyers with diverse tastes entered the market, and Etsy itself transitioned from an independently owned startup to a publicly traded corporation under pressure to generate profits for its shareholders. For example, vendors who sell goods manufactured by others are now common on the platform. Likewise, the platform now allows sellers to provide goods to wholesalers, who will resell these goods to mainstream retailers. Etsy Studio, a branch of the marketplace, now allows vendors of raw materials to post their goods for sale so sellers who wish to make their own handmade goods can source them through Etsy. All these moves have increased the heterogeneity of actors on the platform. While Etsy ended 2017 with 1.9 million sellers and annual gross sales exceeding \$2.8 billion (<https://www.etsy.com/ca/about>), there is considerable churn among those participating in the platform, which suggests that efforts being made to foster collaboration have been less than completely successful.

Our analysis highlights several factors that have, over time, undermined continuing collaboration among the multiple categories of market actors in this context. One, for example, is *coalition formation*: some categories of actors, whether tacitly or explicitly, act together in coordinated fashion that advances their own short term interests while undermining the interests of others. One instance of coalition formation occurred when Etsy encouraged vendors to put all their offerings on sale, and some subset of Etsy vendors did so; this action served to boost short term turnover for those who participated in the promotional activity, and alienated the more craft oriented vendors who believe that putting their handmade goods on sales devalues them.

The full analysis in this paper offers insight on a broader range of such factors that undermine continuing collaboration among actors in a marketplace. It thereby extends the literatures on marketplace dynamics and collaborative consumption. In particular, it helps shed light on barriers to collaborative continuity.

## Cultivating Collaboration and Value Cocreation in Consumption Journeys

### EXTENDED ABSTRACT

Collaboration is an important means for value cocreation among firms, consumers and consumer collectives. However, cultivating collaboration over time requires a deep understanding of how consumers value perspectives evolve and change. To identify opportunities for collaboration, we explore how reflexivity contributes to the cocreation of value throughout consumption journeys. In particular, we seek to understand how consumers reflexive outcomes can be leveraged to drive collaboration and the continuation of value cocreation through ongoing interactions among multiple actors (e.g., firms, customers, and consumer collectives) – i.e., value cocreation (Vargo, Maglio and Akaka 2008).

The study of consumption-related experiences draws attention to the influence of collectives and collaboration in value creation (e.g., Muniz and O'Guinn 2001; Schau, Muniz and Arnould 2009; Schouten and McAlexander 1995). This research points to practices, “linked and implicit ways of understanding, saying and doing things,” as a critical component of value creation within consumption communities (Schau et al., 2009, p. 31). Applying a systemic approach to value creation (Vargo and Lusch 2011), Figueiredo and Scaraboto (2016, p. 527) provide insights into how value is created through “individual enactments of what may be onetime and haphazard actions.” The authors study the circulation of objects in collaborative consumer networks and find that systemic value creation can occur even without commitment to a particular community or ethos and through individual actions (as opposed to routinized practices).

Although prior research explains how practices (e.g., brand community practices) and processes (e.g., circulation) contribute to value creation, little is known about how value is continually cocreated through collaboration and consumption as individual perspectives change and evolve. Furthermore, the evaluation of an experience is situated within broader social and cultural contexts (Akaka, Vargo and Schau 2015) and the experiences themselves can be extended across time and space (Arnould and Price 2009). Thus, it is important to consider the dynamic context of value (Akaka, Vargo and Lusch 2013), as well as the evaluation of a particular experience (Holbrook 1999), to better understand how value is continually cocreated (or not) through consumption.

Consumption journeys are a useful context for studying continual value cocreation because they involve repeated engagement with a practice over time. We draw on cultural consumption approaches to conceptualize consumption journeys as identity projects that progress over extended periods of time. In other words, consumption journeys are continued engagement with a particular practice (c.f., Warde 2005) through which a person can learn, grow, change and further develop a sense of self (Arnould and Thompson 2005). In this way, consumption journeys provide an extended context through which people engage in particular practices and rely on a variety of market-facing resources to continually cocreate value for themselves and for others. We investigate consumption journeys as the context of continual value cocreation because we are particularly interested in understanding how reflexivity emerges as individuals integrate heterogeneous resources to shape their identities, and, in doing so,

reflect on their association within broader social structures (Thompson, Henry and Bardhi 2018).

Reflexivity is an important aspect of value cocreation because the way in which people assess personal experiences within the world is a major factor in how they act or behave (Solomon 1983). Recent consumer research delineates abstract ideal types of reflexivity – existential, critical and reactive – that assume varying views on the relationships among reflexivity, agency and institutions (Thompson et al., 2018). In our effort to understand value cocreation in consumption journeys, we apply an existential approach to studying reflexivity that “depicts consumers as self-aware agents who make volitional choices from a broad array of identity-constituting resources.” This approach aligns with the sociological views that describe reflexivity as a critical aspect of both practices and institutions (e.g., Archer 2010; Farrugia 2013) and accounts for the dynamics of social and cultural contexts that frame extended engagement with practices throughout consumption journeys.

Rather than investigating how reflexivity mediates structure and agency (Thompson et al., 2018), we seek to understand the personal outcomes of reflexivity within a particular consumer collective and how reflexive outcomes contribute to the continuation of value cocreation. We center our investigation on consumption journeys, rather than an individual experience, because we can trace consumption journeys as evolving value contexts and study the engagement with a practice and its associated market-facing resources over time. Based on this, we focus our research on the following questions: 1) How does reflexivity manifest in consumption journeys? 2) How does reflexivity contribute to the continuation of value cocreation throughout a consumption journey?

The findings from this study further the understanding of collaboration and value cocreation in two important ways. First, we discover that reflexive alignment and misalignment between individual perceptions of the self and the social and cultural context of value cocreation can lead to different reflexive outcomes. Second, we find that different combinations of reflexive (mis)alignment and practice continuity can lead to continuation of value cocreation through practice immersion and adaptation. On the other hand, reflexive (mis)alignment and practice discontinuity can lead to practice dissolution and innovation. Based on our findings, we deepen the understanding of the centrality of practices in consumption and innovation, particularly as they enable or limit continual value cocreation. We offer recommendations for managers striving to cultivate collaboration through continual value cocreation in consumption journeys and propose several strategies for enhancing and extending engagement with a particular practice.

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# Giving Seconds and Cents: The Psychological Consequences of Time and Money on Prosocial Behavior and Consumer Well-being

Chairs: John P. Costello, The Ohio State University, USA

Grant E. Donnelly, Harvard Business School, USA

## **Paper #1: My Money is Yours, but My Time is Still Mine: Inseparability of Consumption from the Self Increases Control and Giving**

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## **Paper #2: Donate Today or Give Tomorrow? Adding a Time Delay Increases Donation Amount but not Willingness to Donate**

Emily Powell, New York University, USA

Minah Jung, New York University, USA

Joachim Vosgerau, Bocconi University, USA

Eyal Peer, Bar-Ilan University, USA

## **Paper #3: When Does Being Paid an Hourly Wage Make it Difficult to Be a Happy Volunteer?**

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## **Paper #4: Communicating Limited Financial Resources Increases Perceived Trustworthiness and Interpersonal Connection**

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### **SESSION OVERVIEW**

Time and money are two of life's most precious resources. Despite the ubiquity and importance of these resources, many essential questions about time and money are just coming under the lens of consumer research. This symposium will present cutting-edge research on the psychological consequences of time and money, with an emphasis on how these consequences influence prosocial behaviors and consumer well-being. These papers address the question of how understanding the psychology of these resources can be leveraged to improve outcomes in charitable giving and consumer well-being.

First, Costello and Malkoc introduce an unexamined difference between time and money: inseparability of the self from consumption. Across 6 studies, they demonstrate that this difference presents itself when time/money is given (e.g., helping/donating) and shows the implications of this asymmetry on perceived control and subsequently on donation behavior. This asymmetry has important implications—consumers can use donations of time as a way to restore control and their findings provide an understanding of why consumers might make non-traditional donations (e.g., goods).

Our second paper will present work that demonstrates how time can be used to leverage monetary donations. Powell and colleagues study the impact of introducing a time delay to donation pledges. They find that when consumers are asked to make a pledge to donate in the future, the donation amount is higher than immediate pledges. Interestingly, this time delay does not have an effect on the proportion of consumers who are willing to donate. Ironically, when asked to choose timing of donation, participants prefer the immediate option. The authors examine the roots of this paradox.

While our first two papers discuss how time can be harnessed to increase charitable giving, our next paper focuses on how the emotional experience of time spent volunteering is affected by quantifying the value of time in terms of money. Using data from the American Time Use Survey, DeVoe examines how hourly workers—who have a salient heuristic for the monetary value of their time—enjoy engaging in uncompensated volunteer activities when the opportunity costs of their time are especially high; whereas, non-hourly workers enjoy the activities regardless of the opportunity costs.

Rounding out the symposium, Donnelly and colleagues evaluate a common challenge consumers face—how to best communicate their time/money constraints when requested of these resources. Across 4 studies, they find that communicating a money constraint can increase trustworthiness and interpersonal connection because money is seen as outside of one's control. This is not the case for time constraints, where time scarcity is not associated with trustworthiness. Importantly, consumers who communicate time scarcity do not predict the asymmetry in how their message will be received.

Together, these papers identify important and previously unexamined asymmetries in giving time and money (Papers 1 & 4), uncover paradoxes in donation behaviors (Paper 2), and examine when consumers enjoy giving (Paper 3) and how to communicate scarcity in resources when they cannot donate (Paper 4). Combined, these papers present a cohesive view of how, why, and when people give their time/money.

## **My Money is Yours, but My Time is Still Mine: Inseparability of Consumption from the Self Increases Control and Giving**

### **EXTENDED ABSTRACT**

Although time and money are seen in some respects as comparable and interchangeable, there is evidence that these resources are psychologically distinct in a number of ways (e.g., Mogilner and Aaker 2009; Zauberman and Lynch 2005). In this research, we introduce a previously unexamined difference: inseparability of the self from consumption. We contend that this difference presents itself mainly when time or money is given (e.g., helping, donating).

When spending their own money or time, consumers are present and take an active role in how their money/time is being spent. Put differently, they exert similar levels of control over spending of both resources. Conversely, when giving time/money, an asymmetry occurs. When consumers give their money, they are separated from its consumption. The control over the resource (money) no longer lies with the consumer, but the receiver. When consumers give their time however, they are not (and cannot be) separated from its consumption. That is, although conceptually, the resource is given to someone else, the control of the resource (time) still—at least in part—belongs to the consumer.

In 6 studies, we first demonstrate the inseparability of the self from consumption for time and the consequent time/money asymmetry in perceived control. Next, we examine the implications of this asymmetry for decisions to give (i.e., charitable giving).

We first tested the presence of the inseparability asymmetry for time/money. In Study 1a, ( $N=250$ ) imagined planning a party. Half the participants imagined spending their own time/money to plan the party, while the other half considered giving a friend time/money to help plan. Participants answered three questions to measure perceived control over the resource (e.g., “I have the ability to shape how my time/money will be utilized”), combined into an index ( $\alpha = .91$ ). We found the expected interaction ( $p = .036$ ). When considering spending their own money/time, participants’ perceived control over the resource was not different ( $M_{\text{Time}} = 5.03$ ,  $M_{\text{Money}} = 5.15$ ). When giving the resource, an asymmetry emerged such that participants perceived significantly more control over time than money ( $M_{\text{Time}} = 4.96$ ,  $M_{\text{Money}} = 4.46$ ,  $p = .016$ ).

In Study 1b ( $N=222$ ), participants imagined eight situations where they either had control over the resource (e.g., decided how to spend time/money) or lacked control (e.g., a friend decides how to spend time/money). Averaging across scenarios ( $\alpha = .86$ ), we find that decision-makers felt high levels of control for both resources ( $M_{\text{Time}} = 5.00$ ,  $M_{\text{Money}} = 5.13$ ). When they had given up control, however, those considering time ( $M = 3.86$ ) felt significantly more control over the resource compared to money ( $M = 3.19$ ,  $p = .0005$ ). These results suggest that since consumption of time is tied to the self, a certain level of control remains, even if the time is given.

Next, we examined the consequences of this asymmetry for giving behavior. Respondents ( $N=212$ ) participated in two seemingly unrelated tasks. We first induced low or high control (vs. baseline), using an ease of retrieval task. Next, participants considered making a time or money donation to Feed the Children. They indicated their preference for donating time versus money on a 100-point slider scale and the number of dollars/hours they would donate. Consistent with compensatory control theories, we expected and found that participants feeling low control seek situations that restore control and thus will be more willing to donate time. Low control participants ( $M = 68.37$ ) significantly preferred giving time to money as compared to the other two conditions ( $M_{\text{Baseline}} = 58.27$ ;  $M_{\text{HighControl}} = 56.38$ ,  $p = .02$ ), which were not significantly different from one another. As expected, we observed the same significant pattern in donated hours but no differences across conditions in dollars.

In Study 3 ( $N=185$ ), we tried to boost money donations. If inseparability of time consumption from the self (and thus maintaining control) drives time/money asymmetry in donations, then infusing money conditions with control should alleviate the difference. Participants imagined that their college’s alumni association approached them about a time or money donation program. Half the participants were told that they can choose one of five charities for their donation, while the other half were told that their donation would be assigned based on need. Participants indicated interest in donating and perceived control over the resource. As expected, a significant interaction emerged ( $p = .048$ ). Participants were significantly more interested in donating time ( $M_{\text{Time}} = 3.93$  vs.  $M_{\text{Money}} = 3.18$ ) in the baseline condition. When given control over how the resource will be spent, however, this difference disappeared ( $M_{\text{Money}} = 4.54$  vs.  $M_{\text{Time}} = 4.23$ ). A moderated mediation analysis confirmed the role of perceived control.

In Studies 4a and 4b ( $N=181$ ; 205) we test the role of perceived control over the resource, by adding a third form of donation—goods/vouchers. While purchased with money, goods/vouchers are similar to time because they allow donors to better influence how their donation will be utilized. Thus, we expected the goods/vouchers to behave like time, despite being more interchangeable with money. Participants considered donating time, money, or food (4a; gift certificates to a grocery store, in 4b; to a hunger charity) and

answered the same questions as Study 3. Compared to participants who considered donations of money ( $M = 3.77$ ), those considering donations of time and food ( $M_{\text{Time}} = 4.37$ ,  $M_{\text{Food}} = 4.81$ ) were significantly more interested in donating, which were not different from each other. The same pattern emerged in Study 4b ( $M_{\text{Money}} = 3.91$ ,  $M_{\text{Time}} = 4.47$ ,  $M_{\text{Voucher}} = 4.57$ ). Once again, a mediation analysis confirmed the role of perceived control.

Taken together, we demonstrate a previously unstudied time/money asymmetry in perceived control, stemming from inseparability of the self from time consumption. We further show that this asymmetry has consequences for donation behavior. Consumers who lack control are more likely to donate time. Situations that allow consumers to influence how the resource is used (imitating the sense of control experienced when the resource and the self are inseparable) increase donations of money. This asymmetry has implications for non-traditional forms of donations like vouchers and material items.

### **Donate Today or Give Tomorrow? Adding a Time Delay Increases Donation Amount but not Willingness to Donate**

#### **EXTENDED ABSTRACT**

Charitable giving makes people feel good (Dunn, Aknin, and Norton 2008; Andreoni 1989), but comes, quite literally, at a cost. Accordingly, introducing a time delay between committing to a donation and the payment of the donation could increase willingness to donate. This temporal separation might allow donors to highlight the positive aspects of giving while minimizing the impact of future costs.

Indeed, Breman (2011) has shown that current donors are more likely to increase their monthly donation amount if asked to commit to an increase in the future rather than for the next month. Breman suggests that committing to donating more in the future frees people from the immediate temptation of not giving in the present. Andreoni and Serra-Garcia (2016), on the other hand, show that when given the option to donate a fixed amount (\$5), more people choose to donate in the future (in one week) than to donate today. The authors suggest that people feel obliged to donate and committing to giving later provides an opportunity to fulfill that obligation without necessarily having to follow through (i.e., these people plan on renegeing).

These studies demonstrate that adding a time delay can increase donation amounts when the decision to donate is held constant (Breman 2011) and can increase the proportion of donors when the amount donated is held constant (Andreoni and Serra-Garcia 2016). In the present work, we test how and why time delays impact *both* willingness to donate and the amount donated simultaneously. We demonstrate that time delays consistently impact the amount people are willing to donate but not their decision to donate, a finding that cannot be explained by the previously proposed mechanisms.

In Study 1 ( $N=601$ ), participants asked to make a hypothetical donation today donated substantially less ( $M = \$26.80$ ) than those pledging to donate in three ( $M = \$47.14$ ), six ( $M = \$52.23$ ), or twelve months ( $M = \$76.26$ ),  $F(3, 379) = 16.99$ ,  $p < 0.001$ . However, there were no differences in the proportion agreeing to donate today (62.7%), in three (69.8%), six (60.9%) or twelve months (62.3%),  $\chi^2(3) = 3.1$ ,  $p = 0.37$ ). Thus, time delays appear to impact the amount donated, but not the choice to donate.

Study 2 tested the time-delay effect with real monetary stakes. Participants ( $N=601$ ) were recruited to a two-stage study taking place three weeks apart. In both stages, participants were paid a 45-cent bonus. Participants were asked whether they would be willing to donate a portion of one of their bonuses to charity. Participants were

randomly assigned to donate today or to commit today but pay in the future. That is, they donated either from the bonus they received today for completing stage 1 or from the bonus they would receive in three weeks for completing stage 2. We again found that those donating in three weeks ( $M=9.91$  cents) donated more than those donating today ( $M=7.45$  cents),  $F(1, 596)=5.38$ ,  $p=0.021$ . In contrast, the proportion of donors today and in three weeks did not differ ( $p>0.1$ ).

The increase in donation amounts without an accompanying increase in the proportion of donors is consistent with the idea that separating the benefits from the cost of giving increases willingness to donate. The findings are, however, incompatible with Andreoni and Serra-Garcia's (2016) explanation that a time delay allows donors to minimize feelings of social pressure by committing to insincere pledges. According to the latter, time delays should increase the proportion of donors, rather than the amounts donated.

To test whether time-delay facilitates self-control (as proposed by Breman 2011), in Study 3 ( $N=1,342$ ) participants could choose whether, how much, and when to donate. Study 3 was similar to Study 2 except that participants could choose to donate from either their stage 1 or stage 2 bonus (or not at all). The vast majority of participants (76%) chose not to donate. More importantly, of those who did donate, 69% chose to donate today (only 31% chose to donate in the future). Further, those choosing to donate today ( $M=22.92$  cents) gave the same amount as those choosing to donate in the future ( $M=20.76$  cents),  $F(1, 310)=1.49$ ,  $p=0.223$ . These findings are contrary to Breman's (2011) self-control explanation, which predicts that the majority of participants would choose to donate later rather than now. Likewise, alternative accounts focusing on time discounting (Frederick et al. 2002) or resource slack (Zauberman and Lynch 2005) would have predicted more people donating in the future, inconsistent to the observed findings.

Next, we test the conjecture that time delay increases donation amounts by decreasing the cost associated with paying for the donation (i.e., the pain of payment; Prelec and Loewenstein 1998). People are typically more willing to spend windfall gains than earned money, as the former involves lesser pain of payment (Arkes et al. 1994). Hence, if the increase in donation amounts is driven by lower pain of payment, the effect of time delay should be attenuated when windfall gains rather than earned money is donated. To test this hypothesis, Study 4 ( $N=484$ ) employed a 2(delay: now vs. six months)  $\times$  2(source: windfall vs. earned money) between-subjects experiment. The interaction was not significant,  $F_{Interaction}(1, 479)=1.42$ ,  $p=0.233$ . Donations were higher in the future regardless of whether the donation came from a windfall gain ( $M_{Today}=\$113.32$  vs.  $M_{Six\ months}=\$157.68$ ) or from earned money ( $M_{Today}=\$141.82$  vs.  $M_{Six\ months}=\$223.0$ ),  $F_{Timing}(1, 479)=16.46$ ,  $p<0.001$ . This pattern of results suggests that time delays do not increase donations by reducing the pain of paying.

In sum, we find in four studies ( $N>3,000$ ) that a time delay increases donation amounts but not the proportion of donors. However, when given the choice of when to donate, the vast majority prefer to donate today rather than in the future. These results are counter to all previously offered explanations; they cannot be explained by self-control (Breman 2011), avoiding social pressure (Andreoni and Serra-Garcia 2016), time discounting (Frederick et al. 2002), resource slack (Zauberman and Lynch 2005), or reducing the pain of payment (Prelec and Loewenstein 1998). One possibility is that donations today signal greater generosity than future donations and donors make up for this deficit by increasing donation amounts in the future.

## When Does Being Paid an Hourly Wage Make it Difficult to Be a Happy Volunteer?

### EXTENDED ABSTRACT

One of the key questions emerging from the study of happiness is whether we spend our time on the right activities (Aaker, Rudd and Mogilner 2011). In this regard, spending time helping others appears to be a good bet as it is associated with greater self-efficacy and subjective well-being (Mogilner, Chance and Norton 2012; Musick and Wilson 2003). When such freely undertaken uses of time are directed through labor absent any financial remuneration, it enters into the domain of volunteer work (Tilly and Tilly 1994).

Although volunteer work has a persistent positive association with eudemonic and social well-being regardless of the amount of time spent, the positive effects on hedonic well-being (e.g., happiness) is more fleeting and limited to the experience of the activity itself (Son and Wilson 2012). While there are many powerful social motivations for undertaking volunteer work in addition to the subject well-being returns (Clary and Snyder 1999), this type of activity can be especially difficult to justify when viewed through a market-pricing lens for time as it violates the logic of proportionality that one's temporal efforts for work should receive comparable monetary rewards (Fiske 1992; Heyman and Arieli 2004).

Research shows that job practices that make the monetary value of time salient (i.e., billable hours and hourly payment) are associated with a diminished willingness to volunteer and decreased likelihood of actually volunteering (DeVoe and Pfeffer 2007; 2010). Interestingly these effects on the propensity to do volunteer work were observed at both high and low levels of income and hours worked, suggesting that an activity providing zero remuneration is equally difficult to justify irrespective of the monetary opportunity costs of time. While there is experimental evidence that prompting people to consider their hourly wage rate for time decreases the happiness experienced during an unexpected and uncompensated break (DeVoe and House 2012), there has been no externally valid test for the experience of chosen discretionary activities. Boyce et al. (2013) recently showed that income losses decrease subjective well-being approximately twice as much as similar gains increase it. Here we theorize that as potential forgone income (opportunity costs) for volunteering increase, there will be a corresponding decrease in the experience of happiness while volunteering only when people were naturally exposed to payment regimes that made the opportunity costs of time chronically salient.

In this research, we examine the happiness people report experiencing when they do choose to engage in volunteer work. Specifically, we test whether the subjective experience of happiness while volunteering is influenced by how people are paid and the opportunity costs of their time spent volunteering as measured by how much they would be earning in their paid job and the duration of the activity (Freeman 1997; Menchik and Weisbrod 1987). Since people tend not to consider opportunity costs unless externally prompted (Frederick et al. 2009; Greenberg and Spiller 2016), we did not expect the opportunity costs of time to influence how non-hourly workers experienced volunteering. Among hourly paid workers who have a salient heuristic for the monetary opportunity costs of their time (i.e., hourly wage rate), we predicted that the experience of happiness volunteering would be diminished as the opportunity costs of time for the activity increased.

We used time-diary data from the American Time Use Survey for the years when the Well-Being Module (<https://www.bls.gov/tus/wbdatafiles.htm>) was administered (2010, 2012, and 2013). Each respondent reported his/her activities for the day prior to the interview



and three activities of five minutes or more were randomly selected. To capture the experience of allocating time to volunteer work we examined “volunteering” and “travel-related to volunteering.” Among other experiential questions as well as with whom they were interacting, respondents rated how happy they felt during each activity using a scale from 0 (the feeling was not experienced at all) to 6 (the feeling was very strong). To analyze the 1 to 3 volunteer activities nested within each individual ( $M=1.2$ ), we employed multilevel analyses with robust standard errors (Raudenbush and Bryk 2002). We modeled the log of respondent’s income earned per week and the number of minutes spent volunteering ( $M_{minutes}=65.5$ ,  $SD=85.0$ ) as an indicator of the opportunity costs of each respondent’s time. A total 454 respondents employed in the labor force with complete responses on all variables who recorded at least one volunteer activity were included in our analyses. We dummy coded (“0”) for non-hourly wage earners ( $N=250$ , observations=297) and (“1”) for hourly wage earners ( $N=204$ , observations=254) enabling us meet the >250 observations for obtaining stable estimates within each category (Lindsay, 2015).

In order to explore whether the subjective experience of happiness while volunteering is influenced jointly by hourly payment and the opportunity cost of time as indicated the forgone earnings (income) and the time spent on volunteering (duration), we tested a three-way interaction. Specifically, we fitted a multilevel linear model with hourly status, logged income, and duration on happiness. We found a significant three-way interaction among hourly status, income, and duration,  $z=-2.40$ ,  $p=.016$ , 95% CI [-.01, -.001].

Simple slope tests reveal that high income hourly workers felt less happy the more minutes spent volunteering,  $z=-2.34$ ,  $p=.019$ , 95% CI [-.009, -.001]. There was no association between duration of volunteering and happiness for high income non-hourly counterpart for whom there is not a salient heuristic for the opportunity costs of their time. Additionally, there was no association between duration of volunteering and happiness for low income hourly counterpart whose opportunity cost was salient but low in terms of forgone income. Given we were only comparing respondents who are engaged in volunteering, it is perhaps not surprising that many of the job and demographic characteristics controlled for in prior research on hourly status (DeVoe and Pfeffer 2007; Whillans and Dunn 2015) did not emerge as significant predictors of experienced happiness when included in the model. Importantly, the significance of all interactions reported here were robust to a broad set of covariates. In sum, these findings suggest that when opportunity costs are salient and high, volunteers experience less happiness during their prosocial act.

### Communicating Limited Financial Resources Increases Perceived Trustworthiness and Interpersonal Connection

#### EXTENDED ABSTRACT

Consumers regularly engage in a variety of prosocial actions: often giving their money or time to help non-profit organizations, work colleagues, and friends. Giving time and money to others is associated with enhanced psychological well-being (e.g., Dunn et al. 2008), and increased interpersonal connection (Mogilner 2010). However, consumers have limited resources to give—and need to manage their time and money efficiently (Claessens et al. 2007). Therefore, consumers regularly have to withhold giving money and time to others in order to have these resources for other activities. By withholding resources, consumers may need to turn down requests for help and invitations for shared consumption which may negatively impact interpersonal connection and well-being (Baumeister and Leary 1995). In this work we evaluate how communication about

limited money (e.g., “I don’t have money”) vs communication about limited time (“I don’t have time”) influence perceptions of trustworthiness and interpersonal connection.

Money activates a self-sufficient mindset—one less interested in others (Vohs et al. 2006), and in turn, increases the tendency to deceive others (Aquino et al. 2009) and behave dishonestly (Gino and Mogilner 2013). Time, on the other hand, has been found to be more reflective of the self (Mogilner 2010), and is more associated with emotional meaning (e.g. Carstensen et al. 1999). We hypothesize that communication about limited time (in response to a request for help or shared consumption) will be perceived as more interpersonally threatening—resulting in lower perceived interpersonal connection. Further, money is received through an external source—typically through wages from work—and is often distributed unequally (Norton and Ariely 2011), whereas time is distributed equally and not from an external source, therefore, we hypothesize that communication about limited money may be perceived as more trustworthy because access to money is outside of one’s personal control.

In study 1, we scraped a dataset of direct message tweets from the first week of 2018, that contained the phrase “I don’t have money,” or “I don’t have time” resulting in 2,032 tweets. We scraped information about whether the tweet was ‘liked’ by the user who was tagged in the direct message (a signal for endorsement and fondness for the content; see John et al. 2017). We evaluate the tendency to ‘like’ a tweet as a function of message content. A chi-square test comparing scarcity content was significant: users were 105.26% less likely to ‘like’ a tweet that communicated time scarcity than a tweet that communicated money scarcity (24.7% of users liked a tweet in the time scarcity condition and 50.7% of users liked a tweet in the money scarcity condition;  $\chi^2 = 129.09$ ,  $p < .001$ ).

In our second study, lab participants ( $N=270$ ) were asked to reflect on a recent experience in which someone told them they couldn’t do something because they didn’t have money (or time). Participants wrote a few sentences about the circumstance and reported how close they felt to the person before and after hearing this content. Participants also rated the extent to which they felt the communication was trustworthy and honest, and within one’s control. A repeated-measures ANOVA using perceived closeness (before vs. after) as a within-subjects factor and communication content (money vs. time) as a between-subjects factor, revealed a significant main effect for perceived closeness ( $p < .001$ ), which was qualified by a significant interaction ( $p < .001$ ). Prior to the communication event, participants felt equally close to their communication partners, but after the excuse was communicated, participants felt significantly closer to those who communicated scarce money (compared to time). Increased closeness observed in the post-money excuse condition (vs post-time) was mediated by perceived controllability and trustworthiness.

In our third study ( $N=407$ ) we test the moderating role of controllability. We manipulated whether the lack of resource (money or time) was because of a needed (low controllability) versus wanted (high controllability) reason. Participants were asked to imagine that they invited a friend for a fun night out—grabbing drinks, a nice meal and attending a comedy club. Their friend responds, “*Sorry, I can’t go. I don’t have money [time]. I need [want] to spend money [time] buying [reading] books for school.*” Participants rated their perceived closeness, and perceived trustworthiness and controllability of the content. Participants felt closer to their friend when learning of their limited money ( $p=.003$ ), but there was no main effect for controllability ( $p = .74$ ). However, there was a significant interaction in that participants felt equally close when hearing a money or time excuse for a needed reason but felt significantly closer when hear-

ing a money excuse for a wanted reason ( $p=.001$ ). Trustworthiness significantly mediated the difference in perceived closeness for a wanted (CI: .06, .48), but not a needed reason (CI: -.18, .16).

In our final study ( $N=408$ ; 204 dyads), we sought to understand if perceptions of trustworthiness vary as a function of giving or receiving scarcity communication. Half of participants were asked to generate a response to the prompt, “I would give more to charity if...” and were randomly assigned to write about how they would give more if they had more money (or time). Participants rated this self-generated content in regards to how trustworthy they felt it was. The other half of participants were assigned to read the content of the message and rate how trustworthy they thought it was. A repeated-measures ANOVA found a significant main effect for role ( $p<.001$ ), and a main effect for content type ( $p=.002$ ), and a significant interaction ( $p=.02$ ). Authors found their content to be more trustworthy than readers, and overall money excuses were perceived to be more trustworthy. However, authors found money and time excuses to be equally trustworthy, while readers found money excuses to be significantly more trustworthy.

Overall, we find that communication about limited time (vs money) results in lower perceptions of trustworthiness and interpersonal closeness because consumers believe people have more control over how they manage their time than how they manage their money. While consumers believe their constraints are equally trustworthy, they are perceived differently, impacting interpersonal relationships.

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# The Moving Consumer: How Mobility Shapes Consumer Behavior

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## Paper #1: The Journey that Makes Us: The Impact of Residential Mobility on Consumer Motivation

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## Paper #2: How Residential Mobility Influences Donations

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## Paper #3: Motion, Emotion, and Indulgence: How Movement Influences Consumption

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## Paper #4: Real or Imagined Changes in Environment Restore Self-Control

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### SESSION OVERVIEW

Mobility refers to all forms of territorial movement by people and has been a pervasive aspect of modern life (Bell and Taylor 2004). For example, many people live in one place and work in another. In addition, now more than before, people frequently change their residences in order to pursue a better quality of life (International Migration Outlook, 2018). In spite of its increasing prevalence, our understanding of how mobility changes consumers' psychology and behavior remains limited. Four papers in this session provide novel hypotheses and empirical evidence that demonstrate the impact of different types of mobility on important consumer outcomes. The papers examine different forms of mobility, from relatively infrequent but life-altering mobility (i.e., moving residences or cities) to relatively frequent but innocuous mobility (i.e., changing rooms) to imagined mobility (i.e., mentally simulating a change), thereby imparting a broad yet deep perspective on the effects of mobility. They also explore the impact of mobility on consumer outcomes by investigating what happens during the actual process of being in motion (e.g., being on the train) as well as the consequences that follow from movement. Based on the data from national panel data, field studies and lab experiments, this session highlights the newest research on how mobility shapes consumers' intrinsic motivation, donation behaviors, product preferences and self-control by using a diverse range of theoretical frameworks and measures.

The first two papers examine the consequences of residential moves. **The first paper** examines how residential mobility influences consumers' intrinsic motivation. They show that residential mobility increases individual's self-clarity, and this heightened self-clarity in turn enhances consumers' perceived autonomy and facilitates intrinsic motivation. **The second paper** studies the relationship between residential mobility and donations. A national panel data, field study and lab experiments demonstrate that residential mobility increases one's broadmindedness, which boosts one's helping donations to distant others.

The last two papers explore how mobility influences indulgence and the ability to overcome the desire to be indulgent. **The third**

**paper** investigates how consumers make decisions when they are in the process of being mobile. They reveal that consumers on the move (e.g., on a moving bus) are in an emotional mindset which leads them to prefer indulgent experiences and purchases. Finally, **the fourth paper** tests the role of moving from one environment to another in self-control restoration. They find that changing environments restores consumers' self-control after prior self-control exertion.

In summary, this session demonstrates novel findings showing how mobility can affect consumers. It offers novel, in-depth, empirical and theoretical advances featuring cognitive, emotional, behavioral, and identity outcomes. This session will appeal to a broad set of scholars interested in mobility, consumer motivation, donations, self-control and well-being.

## The Journey that Makes Us: The Impact of Residential Mobility on Self-clarity and Consumer Motivation

### EXTENDED ABSTRACT

Residential mobility can be conceptualized at both the micro/individual and macro/societal levels. At the individual level, it refers to the number of residential moves that an individual experiences during a defined period of time. At the macro level, residential mobility can be defined as the proportion of people within a given community moving their residence during a certain period of time (e.g., Lun, Oishi, and Tenney 2012). Residential mobility has become a pervasive aspect of modern life, due in part to a high number of international migrants, which reached 244 million in 2018 (IOM 2018). Also, more than 10% of the entire U.S. population has moved to a new residence every year since the 1970s (Schmitt 2001). Given its pervasiveness, residential mobility has attracted considerable attention across various disciplines such as sociology (Sampson 1991), education (Tucker, Marx, and Long 1998), and economics (Henley 1998). How residential mobility influences consumer behaviors, however, has seldom been investigated in the marketing literature. The current research addresses this imbalance by examining a novel consequence of residential mobility on consumers' intrinsic motivation. Intrinsic motivation refers to engaging in a behavior or performing an activity for personal, often private or "inner" interests and/or doing something because it is inherently interesting or enjoyable (Deci and Ryan 2000; Laran and Janiszewski 2011).

The current research proposes that residential mobility could serve as an important antecedent that enhances consumers' intrinsic motivation. We argue that this effect occurs because residential mobility can increase consumers' self-clarity and boost their perceived autonomy. Residential mobility involves encountering different environmental surroundings and being exposed to diverse social interactions, providing good opportunities for self-discovery (Markus and Wurf 1987; McGuire 1984). This self-discovery applies to most "learning by doing" activities, which help people develop a clear sense of self-concept and adaptation skills to the new environment (Kealey 1978). In fact, having a clear sense of the self is considered by some to be the foundation for autonomy by perceived control over components of the self-concept (Deci et al. 2015). On the other hand, consumers' perceived autonomy is the basic element for initiating self-determined activities and consequently increases their intrinsic motivation (Deci and Ryan 2000; Kim, Chen, and Zhang 2016). In short, we propose that residential mobility can increase an



individual's self-clarity. This heightened self-clarity then boosts consumers' perceived autonomy and consequently increases their intrinsic motivation. We further predict that the positive effect of residential mobility on intrinsic motivation is mitigated when consumers' self-clarity is boosted experimentally.

Experiment 1 ( $N = 400$ ) using a natural field experiment demonstrates that, rather than enhancing a general tendency to take action, residential mobility enhances only consumers' intrinsic motivation but not their extrinsic motivation. We employed a 2 (mobility vs. stability)  $\times$  2 (intrinsic motivation vs. extrinsic motivation) between-subjects factorial design. We operationalized residential mobility on the macro level by selecting two public universities to represent the high-mobility (91.2% non-local students) vs. low-mobility (20% non-local students) communities. Participants were approached by an experimenter showing a poster about recruiting volunteers for a research task. We framed the task in either an intrinsically motivated or extrinsically motivated way. Then participants indicated whether or not they would sign up as a volunteer. As expected, results revealed that residential mobility was associated with greater intrinsic motivation, but not extrinsic motivation.

Experiment 2 ( $N = 246$ ) establishes the causal link between residential mobility and intrinsic motivation. Participants were asked to visualize the scenarios in which they either move to the different cities (mobility condition) or stay in the same city (stability condition; Oishi et al. 2012), or they described a typical day (control condition; Su et al. 2017). Next, in an ostensibly unrelated task, participants were told that a research center is recruiting some volunteers and there are two types of tasks available. Intrinsically motivated tasks are described as interesting and fun, whereas extrinsically motivated tasks are instrumental and useful (Deci and Ryan 2000). Participants indicated which type of research task they would like to join. Results revealed that the effects were driven by residential mobility increased intrinsic motivation rather than residential stability decreased intrinsic motivation.

Experiment 3 ( $N = 182$ ) provides direct process evidence by showing the sequential mediating roles of self-clarity and perceived autonomy. After participants finished the same visualization task (mobility vs. stability) as in experiment 2, we measured their perceived self-clarity and autonomy as two sequential mediators. Next, participants indicated which type of research (intrinsic or extrinsic) they want to join and left their email address to receive further information. Results showed that the proposed effect of residential mobility on intrinsic motivation is driven by the higher degree of self-clarity and perceived autonomy that are derived from residential change.

Experiment 4 ( $N = 225$ ) provides further process evidence by demonstrating the moderating role of self-clarity boost through a 2 (mobility vs. stability)  $\times$  2 (self-clarity boost: yes vs. no) between-subjects factorial design. We first manipulated the residential mobility via the same visualization task as in the previous experiments. Next, half of the participants went through a "ME/not ME" task in order to boost their self-clarity (Bargh, McKenna, and Fitzsimons 2002). By contrast, participants in the condition of no self-clarity boost did not go through this task. Finally, all participants were presented with two posters that promote blood donation (intrinsically motivated appeal vs. extrinsically motivated appeal) and indicated which poster they found more appealing. As expected, participants in the mobility (vs. stability) condition preferred the intrinsically motivated appeal. However, the difference disappeared in the presence of experimentally boosted self-clarity.

In conclusion, the current research contributes to the existing literature on residential mobility by documenting a novel marketing consequence on consumers' intrinsic motivation. By investigating

the mechanism underlying this effect, this research also extends our understanding of self-clarity and perceived autonomy in the marketing context. Further, our research offers rich practical implications for marketers in terms of how to better utilize intrinsic incentives in their marketing practice.

## How Residential Mobility Influences Donations

### EXTENDED ABSTRACT

With globalization, geographical relocation has become an essential part of life in many parts of the world. How does the experience and mindset of residential mobility impact donations? Previous literature in sociology and psychology has hinted that residential mobility might be negatively associated with prosocial behaviors such as high crime rates and low pro-community actions. We present evidence that high (vs. low) residential mobility can positively impact donations. We propose that residential mobility (vs. stability) leads consumers to have a broader, non-local social identity, which results in donations to distant beneficiaries. While it is natural to want to help those who are close and similar to us, not everyone is motivated to help distant others. Moving experience opens consumers up to new ideas, places, and cultures, so their sense of self likely includes communities other than the local one. This makes them more accepting of distant communities. We argue that such broadened social identity from residential mobility increases donations toward distant others.

In Study 1, we used national panel data (China Family Panel Studies 2010,  $N=29,553$ ) to investigate the effect of residential mobility on donation values toward close vs. distant beneficiaries in an ecologically valid context. The panel data recorded the amounts of respondents' donations given to victims of the severe earthquake in Sichuan Province in 2008 (Wenchuan Earthquake). We used an item asking the current residence of respondents as a measure of distance between the respondents and the donation beneficiaries. Respondents who currently lived in Sichuan Province were coded as *close* since the earthquake occurred in their home town province, and respondents who currently lived in other provinces were coded as *distant*. After controlling for age, gender, annual family income, and the total value of donations to any institutions in the same fiscal year, the results showed that people who had moved (vs. never moved) donated significantly more to the earthquake when they were distant (); however, when the beneficiary was close, residential mobility did not affect the donation amount.

Study 2 aimed to establish the causal relationship between residential mobility and donation intentions a controlled lab setting. Participants from a large university in North American participated this study with a 2 (residential mobility: mobile vs. stable)  $\times$  2 (donation beneficiary: close vs. distant) between-subjects design. Residential mobility was manipulated using a mobility mindset stimulating task (adapted from Lun, Oishi and Tenney 2012), where participants imagined being offered a new job that either required moving to a different location every year (*mobile*) or living in one area for ten years (*stable*). Next, participants were introduced to a campaign helping hungry children either in their home state (*close*) or in another state with similar size and population (*distant*). Then participants were asked to indicate how likely they would be to donate to the campaign. The results replicated Study 1 and confirmed our prediction that for hungry children in a distant state, participants were more likely to donate when they were in the mobile mindset condition compared to the stable condition ( $M=4.74$  vs.  $3.68$ ,  $F(1,139)=6.03$ ,  $p=.015$ ). However, mobility did not impact donation likelihood when the beneficiary was close.

The purpose of Study 3 was to investigate the underlying process that drives the effect of residential mobility on donations toward distant others. We argue that the moving experience opens consumers up to new ideas, places, and cultures, so their sense of self likely includes communities other than the local one. It follows that while people are open to aiding close others' needs regardless of residential mobility, having a broader social identity from residential changes impacts how people respond to distant others' needs. We test this prediction in Study 3. The study employed a 2 (residential mobility: mobile vs. stable) X 2 (donation beneficiary: close vs. distant) between-subjects design. The same task was used to manipulate residential mobility. After the imaged task, participants were asked to indicate their donation tendency to either a UN water local (close others) vs. Africa (distant others) chapter. Next, participants answered a series of measures, among which two items measured broadened social identity ( $r = .74$ ). Consistent with prior studies, the results showed that mobile participants had indicated they would donate more to distant others compared to stable participants ( $M = \$16.93$  vs.  $\$10.77$ ,  $F(1,505) = 7.29$ ,  $p = .007$ ). There was no difference when the beneficiary was close others. A moderated mediation analysis confirmed that broadened social identity significantly mediated the effect of mobility on helping distant others ( $b = 1.55$ ,  $SE = .79$ ,  $CI: [.06, 3.18]$ ), but not close others.

Finally, we conducted a field study to test if residential mobility affected real donation behaviors. Specifically, we coordinated with a national charity foundation, inviting 10,000 students in Shanghai to "Donate Voice," in which donors commit to spending time recording audio books for blind children. In the *close* beneficiary condition, the message was presented as a campaign for blind children in Shanghai. The distant beneficiary condition was presented as a campaign for blind children in Xizang, which is different from Shanghai in geographical location, economy, and culture. Students who signed up for donations were directed to a subsequent survey in which they were asked to report their residential history and how much time they were willing to donate. Results revealed that for students who signed up to donate, those with higher (vs. lower) residential mobility were willing to donate more time to blind children in Xizang (). Again, there was no impact of residential mobility on blind children in Shanghai.

In conclusion, this research makes a novel contribution by demonstrating how residential mobility affects donations, especially towards distant others using national panel data, experiments, and field study.

## Motion, Emotion, and Indulgence: How Movement Influences Consumption

### EXTENDED ABSTRACT

The advent of internet-enabled mobile devices has changed how consumers browse information and make purchases. This technology allows consumers to not only make purchases when they are at home or at work but also when they are traveling. Yet, the major focus of current literature is on understanding how consumers make purchase decisions when they are stationary. We investigate how consumers make decisions when they are in motion.

We posit that when consumers are on the move, they are more likely to be in an emotional mindset. Consequently, they are more likely to prefer indulgent options over utilitarian options. Although we are not aware of research on actual motion, prior research on embodied and grounded cognitions provides useful insights (see Krishna 2012 for a review). This research stream suggests that bodily sensations affect individuals' cognitions. For instance, blinking of eyes

can lower an individual's ability to focus on focal tasks and leads to a "wandering" mind (Smilek et al. 2010). A wandering mindset lowers concentration (Smallwood et al. 2004), and it is well known that an inability to exercise cognitions induces a more emotional mindset (Hock and Bagchi 2018; Shiv and Fedorikhin 1999). We propose that movement of the entire body can also lower ability to process cognitively, and will evoke an emotional mindset, which in turn will increase consumption of indulgent (vs. non-indulgent) experiences and products.

We demonstrate proposed effects in four studies. In Study 1, we provide real world support for our notion that consumers process information more emotionally when they are in motion. We obtained 26,849 tweets posted by individual users from various locations of six cities in the US. A location-based social network application allowed us to identify whether the tweets were posted in locations indicating tweeters were on the move (e.g., on a boat or in a taxi) or stationary (e.g., at home or in a hotel). We used a software (SentiStrength; Thelwall et al. 2010) to code the emotional nature of these tweets and retrieved scores based on their valence and emotional strength. An ANOVA on expression of emotionality supported our proposition that tweets posted when users were on the move contained stronger emotional expressions ( $p < .001$ ).

In the subsequent studies, we investigate the downstream consequences of motion. In Study 2, participants ( $N = 89$ ) were randomly assigned to a moving or a stationary condition, and imagined being on a train or in a café choosing a short video to watch. We provided two choices: an indulgent (from America's funniest home videos) or an informative clip (on financial management). Participants also indicated how they made this decision on two items (1 = used my rational side/used my head; 7 = used my emotional side/used my heart;  $r = .93$ ). As predicted, a logistic regression confirmed that participants on the move were more likely to choose the indulgent video clip ( $b = .97$ ,  $p = .03$ ), and indicated that this decision was driven by their emotional mindset ( $M_{\text{Moving}} = 4.39$  vs.  $M_{\text{Stationary}} = 3.37$ ;  $p = .026$ ). A mediation analysis (Hayes 2013) confirmed that consumers' reliance on emotional mindset mediated the effects of movement on choice (95% CI = .0683, 2.7652).

In Study 3, participants ( $N = 130$ ) were recruited from an online panel based on their current location: currently traveling; located at a public stationary place; or located at a private stationary place. We informed participants that they would be taking part in two ostensibly different studies. In the first study, we asked about their current state of motion. In the second study, participants learned they were shopping for grocery items online (which they could pick up from their local store). We presented 12 items: six were indulgent items (e.g., chocolates, coke) and six were utilitarian items (e.g., oats, water). As in Study 1, participants also indicated how they made their decisions. Because we did not predict or find the two stationary conditions—public and private—to be different from each other, we combined them and treated them as our stationary condition. This also rules out the alternative explanation that our effects emerge because of the public nature of the movement condition. As expected, an ANOVA revealed that those on the move were likely to select more of the indulgent products ( $M_{\text{Moving}} = 1.74$  vs.  $M_{\text{Stationary}} = 1.37$ ;  $p = .046$ ) and this occurred because of their emotional mindset ( $M_{\text{Moving}} = 4.24$  vs.  $M_{\text{Stationary}} = 3.40$ ;  $p = .023$ ). Furthermore, emotional mindset mediated this effect (95% CI = .0336, .5262).

In Study 4, we replicated these effects in the field. Participants ( $N = 70$ ) were recruited from either a public place close to a bus station or when they were traveling on a bus. Participants were provided with an opportunity to participate in a survey, and in return were offered a choice between an indulgent chocolate bar and a healthy

granola bar. In the survey, we asked them to indicate how much they preferred each of the bars ( $-3 =$  Preferred granola bar;  $3 =$  Preferred chocolate bar). Participants then indicated their decision process. Consistent with our predictions, participants preferred the chocolate bar more ( $M_{\text{Moving}} = 1.25$  vs.  $M_{\text{Stationary}} = -.273$ ;  $p = .003$ ) as well as chose it marginally more ( $p = .096$ ) when they were in motion. Further, those traveling made their decisions using an emotional mindset ( $M_{\text{Moving}} = 4.29$  vs.  $M_{\text{Stationary}} = 3.63$ ;  $p = .061$ ), and emotional mindset mediated our results (95% CI = .0105, 1.0206).

Taken together, these studies demonstrate that motion affects how consumers process information and make purchase decisions. We also extend research on bodily sensations to actual movement. Furthermore, this research has important managerial implications: identifying consumers' current state of motion can help managers ascertain which products would be desired and valued more. Therefore, managers may want to provide more indulgent options when consumers are on the move (e.g., on flights, buses; as well as at bus stops, airports). Additionally, emotionally-laden appeals or advertisements are likely to be more successful when consumers are in motion.

### Real or Imagined Changes in Environment Restore Self-Control

#### EXTENDED ABSTRACT

Exerting self-control is an important goal for consumers, but when they are tired and depleted, how can they sustain effective self-control? We propose that mobility—in this case, changing environments—improves self-control performance after prior self-control exertion. This prediction is based on the notion that the brain is highly attuned to its environment. When people change environments, they must understand what is going on, so cognitive resources are redirected from the old to the new setting (Zwaan 1996). In this way, a change in environment may boost executive functioning and self-control performance, even after initial self-control exertion (i.e., offset the ego-depletion effect).

Three experiments tested the mobility hypothesis by randomly assigning participants to complete a task that does or does not require self-control (Task 1) and then assessing participants' subsequent self-control performance (Task 2) in either the same or different laboratory room. We predicted that initial self-control exertion would hinder subsequent self-control performance among those who stayed in the same room, but that changing rooms would restore self-control. Rest replenishes self-control (Tyler and Burns 2008), so the amount of time that elapsed between the two tasks was held constant across all conditions in all reported experiments.

In experiment 1, participants assigned to the depletion condition were forbidden to think of a white bear during a thought-listing task, whereas participants in the no-depletion condition were allowed to think about anything they liked, including a white bear (Wegner et al. 1987). Participants were then given the opportunity to consume a tasty but unhealthy snack (potato chips) under the guise of a taste test. The amount of chips consumed (in grams) during the 10-minute task was the key dependent measure of self-control. Predicting grams of chips consumed, an ANOVA revealed the predicted interaction ( $F(1,153)=4.519$ ,  $p=.035$ ). Replicating previous work, participants in the depletion condition consumed more potato chips ( $M=42.95\text{g}$ ) than participants in the no-depletion condition ( $M=31.78\text{g}$ ;  $F(1,153)=5.133$ ,  $p=.025$ ), but only when participants completed both tasks in the same room. Depleted participants who changed rooms consumed fewer chips ( $M=30.43\text{g}$ ) than their de-

pleted counterparts who stayed in the same room ( $F(1,153)=6.274$ ,  $p=.013$ ).

It is possible that changing contexts improved self-control because of mere distraction or physical movement. To rule out those alternative explanations, experiment 2 added a new comparison condition in which participants completed both tasks in the same room but in between the two tasks they were led halfway to the second room and were then brought back to the original room. Thus, the experiment was a 2 (depletion; no depletion) X 3 (no change; change; movement) between-subjects design.

Participants assigned to the depletion condition wrote an essay that required them to alter their natural way of writing (omitting words containing the letters 'A' and 'N') whereas those assigned to the no-depletion condition were not required to alter their natural way of writing (omitting words containing the letters 'X' and 'Z'; Schmeichel 2007). Then participants completed the Stroop task, a measure of executive functioning and self-control (Stroop 1935). The dependent measure was the difference in time it took participants to complete 30 incongruent trials versus 30 congruent trials (in seconds).

Consistent with the findings reported in experiment 1, mobility (i.e., changing rooms) offset ego depletion. The interaction between change (vs. no change) and depletion condition was significant ( $F(1,283)=4.378$ ,  $p=.037$ ). Mere movement was not sufficient to offset ego depletion as evidenced by the non-significant interaction between movement (vs. no change) and depletion condition ( $F(1,283)=.223$ ,  $p=.637$ ). Dissecting the change (vs. no change) and depletion-condition interaction revealed that depletion-condition participants performed worse ( $M=7.35$ ) on the Stroop task than no-depletion controls ( $M=5.09$ ;  $p=.002$ ). More important, depletion-condition participants who changed rooms performed better on the Stroop task than their counterparts who stayed in the same room for both tasks ( $M=5.07$ ;  $p=.018$ ), and they performed similarly to non-depletion controls who changed rooms ( $M=5.59$ ;  $p=.609$ ).

Mentally simulating an action activates the same psychological processes that are involved in performing the action (Decety and Grezes 2006). If self-control restoration is due to the psychological processes that stem from the environment change, then mentally simulating the room change should also restore self-control. Participants completed the more (vs. less) depleting version of the essay task (experiment 2) and then stayed in the same room, changed rooms, or imagined changing rooms to complete the Stroop task.

Consistent with predictions, changing rooms enhanced self-control among participants who had exercised self-control in the preceding task relative to those who had not exercised self-control in the preceding task. This conclusion was supported by a significant omnibus interaction ( $F(2, 300)=3.314$ ,  $p=.045$ ) and the pattern of simple effects. Conceptually replicating experiments 1-2, depletion-condition participants performed worse on the Stroop task ( $M=7.59$ ) than no-depletion controls ( $M=5.28$ ) when both tasks were completed in the same room ( $p=.004$ ). More important, the change manipulation improved self-control, such that depleted participants performed better on the Stroop task whether they actually changed rooms ( $M=5.03$ ;  $p=.003$ ) or merely visualized changing rooms ( $M=5.88$ ;  $p=.034$ ) compared to depleted participants who stayed in the same room for both tasks. As expected, there was no difference between depleted participants who actually changed rooms and depleted participants who merely imagined changing rooms ( $p=.243$ ). Furthermore, among participants who physically or mentally changed rooms, depletion condition participants performed equivalently on the Stroop task compared to no-depletion controls ( $ps>.298$ ).



In summary, three experiments support the theory that a change in context restores self-control. Alternative explanations such as mere physical movement or disruption were not supported. The studies provide novel insight into how mobility influences a key consumer outcome – the capacity to exert self-control.

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# Consuming Science: Knowledge, Acceptance, and Judgements of Scientific Information and Technology

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## **Paper #1: A Taxonomy of Opposition to Genetically Modified Foods**

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## **Paper #2: Moral Arguments Are Most Persuasive in Changing Attitudes of Opponents of Genetically Modified Foods**

Sydney E. Scott, Washington University in St. Louis, USA

Yoel Inbar, University of Toronto, Canada

Paul Rozin, University of Pennsylvania, USA

## **Paper #3: Emotion, Scientific Reasoning, and Judgments of Scientific Evidence**

Caitlin Drummond, University of Michigan, USA

Baruch Fischhoff, Carnegie Mellon University, USA

## **Paper #4: Green Biases: Consumer Evaluations of Renewable and Non-Renewable Energy Sources**

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### **SESSION OVERVIEW**

Scientists work to develop knowledge or technologies that can improve the world. In order to have an impact, scientific advancements must be adopted—or at least tacitly supported—by the people they are designed to help. However, some people oppose scientific advancements that could objectively improve their lives, despite a clear scientific consensus to the contrary.

The proposed session explores two broad research questions:

1. What are the psychological underpinnings of acceptance of—or opposition to—scientific information and technologies?
2. What interventions can be designed to successfully bring consumers closer to the scientific consensus?

There is a growing body of literature examining public attitudes toward science. For instance, opposition to scientific information and technologies has been attributed to lack of scientific literacy (Ranney and Clark 2016), perceptions of unnaturalness (Scott, Inbar, and Rozin 2016), fears about health risks (Laros and Steenkamp 2004), and values espoused by individuals' social groups (Kahan, Jenkins-Smith, and Braman 2011).

Our session contains four papers that build on this work to shed new light on the consumption of science in the domains of genetically modified food, renewable energy, and the perceived causes of cancer. Each paper offers evidence to identify anti-science biases, judgments, beliefs, emotions, and behaviors.

In the first paper, the authors set out to taxonomize the psychological underpinnings of opposition to genetically modified foods. Using open-ended participant responses, they find five dominant lay reasons. They experimentally test mechanisms related to these underlying psychologies, and end by suggesting differential interventions tailored to each.

In the second paper, the authors take a different approach to the same problem. They examine which types of arguments cause opponents of genetically modified foods to change their minds. Moral arguments shift opponents' attitudes more than arguments about safety,

naturalness, or acceptability in Christian doctrine. These findings suggest that attitudes are based on the moralization of GM foods.

In the third paper, the authors examine how consumers' ability to reason about—and emotional reactions to—scientific evidence relate to their judgments. They find that reasoning ability and emotional reactions to controversial research separately predicts understanding, judgments of quality, and trust in the scientists who conducted it.

In the final paper, the authors explore whether people judge electricity differently due to its generating source. They demonstrate a bias among participants' evaluations of renewable versus non-renewable electricity in hypothetical scenarios, when observing light in a dark or lit room, and when physically experiencing electric shocks.

With this session, we hope to bring the topic of public acceptance of science into the field of consumer research, and we believe the field is uniquely positioned to take it on. With science, consumption has heightened societal *and* commercial importance. We believe the session fits well with this year's conference theme, "Consuming in a Post Trust World," because of clear implications for trust in science and scientists. The proposed session will appeal to researchers interested in judgement and decision making, policy, consumer well-being, emotions, morality, and metacognition.

## **A Taxonomy of Opposition to Genetically Modified Foods**

### **EXTENDED ABSTRACT**

Public discourse today is unsettling, either insular or excessively hostile. Some people maintain vociferous, unshakeable attitudes about complex issues that they do not understand deeply (Caplan, 2011). Nowhere is this more apparent than in disputes around divisive scientific topics. In this work, we build on evidence that many people have strong, enduring attitudes about genetically modified foods despite a remarkably shallow understanding of the mechanisms at play (National Science Board, 2016; Ranney, 2016). There is widespread agreement among scientists that genetically modified (GM) foods are safe to consume (AAAS 2012; European Commission 2010) and have the potential to provide substantial benefits to humankind (Sharma, Kaur, and Singh 2017).

The conventional account of this failure to communicate, the "deficit model," appeals to lack of information (Bodmer, 1986): The idea is that people are too ignorant to appreciate counter-arguments, ignorance leads to reliance on loud voices, which in turn leads to polarization and failure to understand. The standard method to try to overcome these deficits is to use education to change attitudes. Recently, however, the deficit model has been challenged on the grounds that educational efforts rarely work (Miller, 2001).

One critical element that governs discourse but is not a focus of the deficit model is that people are not merely ignorant, but they often fail to realize their ignorance. Asking people to try to explain how a policy works causes them to not only reduce their estimate of their own understanding (Rozenblit and Keil, 2002), but also to moderate the extremity of their attitude. In other words, causal explanation causes people to become aware that they don't fully understand, reducing both hubris and extremism (Fernbach et al., 2013; Sloman & Fernbach, 2017).

This ignorance and lack of awareness suggests that opposition to genetically modified foods may be caused or exacerbated by gaps

between subjective and objective knowledge. It also suggests that people may have specific false beliefs or unfounded concerns that can be targeted with specific interventions (as opposed to broad education efforts).

In our first study, we surveyed a nationally-representative sample of U.S. adults ( $N = 501$ ) to test if subjective-objective knowledge gaps contribute to GM food opposition. Participants were first asked two questions to measure attitudes: extremity of opposition to genetically modified foods (1 = no opposition, 7 = extreme opposition), and concern (1 = no concern, 7 = extreme concern). Responses to these two questions were highly correlated ( $r=.88$ ), and we averaged them to form a measure we call “extremity of opposition”. Next, participants were asked to judge their understanding of GM foods (“subjective knowledge”), using instructions and a single-item rating scale adapted from the cognitive science literature (Rozenblit and Keil 2002). Finally, we measured scientific literacy (objective knowledge) with fifteen true-false questions adapted from the National Science Foundation’s Science and Engineering Indicators survey (NSF 2016), AAAS Benchmarks for Science Literacy (AAAS 1993), and recent work on public understanding of science (Durant, Evans, and Thomas 1989; Mielby, Sandøe, and Lassen 2013; Miller, Scott, and Okamoto 2006).

The results show that as extremity of opposition increases, science literacy decreases ( $\beta_{\text{extremity}} = -1.4$ ,  $t(499) = -4.72$ ,  $p < .0001$ ), while judged understanding of GM foods increases ( $\beta_{\text{extremity}} = .26$ ,  $t(499) = 6.81$ ,  $p < .0001$ ). After z-scoring objective and subjective knowledge, we calculated a difference score by subtracting each participant’s objective knowledge score from their subjective knowledge score. This difference score increases as extremity of opposition increases ( $\beta_{\text{extremity}} = .28$ ,  $t(499) = 8.77$ ,  $p < .0001$ ). We then tested whether objective knowledge predicts subjective knowledge differentially at different levels of extremity of opposition. We regressed subjective knowledge on science literacy, extremity of opposition and their interaction. The interaction is statistically significant, indicating that the slope of science literacy on subjective knowledge differs significantly by extremity of opposition ( $\beta_{\text{interaction}} = -.014$ ,  $t(497) = -4.56$ ,  $p < .0001$ ). Objective knowledge is a significant positive predictor of subjective knowledge up to an extremity of opposition value of 4.77, and turns significantly negative at an extremity of opposition value of 7. For extremists, knowing less is associated with thinking one knows more, and vice-versa.

Our second study was exploratory. The goal was to taxonomize the main reasons people have for being concerned about or opposed to genetically modified foods, independent of the extant literature. To that end, we used the “concern” question from study 1 to capture the responses of only respondents who indicated at least some concern about GM food in a new sample collection on Amazon MTurk, resulting in 506 complete responses. Those participants were presented with the following prompt: “You just indicated some concern about genetically modified foods. In the text box below, describe your concerns in detail and why you have them. Please be as specific as you can.” We then grouped participants’ open-ended responses into five theory-agnostic reasons, which we gave to two hypothesis-blind research assistants, who then coded all responses based on the five reasons. The research assistants’ coding was consistent across 71% of cases, and the remaining 29% of cases were resolved by a third assistant. This resulted in the following taxonomy of psychological reasons for GM food opposition:

- Bodily harm concerns (228 participants)
- Fear of the unknown (93 participants)
- Feelings of unnaturalness (79 participants)
- Environmental harm concerns (34 participants)

- Social or political concerns (17 participants)
- Unintelligible responses (55 participants)

This taxonomy suggests that the psychology of GM food opposition is complex. Therefore it is not surprising that “one size fits all” educational interventions have not been successful in mitigating the prevalence of false, anti-science beliefs. Taken together, these studies suggest that more specific interventions, tailored to different psychological concerns, may be more effective at decreasing concern about and opposition to genetically modified foods. They also suggest that calibration of subjective and objective knowledge may play an important role in opponents’ openness to educational interventions—if those who know the least think they know the most, they may be unwilling to engage in such interventions.

### Moral Arguments Are Most Persuasive in Changing Attitudes of Opponents of Genetically Modified Foods

#### EXTENDED ABSTRACT

Genetically modified food (GMF)—food derived from organisms whose genetic material has been intentionally modified, e.g., through introduction of a gene from a different organism—has been a topic of intense debate. Most consumers in the United States are strongly opposed to GMF, even though the scientific consensus is that GMF is safe for human consumption (AAAS, 2012). We have shown that a plurality of all respondents, and a great majority of GMF opponents in the USA show a moral as opposed to risk-based opposition to GMF (Scott et al., 2016).

Across 4 studies and 1,760 opponents, we systematically manipulate which types of arguments GMF opponents are exposed to and examine attitude change. We are the first to our knowledge to systematically explore different arguments’ effectiveness in the domain of GMF opposition.

In all studies, we defined American GMF opponents’ as individuals who agreed they are opposed to “genetically engineering plants and animals for human consumption”. Opponents answered a set of measures assessing the nature and strength of their opposition, viewed an essay arguing for the acceptability of GMF, then indicated their opposition again on the same set of measures before filling out demographics. Arguments were of four types: moral virtues of GMF, safety, naturalness, and Christian theology.

1. Moral Virtues of GMF: We selected an argument about moral virtues of GMF because prior work suggests that many opponents to GM are moralized opponents (Scott et al., 2016). Moral opponents are typically insensitive to risk-benefit evidence, especially about non-moral consequences (Baron & Spranca, 1997; Tetlock et al., 2000). However, we hypothesized that if moralized opponents saw a *moral* counterargument, they might engage in thinking about tradeoffs and change their minds. In the moral essays, participants were told that “genetically engineered crops can increase health and prevent deaths from malnutrition, especially in the world’s poorest countries” and the example of golden rice which prevents blindness and death from Vitamin A deficiency was explained in depth.
2. Safety of GMF: Much of the literature suggests that risk perceptions are a major predictor of GMF attitudes (Moon & Balasubramanian, 2004). In our safety argument, participants read an essay arguing that GM food isn’t dangerous, and the essay contained polls of scientists and summary statements from reputable scientific organizations.
3. Naturalness of GMF: GMF is considered unnatural, and perceptions of unnaturalness is linked with GMF opposi-

tion (Tenbült et al., 2005). In fact, the unnaturalness of GMF may be one reason why people are morally opposed. Naturalness essays took a few different forms, some arguing that GMF was close to selective breeding and therefore natural, and others arguing that GMF and gene insertion happens in nature.

4. Christian theology: Religiosity has been linked to opposition to GMF, and sometimes GMF is viewed as “playing god” (Brossard, 2012). Therefore, we presented religious arguments that took a few different forms, such as arguing that religious texts permit Christians to cultivate and manipulate the environment or that Christians are called upon since the fall of man to use their talents and innovations (like GMF) to shelter and feed humanity and improve the world.

In study 1 ( $N = 142$ ), opponents were randomly assigned to one of three arguments (two about naturalness, one about Christian theology); In studies 2 ( $N = 213$ ) and 3 ( $N = 692$ ), opponents were randomly assigned to view either a naturalness or Christian theology argument; In study 4 ( $N = 713$ ), participants were randomly assigned to view a naturalness argument, an argument about the safety of GMF or an argument about the moral benefits of GMF.

We operationalized attitude change in two ways. In both cases, arguments about moral virtues of GM were most effective. One measure categorized individuals based on the agree-disagree question “I oppose this” with respect to GMF. All participants had originally indicated they were opposed to GMF, and if they indicated “disagree” after argument exposure, they were coded as 1 (became supporters), else 0 (remained opponents). In a meta-analysis across all four studies, 25.2% of opponents became supporters after viewing arguments about moral benefits of GM (95% CI [19.8%, 31.2%]); 17.6% became supporters after viewing naturalness arguments (95% CI [13.2%, 22.0%]); 14.5% became supporters after viewing safety arguments (95% CI [10.3%, 19.7%]), and 10.4% became supporters after viewing religious arguments (95% CI [7.7%, 13.1%]). A second measure was a pre-post difference score averaged across 12 items measuring attitudes to GMF (9-point likert scale items about desires to strictly regulate GM food, desires to consume GM food (reverse scored) and desires to take actions to protest and oppose GMF cultivation (adapted from Scott et al. 2016; Siegrist, 2000)). On this continuous measure, arguments about moral benefits of GM shifted attitudes by  $d = .44$  (95% CI [.31, .57]). In comparison, arguments about safety shifted attitudes by  $d = .30$  (95% CI [.17, .43]); arguments about naturalness shifted attitudes by  $d = .28$  (95% CI [.20, .36]); arguments about Christian theology shifted attitudes by  $d = .06$  (95% CI [-0.05, .17]).

Across 4 studies and 1,760 GMF opponents, we find that arguing about moral benefits of GMF shifted opponents more than arguments about its safety, naturalness, or acceptability in Christian doctrine. However, consistent with moralization of GMF attitudes, even the best arguments were only moderately effective, with at most 25% of opponents becoming supporters after one of these interventions.

## Emotion, Scientific Reasoning, and Judgments of Scientific Evidence

### EXTENDED ABSTRACT

Although scientists are often stereotyped as cold and distant, scientific research has the power to spark controversy and prompt strong emotional reactions in those who encounter it. Scientific research, in turn, is important to a range of lay consumers’ decisions, from medical decisions (e.g., whether to vaccinate one’s child) to

purchasing decisions (e.g. navigating health claims in advertisements). Although emotions are known to be integral to decision making (Kahneman, 2011), their role in judgments of scientific evidence has been little studied. We investigate how the emotions evoked by scientific evidence are related to three types of judgments regarding that evidence: understanding of it (Drummond & Fischhoff, 2017), judgments of its quality (Broomell & Kane, 2017), and trust in the scientists who produced it (Fiske, Glick, Cuddy & Xu, 2002). We also examine the relationship between these judgments and the ability to reason critically about scientific evidence (Drummond & Fischhoff, 2017), asking whether emotion and reasoning ability make separate contributions to consumer judgments of scientific evidence.

In an online study, 695 participants read a condensed version of a science news report from NPR’s All Things Considered (Harris, 2017) describing research on the role of chance in causing cancer (Tomasetti, Li & Vogelstein, 2017). We chose the article because it involves an emotionally laden topic and presents evidence that sparked controversy, but was not polarized along political or religious lines; we thus believed it would evoke strong, diverse emotions. Participants reported their emotional reactions to the article in terms of six emotions found to affect judgments in other domains (Ekman, 1992; Lerner, Li, Valdesolo & Kassam, 2015; Dunn & Schweitzer, 2005), fear, anger, sadness, surprise, happiness, and disgust, on a 5-level scale from 1= *very slightly or not at all* to 5= *extremely*. Participants then answered a series of dependent measures regarding their subjective understanding of the research, objective understanding (measured by asking participants to summarize the study; responses were coded for correctness by two trained coders), perceived quality of the research, and perceived warmth and competence of the scientists who conducted it, following Fiske et al.’s (2002) conceptualization of trust. Finally, participants completed the Scientific Reasoning Scale ( $M = 6.9$ ,  $SD = 2.7$ ,  $\alpha = 0.72$ ; Drummond & Fischhoff, 2017), which comprises 11 scenario-based problems measuring the ability to critically evaluate the quality of scientific evidence.

We used regressions to predict participants’ responses to our dependent measures as a function of their scientific reasoning ability and emotional reactions. We first modeled each dependent variable as a function of scientific reasoning ability, and found that individuals with greater ability reported greater subjective ( $B = 0.031$ ,  $p < 0.01$ ) and objective understanding ( $B = 0.128$ ,  $p < 0.001$ ), and rated the evidence as of lower quality ( $B = -0.052$ ,  $p < 0.001$ ). Ability was unrelated to judged warmth and competence.

We next added the emotion variables as predictors, assessing whether including them improved model fit. We modeled the emotions in two different ways: (1) we added each emotion as a separate predictor, as in the emotion and decision making literature (Lerner et al., 2015); and (2) we grouped emotions into those with negative and positive valence by creating two indexes: positive emotional arousal (averaging reported happiness and surprise) and negative emotional arousal (averaging reported fear, anger, sadness, and disgust), as in the risk analysis literature (Finucane, Alhakami, Slovic & Johnson, 2000). We found that overall, including emotions as predictors improved model fit, and modeling emotions separately improved model fit more than modeling them by positive and negative arousal, using goodness-of-fit criteria (AIC and adjusted  $R^2$ ) that penalize models for the number of predictors. This finding held for all but one measure: participants’ objective understanding of the evidence was unrelated to emotion, however modeled.

With respect to the specific emotions, we find that sadness is positively associated with subjective understanding of the article ( $B = 0.096$ ,  $p < 0.001$ ), while anger and disgust are negatively associated with subjective understanding ( $B = -0.147$ ,  $p < 0.01$ , and  $B = -0.185$ ,



$p < 0.001$ , respectively). Surprise and sadness were positively related ( $B = 0.077$ ,  $p < 0.01$ ;  $B = 0.144$ ,  $p < 0.001$ ), while anger and disgust were negatively related ( $B = -0.18$ ,  $p < 0.01$ ;  $B = -0.277$ ,  $p < 0.01$ ), to judgments of research quality. Happy and surprised participants judged the scientists as warmer, ( $B = 0.187$ ,  $p < 0.001$ ;  $B = 0.083$ ,  $p < 0.01$ ), and more competent ( $B = 0.089$ ,  $p < 0.001$ ;  $B = 0.112$ ,  $p < 0.001$ ); disgusted participants judged the scientists as less warm ( $B = -0.252$ ,  $p < 0.01$ ) and less competent ( $B = -0.248$ ,  $p < 0.01$ ).

Overall, our results suggest that scientific reasoning ability and emotional reactions to controversial research predict participants' subjective understanding of it and judgments of its quality; emotion but not reasoning predicts trust in the scientists who conducted it. These results are subject to several limitations: because we studied emotions integral to the stimulus, the signal is inherently less clear than in studies that examine the effect of a single emotion; we also cannot separate the emotions that participants expressed from the participants expressing them. Our results have practical and ethical implications for science communications and lay consumers. We found that those with greater scientific reasoning ability understood the evidence better, but thought it was of lower quality, suggest that knowing more about science can help consumers to better understand scientific evidence presented to them in the media, and also to be more critical of such evidence. We also found that surprised consumers thought the research was of higher quality, and placed greater trust in the scientists who conducted it. Evoking surprise could thus be a powerful tool for science communicators, but also one subject to misuse. Further, in this study we deliberately sought a stimulus describing scientific results not (yet) subject to political or religious polarization; future work might examine the effects of emotion in such situations.

### **Green biases: Consumer evaluations of renewable and non-renewable energy sources**

#### **EXTENDED ABSTRACT**

Do people perceive energy from renewable sources as being different than energy from non-renewable sources? If so, this fundamental misunderstanding about energy may explain people's decisions about when and whether to introduce energy from renewable sources into their lives.

Previous survey-based research on green energy products has found that many people hold general positive sentiments around green products but are ultimately reluctant to purchase them due to the belief that they are of higher cost and lower quality (Griskevicius, Tybur, & Van den Bergh, 2010; Lin & Chang, 2012; Luchs et al., 2010). Unlike products that have previously been studied (e.g. laundry detergent) which may in fact differ based on whether they are eco-friendly, electricity has exactly the same physical properties no matter how it is produced. Do people nevertheless view energy from renewable sources as being different than energy from non-renewable sources? Across four studies, we demonstrate that people do indeed view electricity differently due to its generating source. We demonstrate this bias operating when evaluating hypothetical experiences with electricity, when directly observing light in a dark or lit room, and when physically experiencing electric shocks. We also find differences between separate versus joint evaluations (Hsee, 1996). When making separate evaluations, people do not show a consistent preference for products powered by renewable energy and at times judge them to be worse. But in joint evaluations, products powered by renewable energy are judged to be of superior quality. This may indicate that on an unconscious level, people have neutral or slightly negative attitudes towards renewable energy, but

when consciously comparing renewable versus non-renewable energy, people prefer renewable energy.

In Study 1, 332 students were asked about their views of renewable versus non-renewable energy in hypothetical scenarios. Participants reported that being electrically shocked by a renewable energy source would be safer than being electrically shocked by a non-renewable energy source,  $t(305)=9.52$ ,  $p < .001$ , and that a light bulb powered by renewable energy would produce softer light relative to a light bulb powered by non-renewable energy  $t(305)=7.62$ ,  $p < .001$ . In Study 2, 478 participants from Amazon Mechanical Turk (MTurk) also viewed shocks or light from renewable energy as safer or softer than from non-renewable energy. In addition, MTurk participants also viewed renewable energy as more efficient,  $t(478)=4.99$ ,  $p < .001$ , and more reliable,  $t(478)=2.32$ ,  $p = .02$ , than non-renewable energy.

Although Studies 1 and 2 demonstrate a bias in hypothetical surveys, Study 3 tested how people evaluate renewable energy when witnessing electric outputs first-hand. In this study, 164 students evaluated light from two different flashlights, one that had been charged with renewable energy and one that had been charged with non-renewable energy. Participants were first given one flashlight and were asked to evaluate the quality of the light in a dark room and in a lit room (order counterbalanced). Next, participants were given the other flashlight and were again asked to evaluate the light. Participants showed a consistent preference of the light from renewable energy in the within-subjects analysis (e.g. indicated a higher willingness to pay,  $F(1,159) = 37.41$ ,  $p < .001$ ). This was not the case in the between-subjects analysis, where sometimes participants favored the non-renewable energy and sometimes favored the renewable energy. It appears that when people are aware that they are comparing renewable versus non-renewable energy, they answered in such a way to appear pro-renewable energy. But when they are not comparing the two types of energy sources, people do not consistently rate renewable energy as being superior. Given that the way in which a battery is charged has no bearing on the light that is produced, such findings imply that the preference for renewable energy only becomes salient when people are faced with both options.

In Study 4, 165 students experienced electrical stimulation on their arms from two different devices, one that had been charged with renewable energy and one that had been charged with non-renewable energy. Participants first experienced one electrical stimulation device during a fixed round where they experienced the stimulation at a low intensity for 10 seconds. Next, participants experienced the same device during a free round where they were free to take the intensity to a maximum of 60 and were free to test the device for a maximum of 2.5 minutes. Participants then experienced the other device, first during a fixed round and then during a free round. Another group of participants were in a control group where they experienced both devices during both fixed and free rounds, but were not told by which energy source the device was charged. The order in which all participants evaluated the two devices was randomized. This allowed for us to examine the first fixed and free rounds for the between-subjects analysis and examine the first and second fixed and free rounds for the within-subjects analysis.

The results from Study 4 were similar to the results from the Study 3. In the within-subjects analysis participants rated the renewable energy as being safer,  $F(1,84)=5.91$ ,  $p = .02$ , more efficient,  $F(1,84)=3.43$ ,  $p = .07$ , and expressed a greater willingness to pay,  $F(1,84)=7.59$ ,  $p = .007$ . As with Study 3, we see no clear preference of one energy source in the between-subjects analysis. Thus, across both studies people reported renewable energy as being superior only when they were aware that they were comparing it to non-renewable



energy. But when people were not aware that such a comparison was being made, there were no preferences for renewable energy.

This research provides a new way of understanding people's views on renewable and non-renewable energy sources, in the absence of objective differences between the two. The findings reveal new psychological insights that determine the acceptance of renewable energy (Wüstenhagen et al., 2007). Marketers wishing to promote renewable energy it powers would be well-advised to present it alongside a non-renewable option, thus improving consumer evaluations of the renewable energy and the products it powers.

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# The Consuming Body: Foregrounding Embodied Understandings

Chairs: Marcus Phipps, University of Melbourne, Australia

Aphrodite Vlahos, University of Melbourne, Australia

## **Paper #1: The Embodiment of Repair: Consumer Experiences of Material Singularity and Practice Disruption**

D. Matthew Godfrey, University of Arizona, USA

Linda L. Price, University of Oregon, USA

Robert F. Lusch, University of Arizona, USA

## **Paper #2: Consumer Identity in the Flesh: Lactose Intolerance and the Erupting Body**

Kushagra Bhatnagar, Aalto University, Finland

Jack Tillotson, Liverpool John Moores University, UK

Sammy Toyoki, Aalto University, Finland

## **Paper #3: Understanding Organ Donation: Discourses of Embodied Recycling**

Rebecca Scott, Cardiff University, UK

Samantha Warren, Cardiff University, UK

## **Paper #4: Contested and Confused: The Influence of Social Others in Disrupting Body Projects**

Aphrodite Vlahos, University of Melbourne, Australia

Marcus Phipps, University of Melbourne, Australia

### SESSION OVERVIEW

This special session is unified through a focus on the body. It is through the body that consumers sense the world and develop an understanding of consumption phenomenon. This session traverses embodied understandings of identity, materiality and ultimately how consumers sense “truth” in their everyday interactions. The session asks the questions “What role does the body play in understanding the world?” and “How does foregrounding different elements of embodiment lead to different understanding of consumption phenomenon?”

The first presentation explores the role of the body in aligning and misaligning materials. We ‘break in’ our hiking boots or camping equipment to facilitate the creation of material singular objects. However, the same forces lead to the continual break-down and wearing-in of objects. Through an in-depth ethnographic analysis of shoe repair practices, embodiment is foregrounded in this research through the constant material disintegration of objects. Consumers embodied, material “feel for the game” (Bourdieu 1998, 25) must continually deal with material disruptions that occur relatively slowly and gradually as a natural consequence of their practices.

The second presentation brings the body to the forefront through a focus on experiences of impaired embodiment. The study investigates a group of consumers whose consumption routines have been impaired by a bodily condition—lactose intolerance. The body only became apparent in consumer narratives of eating and drinking after they were diagnosed as intolerant. Here, the embodied know-how over body practices can no longer be taken for granted and must be re-learned. Consumer identity work is shown as a fragmented collection of instances of practical coping.

The third presentation provides an interesting contrast by investigating a context where the body is brought to the forefront after death. Here the “gift of life” of donor transplantation deems body parts as devoid of identity. The research aims to develop an understanding of the ways in which the body is conceptualized and objectified through the eyes of deceased donor families (DDF). Through an exploration of embodied recycling, the study investigates the rare experience of DDFs that contact the organ recipient of their deceased

and the constellation of sensory stimuli that brings them closer together.

The final presentation considers the body as a site of contestation. Drawing on a netnography and interviews with young women who have undergone breast-augmentation, the study explores how plans are disrupted by those who do not agree with their choices. Woman reformulated their body practices, through stuffing their bras to desensitize others to their impending change, or by decided not to have surgery at all. Consumers navigate the tensions between their own desires and the opinions of others when seeking to embody their desired appearance.

This session highlights the broad nature of embodiment. The four papers share the body as a site of consumer research, yet differ in terms of contexts, theoretical lenses and methodological approaches. This session has relevance to theorists of practices, assemblages and non-representational theory through furthering the theorization of embodiment. Furthermore, it has implications for body centric research such as health interventions.

## **The Embodiment of Repair: Consumer Experiences of Material Singularity and Practice Disruption**

### EXTENDED ABSTRACT

Consumers acquire things so they can run, walk, play, cook, eat, work, sleep, be entertained, and perform all of their everyday practices. These objects’ competence, including their capacity to produce and resist material effects, facilitates their interactions with other objects integrated into consumption practices. These interactions generally occur outside awareness, as consumers experience everyday activities through the realization of an embodied memory or habit unconsciously engrained through repeated practice and inseparable from the world they experience (Harrison 2000; Merleau-Ponty 1962; Wallenborn and Wilhite 2014). As Miller observes, “the lesson of material culture is that the more we fail to notice them, the more powerful and determinant of us they turn out to be,” (2010, 54).

These embodied practices are not static, but are in continual motion. Matter constantly becomes something new as interactions between objects create new distributions of competence between them (Bennett 2010; Coole and Frost 2010). As the objects in consumption practices shift, practices shift along with them. In a very material way, “embodiment revolves around an ever-ongoing combination of heterogeneous elements; a continual *collective individuation* of objects, things, contexts, and bodies” (Harrison 2000, 508, emphasis in original). The assembled unity and repeated practices of daily life constitute the elusive nature of embodiment—the tacit way that over repeated practice the body incorporates material arrangements into taken-for-granted actions (Wallenborn and Wilhite 2014). With use we “break in” our seasoned iron skillet, leather hiking boots, outdoor camping equipment, the cushions on our favorite chairs, the fit of our dress slacks, the feel of our new phone with how we contain it, text, e-mail and take photos with it.

However, the same forces that facilitate the creation of material singular objects within embodied practices also lead to the continual break-down and wearing-in of objects integrated within them. Consumer practices are continually threatened by the constant material disintegration of objects that are central to practice performance. Most of these breakdowns occur outside our awareness, only rising

to consciousness as practices get disrupted, shaking us out of our embodied performances (Harrison 2000). A thing which exists “present-at-hand” often does not become noticed until it breaks and is no longer usable or “ready-to-hand” (Heidegger 1962, 103). Similarly, consumer practices, may appear to perpetuate unnoticed until the material elements of the practice get disrupted (Phipps and Ozanne 2017) people experience secure existentially because their practices are unconsciously embedded into stable & “obdurate” materiality that supports the practice. When some of materials that the practice relied upon shifted and became unaligned with the practice, this disruption occurred at the material level. The object (water). We extend prior work on practice disruption to examine how consumers deal with material disruptions that occur relatively slowly and gradually as a natural consequence of their embodied practices.

Through an in-depth ethnographic analysis of shoe repair practices, we find that the continual process of embodied, material practice change leads some objects to become materially singular to a practice. Material singularity describes moments of physical irreplaceability that objects can achieve as embodied components of consumers’ practices. It is a fluid state, constantly changing as objects interact in practice. The fluid state of material singularity often goes unnoticed, as other objects integrated in a practice shift in response to each other and consumers unconsciously adjust their performance in response to these changes. During this “co-evolution of bodies and the material world” (Wallenborn and Wilhite 2014, 56), consumers often develop an embodied, material “feel for the game” (Bourdieu 1998, 25), like a skilled cricket bowler or batsman who instinctively reacts in different ways as ball and field wear down during the course of a match. Consumers typically don’t consciously appreciate the material singularity of an object until it disintegrates sufficiently to disrupt a practice. Repairing a materially singular object maintains the singular flows of competence in the practices and the embodied performance that these flows facilitate. Conversely, replacing a material object would force the consumer to change their practice and the previously embodied flows of competence between objects integrated within it.

To repair and realign disrupted practices consumers must become reflexive about the role of material objects. Repair thus disembodies elements of embodied practices and makes them salient enough for consumers to actively reassemble. We find that consumers respond to practice disruption in several ways. First, anticipating material threats, consumers may protect an object by bolstering or fortifying its coherence in an attempt to prevent or slow its future disintegration. Second, when material singularity becomes salient, consumers can proactively recalibrate an object with their practices as it wears down, maintaining object and practice alignment before disruption occurs. Third, and mostly commonly, faced with the disruption of a practice caused by object disintegration, consumers may reactively repair the practice by restoring sufficient competence to the object that it can be effectively reintegrated back into the practice.

Our research makes several key contributions to research on consumer practice and embodiment. First, we outline the processes by which embodied practices gradually shift and break down outside consumer consciousness, and how inevitable disruptions bring previously unconscious practices into conscious awareness. Second, we introduce the concept of material singularity, which describes moments of physical irreplaceability that objects can achieve as embodied components of consumers’ practices. Finally, we explain how material singularity influences the ways that consumers realign objects within their practices in order to maintain or repair their embodied experiences of practice performance.

## Consumer Identity in the Flesh: Lactose Intolerance and the Erupting Body

### EXTENDED ABSTRACT

It is widely accepted that consumer researchers know a great deal about consumer identity work. Consumer identity work as a research program concerns itself with the ways in which consumers attempt to reflexively fashion or revise a reasonably coherent sense of self by participating in linguistically mediated discourses (Arnould and Thompson 2005; Ahuvia 2005; Hill and Stamey 1990). However, consumer research has neglected to attend to how embodiment is implicated in identity work. Wherever consumer research does attend to the body, it is understood as an expressive vehicle for a bounded, endogenous self, involved in a long-term consumer identity project (Sandikci and Ger 2013; Schouten 1991; See Joy and Sherry 2003 for an exception). Our work provides a systematic elucidation of the body as understood not in contrast to some inner self, but rather as the subject through which we experience and perceive the world around us (Merleau-Ponty 1962).

The purpose of this article is to better understand the relationship between embodiment and consumer identity work. The dominant metaphor of identity project foreshadows reflexive consumer subjects engaged in explicit (Mick and Buhl 1992; Schau and Gilly 2003) or tacit (Thompson and Tambyah 1999) goal-driven pursuits, and conceived of as “identity seekers and makers” (Arnould and Thompson 2005, pg. 871; Thompson and Ustuner 2015; Ustuner and Holt 2012). In contrast, this work aims to provide a fully worked out account of how the situated body serves as a medium and background of immediate identity-oriented consumer experience, how prior to thinking and talking about the world, we embody it (Dreyfus, 1991; Fuchs and Schlimme, 2009;). We employ a cultural phenomenological lens to interpret consumers identity work as a fragmented collection of instances of practical coping, thus showing that embodiment is deeply implicated in processes of identity work (Csordas 1993; Merleau-Ponty 1962). Our work shows that a “paradigm of embodiment can be elaborated upon for the study of culture and self” (Csordas 1990, p. 4) where the body is not a product of culture, but “the existential ground of culture”.

Our guiding research question is: *How does talk about embodied experiences of food consumption constitute identity?* We focus on experiences of impaired embodiment to bring the often-neglected corporeal aspect of identity work into full view. Associated questions are: What is it like to be a lactose intolerant embodied organism? And, what are its implications for processes of identity formation and revision? When refracted through the prism of embodiment, identity work, conventionally regarded as the discursive authoring of preferred selves (Thompson and Haytko 1997; Ahuvia 2005), becomes a successful instance of embodied maximal grip (Merleau-Ponty 1962), i.e. the bodily disposition to “respond to the solicitations of situations in the world” in a way that leverages whatever wiggle-room available therein, with the ultimate end of attaining optimal embodied equilibrium (Dreyfus & Dreyfus 1999, p. 103).

We study a group of consumers whose sedimented consumption routines have been impaired by a bodily condition—lactose intolerance. They cannot consume milk and milk products without experiencing a bodily disequilibrium - involuntary episodes of bodily discharges (burps, farts, stools, vomit), or intense throbbing pain. The particular bodily situation impairs the cohering of bodily experience related to eating and drinking. Embodied know-how that once pervaded eating and drinking can no longer be taken for granted and has to be re-learned.



Fieldwork was carried out in Finland, a socialist democracy embedded in the Nordic “ethos of equality and egalitarianism” (Ostberg and Kjeldgaard 2007, p. 184) that promotes social rights and allows people “social resources, health and education to participate as effective socialist citizens” (Esping-Anderson 1996, 12). We utilized long semi-structured interviews as our predominant mode of gathering our empirical material (Arsel 2017). Our approach to phenomenology is consistent with research that takes embodiment as ‘the starting point for analysing human participation in a cultural world’ (Csordas, 1993, p. 135).

Before being diagnosed as lactose intolerant, the consuming body did not often feature in our respondent’s experiences. However, embodied impairment in the form of LI, collapses the separation between body and identity, so that reflecting on and being aware of one necessarily entails being aware of the other. The sudden eruption of the body leaves valorized identity projects in tatters, as the impaired body breaks out of the intentional arc and threatens achievement of maximal grip on the situation. Identity work from an embodied perspective recreates the cleavage between self and body, redrawing the boundary that had been collapsed by LI. Lactose intolerant people respond with three families of embodiment-oriented identity work, in an attempt to re-habilitate and re-embodiment their lives so as to achieve maximal grip: 1) *Discursive Softening*, where lactose intolerant people respond to the embodied disruption by playing down its meaning and consequence; 2) *Expanded Consumption Repertoire*, where they respond by learning new repertoires of consumption; and 3) *Embodying Expertise*, where they re-intuit and re-habituate themselves to their impaired bodies.

This study attempts to work out the embodiment inherent in identity work, i.e., highlighting the ‘know how’ aspect of identity work, in addition to the previously explicated ‘know that’ aspect of identity work (Luedicke et al 2009). Our research contributes to the growing literature on the lived phenomenological body, explicating the varied ways in which people experience their bodies, and to better understand how these multifarious experiences sculpt identities and selves.

## Understanding Organ Donation: Discourses of Embodied Recycling

### EXTENDED ABSTRACT

In the UK there are 6,500 people on the national transplant waiting list (NHS 2018). Despite steep rises in transplant survival rates, and reductions in the number of people waiting for operations, demand for organs still far exceeds ‘supply’ (Gunnarson and Svenaeus 2012). The metaphor of an organ ‘shortage’ has become firmly embedded in organ donation and transplant (ODT) discourse, and this has powerful implications for the human body as having ‘market value’ (Lock and Nguyen 2010, 234).

The problematics of ODT involve complex attachments to the ‘commodities’ involved; the donor’s relationship with their body, the transplant patient’s body concepts, the sentiments of ODT medics and the emotional trauma experienced by deceased donor families (DDF). It is this last group of people that represent a particularly pressing issue for the ODT community. In approximately 60% of cases, families do not consent to the deceased’s body being used for transplant (NHS 2015). It is this gap – alongside the general reluctance of people to talk about organ donation – that is the impetus for our study: How can an embodied perspective better help us understand people’s propensity to consume and be consumed (or not) by the body of another?

Although organ donation research has begun to consider the interplay between DDF and consent rates (Hulme et al. 2017; Noyes et al. 2016), the specific phenomenon of embodied discourses and the sociocultural structures that enable them to emerge and endure has yet to be subject to significant scholarly attention. Embodiment (Vom Lehn 2006) and sensory stimulation (Hamilton and Wagner, 2014) have become central features of transformative service environments and consumer value cocreation (McCull-Kennedy et al. 2012). As such we see our contribution developing out of the importance of the viscerally experienced emotional labor, sense-making and embodied practices that are central to the patterning of transformational service settings (McCull-Kennedy et al. 2012).

Moreover, whilst the role of the body in ODT process has recently begun to be considered (Blekher, Katz and Gneezy 2014) our understanding of the interplay between emotional attachments to body parts and ODT remains limited. We aim to shed light upon this issue by developing an understanding of the ways in which ‘the body’ - with discrete boundaries between ‘insides’ and ‘outsides’, ‘subjects’ and ‘objects’ and ‘self’ and ‘other’ (Rayner 2003) - is conceptualized and objectified through the eyes of DDF. We consider the corporeal, social and cultural mechanisms that facilitate ODT body concepts in Western society.

There are a range of theoretical resources we can draw on to understand the interplay between embodiment and DDF consent including; medicine (Hulme et al., 2016; Ryckman et al., 2009), medical anthropology (Lock, 1995; Scheper-Hughes, 2001), health marketing (Aldridge and Guy, 2008; Burkell, Chandler and Shemie, 2013; Dijker, Nelissen and Stijnen 2013), consumer research (Blekher et al., 2014; Lai, Dermody and Hanmer-Lloyd 2007), and social psychology (Dijker et al., 2013; Ryckman et al., 2009). Taking a ‘mortal embodiment’ perspective, Lai et al. (2007) investigate how the decision to dispossess body parts for donation challenges the role of the body as the marker of the self. They highlight how embodied projects within consumerist societies are challenged by ‘the gift of life’ discourse where body parts are deemed as devoid of identity (Lock 2002; Ohnuki-Tierney et al. 1994). Moreover, Gunnarson and Svenaeus (2012) note how the ethics of ODT is tied to the relationship we have with our bodies on a societal (and therefore political) level. This article focuses on how the attachments people have to bodies/body parts has a bearing on their market ‘value’ (e.g., to extend life). The value attribution is determined by a constellation of embodied factors that can’t be explained by rationality.

In building the theoretical foundations of our study, we draw from research on thanatopolitics (Foucault and Ewald, 2003), as well as insights from modern biopolitics (Campbell 2009), conceived as the power to ‘make’ live and ‘let’ die (Foucault and Ewald 2003), to help us analyze and understand our research question: How can an embodied perspective help us gain a deeper understanding into people’s propensity to consume and be consumed (or not) by the body of another? We consider how conceptualizations of the body change when it is required to be a source of ‘augmentation’ to another person.

Our paper analyses data collected using interviews with deceased donor family members, organ donors and transplant recipients across the UK to offer new insights into the embodied aspects of donation and contributes to ongoing discussions about the body as an anatomical resource, gift and commodity (Gunnarson and Svenaeus 2012). This study focuses on the ODT experience of transplant patients, DDFs and medical practitioners. Forthcoming interpretive methods will include projective drawing techniques, participant observation, field notes and netnography.

While this may be subject to refinement as the project progresses, early analysis suggests that we contribute to the embodied dimension of the transformational service literature by demonstrating how the death of the body, when it is carefully managed and controlled, enables pride, achievement, self-actualization and mobilization for DDFs, which helps to breathe new life into the loss and grief experienced by DDFs. This challenges the traditional narrative of grief as 'loss.' As a preliminary label for the positive, proactive and proud set of experiences we are using the term 'embodied recycling.' Embodied recycling defines the rare experience of DDFs that make contact with the organ recipient of their deceased and the constellation of sensory stimuli that brings them closer together.

Interviews reveal a rich corporeal portrayal of ODT stories through expressive bodily sounds and movements. Overall, this work aims to extend the ODT, health, and service disciplines by addressing the pressing need to learn more about the transformative impact of family consent. Initial findings show how the embodied pride, achievement, and mobilization felt by DDFs offers an embodied emancipation from the constraints of grief.

### **Contested and Confused: The Influence of Social Others in Disrupting Body Projects**

#### **EXTENDED ABSTRACT**

Close social others, such as friends or family, are likely to have an opinion in consumption contexts. Whether it is choosing clothing or a new hairstyle; or engaging in socially unacceptable behaviours such as excessive alcohol consumption, consumers are likely to hear from others about the efficacy of their behaviours.

In the context of body modification, theorists often employ the concept of a body project to explain how and why consumers work to change their bodies (Askegaard et al. 2002). Researchers conceive of the body as a malleable entity in which consumers are actively managing their body appearance in accordance with their identity (Schilling 2003). This current research extends this line of thinking to explore how decisions involving the body can also be relational pursuits, which are based on the influence of close social others. For instance, consumers rely on others, such as tattooists, in order to help them actualize their desired appearance onto their body (Patterson and Schroeder 2010). We seek to theorize how relationality influences the planning, preparation, and embodiment of an ideal body.

Relationality in body projects are important for body modification practices, such as piercing, tattooing, or elective cosmetic surgery, because these practices are often contested (Giesler 2012). Despite a growing uptake in body modifications, a stigma is still attributed to these practices (Bradshaw and Chatzidaki 2016). More specifically, consumers who seek to change their appearance may be met with resistance within their personal networks or broader society. Therefore, while individuals may feel they have complete control over their bodies, there are times when the body becomes a social pursuit, and this relationality may hinder body practices.

We selected breast augmentation among younger women as a site of body project relationality by close others. Breast augmentation is increasing in popularity and is considered the most popular cosmetic procedure for young women aged 19-34 (ASPS 2017). For this reason, many young women are turning to online communities as a means of gaining support. We conducted a blended netnography, tracing three types of online communities: YouTube recovery vloggers (video bloggers), online forums, and Instagram communities (Kozinets 2015). Data collection also included 18 in-depth consumer interviews with female consumers recruited from online networks.

They are aged between 20-39 years of age and have recently undergone elective breast augmentation surgery.

Findings from this study support that informants consider breast augmentation an increasingly mainstream practice among women their age (i.e., Thompson and Coskuner-Balli 2007). Since many informants personally know someone who had the surgery, they consider breast augmentation to be a socially acceptable body modification practice. Nevertheless, their decision to undergo breast augmentation was often contested within their social networks of support. In particular, negative opinions from close social others played a role in the practices that informants enacted over their own bodies. Exploring these tensions helps us understand how relationality influences consumer's body projects.

Family members and friends met women's desires for change with resistance, commonly telling them to "be natural" or to "love themselves" as they are. Women were told they were shallow for wanting to change their appearance, and their justifications were often scrutinized. Women feared that they were making a mistake given their lack of social support. For example, Phoebe chose not to get breast augmentation because her family members disapproved. This was a common phenomenon in online forums, which revealed dozens of threads from women seeking advice for how to justify the decision for surgery to friends or family members. In Phoebe's case, the fear of a fall out with her family was not worth her changing the body that she was not happy with. In other words, even when women made plans over their own bodies, they were sometimes derailed by unsupportive others or the risk of negative social consequences.

Once women committed to surgery, they prepared themselves and others for the embodied change in their appearance. In order to minimize the risk of a negative reaction to her surgery, Danika slowly filled her bras with socks at work, adding an extra sock each week in order to desensitize her office co-workers to her impending change. Others emotionally prepared for the risks of surgery. This included attempting to reassure apprehensive family members or friends who were not convinced that they had done their research, or were making a rash decision. Sarah went as far as taking her unsupportive mother to meet the surgeon, leveraging his social authority in alleviating her concerns. These examples and others support that preparing others is an integral part of going through with the surgery.

Finally, women reformulated some practices in order to manage the differing opinions between themselves and their support networks. Women often explained that they had parents or romantic partners who did not want them "going too big" or selecting implants that were too large. They feared that they would "show off" their new bodies too much or that their revised appearance would "change" them. For some, informants revised their plans, opting for smaller sized breast implants, to accommodate their partner's desire. This accommodation did not always work well, such as in the case of Olivia regretting her decision to concede to her husband's wishes over her own body. Shortly after their divorce, Olivia started looking into larger implants that were more in line with her ideal appearance. Thus, social tensions play out on the very bodies of these young women.

Prior research exploring body modification theorizes that consumers match their external appearance with an ideal self (Askegaard et al. 2002; Schouten 1991). This study considers the role of important social others in the construction and embodiment of an ideal body. The primary contribution of this research is highlighting that even though the decision to modify may be individualized, body projects can be more fully conceptualized as relational and contested pursuits. We find that consumers navigate the tensions between their own desires and the opinions of others when embodying their desired appearance.

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## Eye Candy: Effects of Food Aesthetics on Eating-Related Judgments, Feelings, and Behavior

Chair: Linda Hagen, University of Southern California, USA

### Paper #1: Pretty Healthy Food: How Prettiness Amplifies Perceived Healthiness

Linda Hagen, University of Southern California, USA

### Paper #2: The Messy Satiation Effect: The Benefits of Eating Like a Pig

Kevin L. Sample, University of Georgia, USA

Kelly L. Haws, Vanderbilt University, USA

### Paper #3: That's Just Plain Creepy: Understanding Consumer Responses to Personalized Food Products That Resemble People

Freeman Wu, Vanderbilt University, USA

Adriana Samper, Arizona State University, USA

Andrea Morales, Arizona State University, USA

Gavan Fitzsimons, Duke University, USA

### Paper #4: The Self-Perception Connection: Why Consumers Devalue Unattractive Produce

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### SESSION OVERVIEW

In today's world, overeating and obesity ironically exist alongside undernutrition and food waste (Block et al. 2016; Mayer 1990; Zlatevska, Dubelaar, and Holden 2014). While increasingly complex nutrition information and unregulated health-claims have been widely implicated as potential culprits of these contradictory outcomes (Kozup, Creyer, and Burton 2003; Roe, Levy, and Derby 1999), little research has examined how the visual aesthetics of food can influence choice, consumption, and waste, which is surprising, given that visual presentation of food is often the most obvious and immediate information that consumers receive.

In this session, four research teams examine how various manifestations of aesthetics produce sensory, cognitive, and affective reactions that can influence food choice and consumption. Each paper touches on a different underlying process, but all four seek to address an overarching question: How can marketers best leverage the aesthetic presentation of food to promote healthier and more sustainable purchase and consumption behaviors?

The first two papers focus on how food aesthetics influence evaluations inherently related to the food in question: the food's perceived healthiness and the consumer's satiation. First, Hagen concentrates on food styling and shows that pretty (vs. less pretty) food presentation leads consumers to judge food as healthier across various aspects of healthiness (e.g., nutrient and calorie content). She demonstrates that this effect is not driven by a halo effect, judgment polarization, or motivated reasoning, but rather by people paradoxically perceiving prettier food as more natural. Next, Sample and Haws change gears and examine changes in visual aesthetics of food as a result of consumption, showing that eating in a messy (vs. clean) manner can simultaneously increase satiation and decrease guilt from wasting food. They find that both of these outcomes can be attributed to messy eating rendering the food less appetizing.

The next two papers move on to explorations of how food aesthetics impact reactions reaching beyond the food itself: feelings of wrongness associated with the act of consumption and consumers' self-perception. Wu, Samper, Morales, and Fitzsimons examine the

practice of customizing food products with lifelike images of people and reveal that, although popular, personalization involving a higher (vs. lower) resemblance to the depicted individual can actually reduce food consumption. They find that this reluctance to consume is driven by superstitious feelings that it is wrong to destroy someone's likeness. Finally, Grewal, Hmurovic, Lambertson, and Reczek investigate reasons for consumers' rejection of ugly produce and show that choosing ugly (vs. pretty) food can undermine people's positive self-perception. Consequently, the authors discover that interventions that protect would-be customers' self-esteem boost their willingness to choose and pay for ugly produce.

Together, the four papers shine a light on the topic of food aesthetics—a subject that is not only of substantive interest given the pressing societal issues surrounding obesity and food waste, but also provides theoretical insight into the various processes involved in “eating with our eyes first.” We believe this session will appeal to a broad audience, including researchers interested in aesthetics, affect, food-related lay beliefs, health, and sustainability.

### Pretty Healthy Food: How Prettiness Amplifies Perceived Healthiness

#### EXTENDED ABSTRACT

Consumers view about 4,010 food and 2,840 restaurant advertisements per year (Statista 2016). In these ads, they continuously see foods that were extensively styled to look pretty, in order to appear appetizing and plentiful. But might consumers also perceive prettier foods as *healthier*? Person perception research shows that prettier people are judged more positively on virtually all dimensions (Feingold 1992). Aesthetics research in consumer psychology indicates prettier products, too, are often evaluated more favorably—for example, they seem more user-friendly (Tractinsky et al. 2000), signal professionalism (Townsend 2017), and suggest high production effort (Wu et al. 2017). Surprisingly, no research has examined whether and how prettiness of food impacts a key food judgment: perceived healthiness. Seven studies show that prettier food is judged as healthier and compare possible underlying processes.

First, prettiness may elicit a generalized halo effect. Beauty elicits positive affect (Winkielman and Cacioppo 2001), and initial positive affective reactions often spill over into judgments of specific attributes, even when those are unrelated to the attribute inducing the initial reaction (Thorndike 1920). Thus, prettier versions of food may, indiscriminately, be judged more positively on all attributes—including healthiness. Second, prettiness may polarize healthiness judgments. Prettier targets are usually more prototypical (Veryzer and Hutchinson 1998), and prototypical exemplars are judged higher on category-defining attributes (Osherson et al. 1990). Thus, prettier versions of healthy foods may be judged as healthier, but prettier versions of unhealthy foods as unhealthier. Third, prettiness may induce specific inferences. Consumers use many (often incorrect) lay theories about attribute correlation (Bruner and Tagiuri 1954), e.g., unhealthy=tasty (Raghunathan et al. 2006) and healthy=expensive (Haws et al. 2017). Thus, prettiness may signal something that, per people's lay theory, is a proxy for healthiness, and prettier versions of food may thus be judged as healthier.

A pilot (N = 803) used a 2(prettiness: pretty vs. ugly) × 8(food replicate) between-subjects stimulus sampling design to test the ba-

sic effect. Participants were asked to find and upload photos of either a pretty or an ugly version of various foods (sandwiches, pizza, salad, omelette), and then rated the food's "perceived healthiness" (healthy, nutritious, good for me, fatty<sup>R</sup>, and high calorie<sup>R</sup>; = .89). People judged the food as healthier when it was pretty than when it was ugly ( $p < .001$ ), supporting the idea that people see prettier food as healthier, but contradicting the polarization account, as both unhealthy and healthy items were rated as healthier.

Studies 1A-1B used single-factor (prettiness: pretty vs. not pretty) designs with more moderate stimuli and held constant photographic quality, food content, and price to show the effect in a controlled manner. In study 1A ( $N = 205$ ), participants evaluated fully controlled experimenter-designed stimuli. They saw the same almond butter & banana (AB&B) toast that was either pretty or not pretty, but equal in terms of perceived amount, tastiness, and price. They rated "perceived healthiness" and gave a numerical calorie estimate. People judged the AB&B toast as healthier ( $p < .001$ ) and estimated it contained fewer calories ( $p = .003$ ) when it was pretty than when it was not pretty. In study 1B ( $N = 154$ ), participants evaluated ecologically valid food stimuli from an "ad-vs.-real" food reportage. They saw the same, equally priced, cheeseburger that was either pretty or not pretty. They provided the same judgments as in study 1A (except for the calorie estimate), and also rated "perceived tastiness" and "perceived amount," because the tasty=unhealthy intuition (Ragunathan et al. 2006) and large portion size may work against the predicted effect. Results fully replicated study 1A, even controlling for the prettier food looking tastier and larger ( $ps \leq .043$ ). Evidently, prettier food is judged as healthier, independent of tastiness, amount, and price.

Study 2 ( $N = 200$ ) used a single-factor (target food prettiness: pretty vs. not pretty) design to test if prettiness-induced healthiness perceptions sway people's choices. Participants had to identify which of two foods contained fewer calories, and correct responses were incentivized via a bonus doubling their pay. They saw an avocado toast (control) plus an almond butter toast that was either pretty or not pretty. People were more likely to (incorrectly) choose the almond butter toast as the lower calorie option when it was pretty than when it was not pretty ( $\chi^2 = 7.87, p = .005$ ). A replication using sandwiches and an unhealthy choice task reproduced the effect.

Studies 3A-3B examined the remaining process accounts. First, per the logic of the halo effect, people with a stronger initial positive affective reaction towards prettiness should exhibit a stronger effect. Study 3A ( $N = 199$ ) tested if the effect is enhanced for individuals highly attracted to beautiful aesthetics and attentive to beauty. People high in "Centrality of Visual Product Aesthetics" (Bloch et al. 2003) did *not* exhibit a stronger, but rather a weaker, pretty=healthy effect for the AB&B toast, contradicting the halo account. Next, per the logic of lay theory-based inferences, having more information should weaken the effect. Study 3B ( $N = 604$ ) tested if the effect is reduced when people have health-related information that reduces the need for guesswork. People exhibited the pretty=healthy effect for the AB&B toast only when given no cue ( $p = .002$ ) or an ambiguous cue ( $p = .014$ ), but not when given a health-related cue ( $p = .275$ ), supporting the specific inferences account. Replications using the ecologically valid cheeseburger stimuli fully reproduced all effects.

Study 4 ( $N = 202$ ) examined the nature of the inferences in-depth. Participants evaluated lasagna that was either very pretty or moderately pretty. They rated "perceived healthiness," and, as viable mediators, "perceived sophistication," "perceived care," and "perceived naturalness." The effect of food prettiness on perceived healthiness was mediated by greater perceived naturalness ( $B = .112$ ;

95% CI: .035, .235), but not by perceived care, sophistication, or tastiness.

This research reveals that pretty food presentation biases healthiness judgments, and also shows that this effect is driven by a perception that prettier food is more natural, from which consumers infer healthiness. Implications for consumer welfare and food branding are discussed.

## The Messy Satiation Effect: The Benefits of Eating Like a Pig

### EXTENDED ABSTRACT

Consumers frequently underestimate satiation, leading to detrimental decisions, mindless eating, and overconsumption (Wansink 2007). Though poor at estimating perceived and actual satiation, consumers are quite adept at appraising visual aesthetics. Even though attractive foods and food presentation strongly enhance likelihood to purchase and consumption (Michel et al. 2015; Zellner et al. 2014), the aesthetics of food presentation can only be controlled before the point of initial consumer acquisition. So, how might changes in attractiveness impact consumption over time, and could food aesthetics help curb overconsumption instead of fanning the flame of obesity?

Over the course of consumption, an initially visually attractive food can become messy and therefore less attractive. We propose that this decline in attractiveness will make a once appetizing food no longer appetizing and this process will lead to an increase in satiation. Satiation perceptions are malleable and strongly influenced by non-physiological factors (Redden 2014); for instance, they are highly susceptible to the available visual cues (Chandon and Ordabayeva 2009; Van Ittersum and Wansink 2011; Wansink, Painter, and North 2005). As such, to the extent that positive evaluations and consumption intentions for an initially attractive food diminish as it loses its attractiveness, satiation should be increased. Thus, we suggest that decreasing the attractiveness of food during consumption by way of eating in a messy (vs. clean) manner may stifle overconsumption while also diminishing guilt associated with not finishing one's food. We test for this "messy satiation effect" across three studies, while exploring the underlying process and the resultant guilt.

In study 1, participants ( $N = 102$ ) were presented with an image of one serving of lasagna and asked to imagine eating. Participants were then randomly assigned either a messy or clean image of the partially eaten lasagna and asked two satiation items (likelihood of eating more of the food, likelihood of finishing the food;  $\alpha = .91$ ). We next assessed how appetizing the food looked and general liking for lasagna. An ANCOVA with our satiation measure revealed greater perceived satiation in the messy condition ( $M_{\text{messy}} = 6.28$  vs.  $M_{\text{clean}} = 6.94$ ;  $p < .05$ ). A mediation model with cleanliness (IV), satiation (DV), and how appetizing the food looked (mediator) indicated full mediation ( $\beta = -.5576$ , 99% CI: -1.2564, -.1017).

In study 2 ( $N = 304$ ), we establish the robustness of the messy satiation effect using a different food item and counterbalancing the order of the satiation and appetizing measures. We also introduce a control condition without a picture of the food in question. We hypothesized that consumers typically plan on cleaning their plate (Collins 2006; Schwartz et al. 2012), and without a picture, satiation should be similar to that in the clean picture condition, whereas those in messy picture condition should show increased satiation. Participants were prompted to imagine eating cake and randomly assigned a messy, a clean, or no image of the partially eaten cake. There was a significant main effect of picture type, driven by increased satiation in the messy condition ( $M_{\text{messy}} = 5.19$ ;  $M_{\text{clean}} = 6.25$ ;  $M_{\text{control}} = 6.03$ ;  $p$

< .01), with significantly greater satiation for messy than clean ( $p = .001$ ) and messy than control ( $p = .01$ ), but equal satiation for clean and control ( $p = .51$ ). This suggests that without a picture, consumers act as if the remaining food is still visually pleasing and will continue to consume in line with our theorizing about cleaning one's plate. There was no main effect of measure order ( $p = .64$ ), so we collapsed results for mediation analysis and again see full mediation from how appetizing the food is ( $\beta = -.2034$ , 99% CI:  $-.4513$ ,  $-.0258$ ).

In study 3 ( $N = 203$ ) we look to another consequence of the messy-satiation effect: guilt relief. Overeating can produce guilt, but so can discarding food. Since consumers engage in rejection behaviors with visual incongruity (Patrick and Hagtvedt 2011) and place less value on distorted products (Trudel and Argo 2013), a consumer should be able to reject (i.e., waste) messy-looking food with significantly less guilt than cleanly eaten food, and to continue to consume (i.e., overeat) clean food with significantly less guilt than messy-looking food. We tested this using a 2(messy vs. clean) $\times$ 2(overeating vs. wasting food) design where participants were shown a slice of cheesecake, told they were close to being full, and to imagine that they began to eat the cake. They were then randomly assigned a messy or clean half-eaten piece of cheesecake and told that they were full and either finished up the cake anyway or had the waiter remove their plate. They were then asked about the guilt associated with their assigned behavior. An ANOVA reveals a significant interaction between visual state of the cake and action of overeating or wasting food ( $p < .05$ ). Those in the clean condition reported significantly less guilt when overeating than when wasting food ( $M_{\text{CleanOvereat}} = 4.42$  vs.  $M_{\text{CleanWaste}} = 5.87$ ;  $p < .01$ ), whereas those in the messy condition indicated the same amount of guilt regardless ( $M_{\text{MessyOvereat}} = 4.81$  vs.  $M_{\text{MessyWaste}} = 4.73$ ;  $p = .88$ ). These results indicate that stopping eating when eating cleanly is possibly a harder thing to do, as consumers are apt to avoid the negative consequences of wasting food. Conversely, eating in a messy manner should not only provide a benefit of increased satiation but less guilt as well.

Together, our studies demonstrate that various forms of changing visual aesthetics during food consumption impacts rates of satiation. Furthermore, a consumer who may not be able to resist ordering a hedonic food can actually "eat like a pig" in an effort to increase satiation, stem overconsumption, and alleviate the guilt from not "cleaning one's plate."

### That's Just Plain Creepy: Understanding Consumer Responses to Personalized Food Products That Resemble People

#### EXTENDED ABSTRACT

From cell phone cases to party favors, consumers are drawn to personalized products (Moreau et al. 2011), a trend that continues to manifest itself across an ever-increasing variety of goods, including food. For instance, consumers now have the option to decorate birthday cakes or even M&M's with images of friends, family, or celebrities. Despite their growing popularity, the downstream effects of such personalization on post-purchase consequences are relatively unknown. We propose that this kind of personalization can actually reduce food consumption.

We draw from the sympathetic laws of magic (Frazer 1890) to examine the impact of food personalization on consumption. Specifically, one such law, the law of similarity, holds that things that resemble one another share essential properties, such that actions taken on an object affect similar-looking objects (Rozin et al. 1986). Given that consumption of personalized food products entails destroying the image of the depicted individual, we contend that eating such

food products would be akin to marring the same individual, an aversive experience that ultimately reduces consumption. Importantly, such effects should only hold for realistic-looking images, but not a cartoon image or the name of the individual. Our work provides new insights on how the sympathetic laws of magic operate in consumption contexts. While prior consumer research on magical thinking has predominantly focused on the law of contagion (e.g., Kramer and Block 2014), we elucidate the influence that the law of similarity can also have on consumption. More broadly, given the mismatch between initial consumer interest and actual consumption, we add to the emerging body of research that explores when and how the drivers of predicted and experienced utility diverge (Wilson and Gilbert 2005). We test our predictions across four studies involving hypothetical and actual consumption.

Study 1 ( $N = 339$ ), which was hypothetical in nature, provides initial evidence for this phenomenon in a 2(portrayal of individual: face vs. name; between) $\times$ 3(M&M type: individual, word, letter; within) design. Participants imagined encountering, at their cousin's graduation party, a bowl of personalized M&M's that depicted their cousin's face (vs. name), "Congrats!", and "M", and were asked to indicate their likelihood of eating each type of M&M. Results revealed a significant portrayal  $\times$  type interaction ( $p < .0001$ ). While participants were less likely to eat M&M's depicting their cousin's face (vs. name) ( $M_{\text{face}} = 5.06$  vs.  $M_{\text{name}} = 5.45$ ;  $p = .0437$ ), the likelihood of eating the other two types of M&M's did not differ by condition ( $p > .22$ ).

In study 2 ( $N = 217$ ), a single-factor 3(portrayal of individual: face vs. name vs. cartoon) design, we generalize our findings to cakes depicting photographs of people, and show that people displayed lower willingness to eat a birthday cake depicting their cousin's face ( $M_{\text{face}} = 4.50$ ), compared to a cake depicting their cousin's name ( $M_{\text{name}} = 5.35$ ;  $p = .0021$ ) or a cartoon illustration of their cousin ( $M_{\text{cartoon}} = 5.21$ ;  $p = .0090$ ). The latter two conditions did not differ from one another ( $p > .61$ ). Further, participants were asked to indicate how wrong it felt to be eating the birthday cake, which underlies the desire to consume the cake depicting the face (vs. name;  $b = .43$ , 95% CI:  $.20$ ,  $.71$ ; vs. cartoon;  $b = .33$ , 95% CI:  $.10$ ,  $.60$ ) (Hayes 2013), thereby providing initial evidence for the underlying process. In other words, we demonstrate that the reluctance to consume was attenuated with a cartoon image of the cousin, which bore lower resemblance to the individual, and hence did not elicit as much negative affect.

Our last two studies replicate study 1's findings with actual consumption. In study 3 ( $N = 167$ ), a single-factor (portrayal of individual: face vs. name) design, undergraduate students were given M&M's featuring the business school dean's face (vs. name) to eat while they watched a video. Conceptually replicating study 1, students ate fewer M&M's that featured the dean's face ( $M_{\text{face}} = 6.39$  vs.  $M_{\text{name}} = 8.34$ ;  $p = .0355$ ), an effect that was driven by feelings of wrongness ( $b = -.43$ , 95% CI:  $-1.05$ ,  $-.02$ ).

Finally, in study 4 ( $N = 120$ ), using a similar procedure as study 3, we find that consumers ate fewer face M&M's, and that inclusion of the face design had negative spillover effects on actual consumption of other M&M's presented alongside the face (vs. name) M&M's. Specifically, using a 2(portrayal of individual: face vs. name; between) $\times$ 2(M&M type: individual vs. school; within) design, students were given M&M's featuring the dean's face (vs. name) to eat, along with M&M's featuring the business school's name. Results revealed that, consistent with study 3, students ate fewer M&M's that featured the dean's face ( $M_{\text{face}} = 3.89$  vs.  $M_{\text{name}} = 5.29$ ;  $p = .0282$ ). However, we also discovered a negative spillover effect, such that people who were given face M&M's alongside the school M&M's



consumed fewer overall M&M's than those who were given name M&M's ( $p = .0501$ ). Thus, for actual consumption, the discomfort of the mere idea of consuming a face appears to reduce overall consumption of related foods.

Taken together, the current research illustrates how the law of similarity can impact consumption in the context of personalized food products. Given the law holds that the image equals the object, and that actions taken on an object affect similar objects, we find that individuals avoid consuming personalized food products that bear a close resemblance to the depicted individual, as doing so elicits feelings of wrongness.

### The Self-Perception Connection: Why Consumers Devalue Unattractive Produce

#### EXTENDED ABSTRACT

Consumers reject unattractive produce, resulting in unsold product that generates billions of pounds of waste (Buzby, Wells, and Hyman 2014). To address this problem, some retailers have started selling unattractive produce, promoting this “ugly food” primarily via two approaches: positively framing its atypical appearance and/or substantially reducing the selling price. It is questionable, however, whether these strategies will be effective or sustainable in the long-term.

We suggest that there are better and more cost-effective ways to market unattractive produce. We ground our arguments in a social-cognitive understanding of *why* consumers reject “ugly” produce. Drawing on self-perception theory (Bem 1972) and self-signaling theory (Bodner and Prelec 2003), we demonstrate that consumers devalue unattractive produce because of *altered self-perceptions*: merely imagining the consumption of unattractive produce acts as a self-diagnostic signal that negatively impacts how consumers view themselves, consequently lowering their willingness to pay (WTP) for the unattractive produce relative to equally safe, but more attractive, alternatives. In line with this theorizing, across three studies and one field experiment, we show that this negative impact can be offset by altering the diagnostic value of the self-signal or bolstering consumers' self-perceptions by boosting self-esteem.

Study 1 tested our proposed self-perceptions process. Participants were randomly assigned in a 2(produce attractiveness: unattractive vs. attractive) $\times$ 2(produce type: strawberry vs. potato) between-subjects design. Participants imagined shopping and viewing an attractive or unattractive produce contained in a package. Participants indicated their WTP and answered a sixteen-item self-perceptions index ( $\alpha = .90$ ) after a filler task, indicating how they perceived themselves after imagining consuming the produce. We found that there was no difference across the two produce types and that produce type did not interact with our attractiveness manipulation, so we included produce type as a covariate. We found a main effect of attractiveness ( $p < .001$ ) where participants' WTP was significantly higher for attractive than unattractive produce. To test our proposed self-perception process, we conducted a mediation analysis estimating the indirect effect of produce attractiveness on WTP, with participants' self-perceptions as the mediator and produce type as a covariate. Results revealed that the indirect effect was statistically significant (95% CI: .07, .21).

In study 2, we tested our first intervention approach: altering the diagnostic value of the produce's self-signal. Participants were randomly assigned in a 2(produce attractiveness: unattractive vs. attractive) $\times$ 2(diagnostic value: diagnostic vs. non-diagnostic) between-subjects design. Taking part in two seemingly unrelated studies, participants completed personality items and a product choice task,

receiving feedback indicating that they had selected products that were either self-diagnostic or not. Then participants engaged in the same strawberry task as in study 1. As expected, there was a significant interaction on WTP ( $p = .048$ ). The simple effect of produce attractiveness on WTP was significant when participants believed their choices were self-diagnostic ( $p < .001$ ), such that those who imagined consuming the attractive produce indicated greater WTP than those who imagined consuming the unattractive produce. The simple effect was not significant, however, when participants believed their choices were not self-diagnostic ( $p = .244$ ). We additionally ran a moderated mediation analysis, with produce attractiveness as the predictor, self-perceptions as the mediator, and diagnostic value of choice as the moderator. We found a significant index of moderated mediation (95% CI: .09, 2.63) such that, when participants believed their behavior was diagnostic, self-perceptions mediated the effect on WTP (95% CI: -2.35, -1.00). Conversely, when participants believed their behavior was not self-diagnostic, the indirect effect became non-significant (95% CI: -.99, .26).

In studies 3-4, we tested our second intervention approach: bolstering consumers' self-perceptions by boosting self-esteem. In Study 3, participants were randomly assigned in a 2(produce attractiveness: unattractive vs. attractive) $\times$ 2(self-esteem: high vs. control) between-subjects design. After earning \$2 for completing an unrelated study, participants completed a self-esteem writing task. Participants then read about a produce box delivery service and saw an image of an open box containing an assortment of attractive or unattractive produce. Participants indicated their real WTP for a similar produce box, using an adaption of the BDM price elicitation method (Becker, DeGroot, and Marschak 1964), and answered our self-perceptions scale. Consistent with our predictions, there was a significant interaction on WTP ( $p = .039$ ), with participants indicating significantly lower WTP for unattractive (vs. attractive) produce when self-esteem was not boosted ( $p = .008$ ), but indifference when self-esteem was boosted ( $p = .979$ ). In fact, enhancing self-esteem effectively increased people's WTP for the unattractive produce by 22.4%. Subsequent moderated mediation analysis, with produce attractiveness as the predictor, self-perceptions as the mediator, and the self-esteem intervention as the moderator, was significant (95% CI: .007, .10). In the absence of the self-esteem intervention, self-perceptions mediated the relationship between produce attractiveness and WTP (95% CI: -.10, -.01). When consumer self-esteem was externally boosted, however, the indirect effect became non-significant (95% CI: -.04, .02), suggesting that momentarily enhancing self-esteem disrupts the negative influence of produce attractiveness on self-perceptions and, as a result, increases participants' WTP for unattractive to produce to be equal that of attractive produce.

In Study 4, conducted in a grocery store, we manipulated in-store advertising messages (self-esteem appeal: high vs. control) posted above a display of unattractive and attractive apples and measured shoppers' subsequent produce choices (i.e., attractive or unattractive) and self-perceptions (using a shortened 5-item index;  $\alpha = .90$ ). We predicted that the in-store self-esteem boosting advertisement would bolster shoppers' positive self-perceptions to a greater degree than the control advertisement, thereby increasing shoppers' likelihood of choosing unattractive produce. Indeed, shoppers exposed to the positive self-esteem ad were significantly more likely to choose unattractive apples ( $p = .006$ ); and this self-esteem marketing intervention increased shoppers' choice share of unattractive apples by 93.3%. Moreover, mediation analysis supported our predicted process, showing a marginally significant indirect effect of self-perceptions (90% CI: .02, .43).



In sum, we demonstrate that consumers systematically devalue unattractive produce because it threatens their self-perceptions. By identifying this novel process mechanism, we derived two methods for effectively offsetting this devaluation response: altering the diagnostic value of the self-signal and bolstering self-perceptions by boosting consumers' self-esteem.

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# This Session is Essential: Antecedents and Consequences of Product Essence

Chair: Noah VanBergen, University of Cincinnati, USA

## **Paper #1: Magical Anchors: Initial Focal Attention Drives the Direction and Content of Essence Transfer**

Thomas Kramer, University of California, Riverside, USA  
Wenxia Guo, Acadia University, Canada  
Zhilin Yang, City University of Hong Kong, China

## **Paper #2: Inside Out: Product Essence is Perceived to be Concentrated in the Center of a Group of Products**

Kunter Gunasti, Washington State University, USA  
Noah VanBergen, University of Cincinnati, USA  
Caglar Irmak, University of Miami, USA

## **Paper #3: System Justification and the Preference for Atavistic Products**

Minju Han, Yale University, USA  
George Newman, Yale University, USA

## **Paper #4: Too Much of a Good Thing? Consumer Response to Changes in Brand Essence**

Tarje Gaustad, Kristiania University College, USA  
Bendik Samuelsen, BI Norwegian Business School, Norway  
Luk Warlop, BI Norwegian Business School, Norway  
Gavan J. Fitzsimons, Duke University, USA

### **SESSION OVERVIEW**

Research on psychological essentialism suggests that consumers may perceive objects to possess an inherent underlying essence that determines the object's identity. While marketing researchers have begun to study how such perceptions impact aspects of consumer behavior (e.g., Morales and Fitzsimons 2007; Newman and Dhar 2014), several intriguing questions require further investigation. For example, what factors make the perception (or transfer) of product essence more likely? How does the salience of a given product's essence influence perceptions and evaluations? Under what circumstances do consumers value (or devalue) products and brands with a strong and salient essence?

These are questions around which this session is focused. Our four papers tackle a range of phenomena surrounding the topic of psychological essentialism, providing new insights into both the antecedents and consequences of essence perception. As we demonstrate, the questions investigated are important for many marketing stakeholders, from advertisers and retailers (see especially the first two papers) to brand managers and consumers (see especially the last two papers).

Kramer, Guo, and Yang open the session by questioning an implicit premise of extant research on essence transfer (i.e., contagion)—that essence transfer is unidirectional. These authors not only show that essence transfer is bidirectional, but they also identify the key determinant of the direction of essence transfer: initial attention allocation. Three studies demonstrate that objects to the left are attended to first and therefore transfer their essence to adjacent objects.

Gunasti, VanBergen, and Irmak study how the physical location of a given product that appears with other identical products (i.e., product replicates) influences perceptions of the target product. The authors propose that product essence is perceived to be concentrated at the center (vs. edge) of a group. Three studies support this proposition, showing that a product from the center (vs. edge) of a group is perceived to be more efficacious and possess greater product essence.

Han and Newman shift the session's focus from the determinants of essence perception to its downstream consequences. Across

four studies, these authors show that consumers are drawn to *atavistic* products (i.e., products reverting to the past) when the broader social system is threatened. Results reveal that this occurs because atavistic products are perceived to possess the essence of their product category, thereby offering stability under system threat.

Finally, Gaustad, Samuelsen, Warlop, and Fitzsimons show that more brand essence is not always better. Their studies show that augmenting (vs. dampening) brand essence can both strengthen and weaken brand identification: When brand connection is linked to an ideal (actual) self-identity, augmenting brand essence increases (decreases) the perceived similarity between the self and the brand, thus influencing brand evaluations.

Together, these studies advance the study of psychological essence in several ways, offering a cohesive set of findings relating to the perception, transfer, and valuation of product essence. Given the range of entities to which psychological essentialism applies and the diversity of its consequences, this session has implications for researchers interested in such topics as branding, spatial processing, advertising, retailing, and consumer-brand relationships.

## **Magical Anchors: Initial Focal Attention Drives the Direction and Content of Essence Transfer**

### **EXTENDED ABSTRACT**

Research has documented essence transfer between objects upon direct or indirect contact, consistent with magical thinking's law of contagion (e.g., Kramer and Block 2014; Morales and Fitzsimons 2007; Rozin, Millman, and Nemeroff 1986). Extant findings have mostly focused on the effect of contagion on a target option or person, and have thus implicitly assumed that essence transfer is one-directional; namely, from a designated source to the designated target, with both designations made by the researcher. For example, Morales and Fitzsimons (2007) found that evaluations of cookies (i.e., the target) are lowered when they come in contact with sanitary napkins (i.e., the source). However, while negative essence of the sanitary napkins demonstrably transferred to the cookies and thereby lowering their evaluations, might some positive essence of the cookies also have transferred to the sanitary napkins, thereby rendering the evaluations of them more favorable? Secondly, if contagion can indeed be bi-directional in nature, such that any option may serve both as the target and as the source of essence transfer, such that contagion may be more prevalent than heretofore demonstrated, then what determines its principal direction?

We propose that the direction of essence transfer, and thereby the content of contagion, depends on the option that receives initial attentional resources, which renders it the contagion source. Specifically, we predict that contagion spreads from left to right, consistent with the reading direction of English and with research showing that individuals attend first in their visual field to the location where the writing system starts (Chan and Bergen 2005). Hence, when two options are encountered simultaneously, the one in the left visual field left will draw consumers' initial attention and thereby determine the content of the essence transfer. Three studies tested our proposition.

In our first study, participants were randomly assigned to conditions in a 2 (source: higher-quality vs. lower-quality) X 2 (contact: touch vs. no-touch) between-subjects design, which also included two control conditions. In the higher-quality source conditions, Johnson's (national brand) was shown to the left of Mannings (private-la-

bel brand) baby oil, whereas in the lower-quality source conditions, Mannings was shown to the left of Johnson's. Furthermore, in the touch conditions the two brands were depicted to be in physical contact, whereas in the no-touch conditions they were separated by one inch of space. In the higher-quality (lower-quality) control condition, Johnson's (Mannings) baby oil was shown on its own. After exposure to the stimuli, participants evaluated the two brands or single brand (in the control).

Analysis showed that attitudes toward the target brand were more favorable when the higher-quality (vs. lower-quality) brand was depicted to the left of the target, receiving initial attention. More interestingly, quality level of the source impacted attitudes towards the target only when the brands were touching, consistent with a contagion-based explanation. Further, when the two brands were touching, attitudes towards the higher-quality brand were less favorable when it was the target (vs. source), consistent with our expectation that the lower-quality option negatively contaminates the higher-quality one when the former draws initial attentional resources. Yet, attitudes towards the lower-quality option were more favorable when it was the target (vs. source). Additionally, attitudes towards the higher-quality target were less favorable when it was (vs. was not) in contact with the lower-quality source, whereas attitudes towards the lower-quality target were marginally more favorable when it was (vs. was not) in touch with the higher-quality source.

Our next study sought to draw attention away from options participants conventionally attend to initially, and exposed them to two brands sequentially. We expected that the left-to-right contagion effect is attenuated or eliminated when reading direction and reveal direction are in conflict with each other. The study had two between-subject factors (anchor: higher-quality vs. lower-quality option; reveal direction: left-to-right vs. right-to-left). We developed four video clips, corresponding to the four conditions. After viewing the video clip, participants were asked to evaluate both brands. Analyses yielded a marginally-significant anchor X reveal order interaction. Specifically, we replicated the results from study 1 when the brands were revealed consistent with the reading direction of English; however, when the brands were revealed from right-to-left, attitudes towards the higher-quality option were significantly less favorable when it was the target versus the source, while attitudes towards the lower-quality option were more favorable when it was the target versus the source.

To examine the role of attentional resources, we tested in our last study if the effect is limited to participants motivated to devote cognitive resources to the task (Petty and Cacioppo 1986). We expected that participants high (but not those low) in attention would rate a regular soup to be healthier when it was in contact with a healthy soup that touches (vs. does not touch) it. We again developed four video clips, in which the two brands were revealed sequentially from left to right, revealing either the healthy soup or the control soup before the target soup, with the two soups either in (or not in) physical contact. The healthy soup was always depicted to the left of the regular soup. After exposure to the soups, participants rated how healthy the target soup was and the amount of attention they paid to the stimuli. Analyses revealed a significant 3-way interaction among the factors: when the soups were touching, the regular soup was rated healthier as participants paid increasingly more attention. Further, reveal direction predicted healthiness ratings task only among those devoting high attention resources.

Thus, our studies confirm that essence transfer can indeed be bi-directional, and that the direction (and thereby content) of essence transfer depends on which option receives initial attentional resources. We thereby not only extend the scope of contagion re-

search, but also provide advice for retailers who may strategically direct shoppers through stores in a direction that renders particular options to be the source of essence transfer, such as national brands, thereby increasing evaluations of private-label store brand they are in contact with.

### **Inside Out: Product Essence is Perceived to be Concentrated in the Center of a Group of Products**

#### **EXTENDED ABSTRACT**

Research on psychological essentialism (Medin and Ortony 1989) suggests that products are perceived to possess an inherent defining essence (Mishra 2009; Morales and Fitzsimons 2007; Newman and Dhar 2014). Our research focuses on the perceived location of this essence when consumers are exposed to multiple units of the same product arranged adjacently (i.e., as a group of product replicates). For example, marketers present multiple facings in store aisles, across rows of vending machines, and on refrigerator shelves. While marketing researchers have studied how the organization (Pizzi and Scarpi 2016) and relative quantity of identical products (Parker and Lehman 2011) in such displays impacts consumer behavior, we know less about how the physical location of a given product impacts product perceptions or evaluations. Do consumers viewing an array of product replicates perceive different levels of essence at different areas of the display? If so, how does the location of a particular product within a set of product replicates (i.e., towards the center vs. edge of the group) impact product perceptions?

We propose that when consumers consider such arrays, they perceive product essence according to a gravitational density metaphor. More specifically, we propose that because product replicates all possess the same essence, when consumers view such replicates as a group, they perceive that the essence of these products is concentrated at the center (vs. edges) of the group. An implication of our conceptualization is that a product taken from the center (vs. edge) of an array will be perceived more favorably in terms of the products' defining characteristic, i.e., the essence.

It has been shown that when presented with a horizontal array of several (different) brands, consumers are most likely to choose the brand in the middle (Atalay, Bodur, and Rasolofoarison 2012; Greenacre et al. 2016; Valenzuela and Raghuram 2009). Two explanations offered for this effect are that the middle brand receives the most visual attention (Atalay et al. 2012) and that consumers have lay beliefs suggesting that retailers put the most popular options in the middle (Valenzuela, Raghuram, and Mitakakis 2013). The studies in this domain have thus focused on preference for different brands due to visual and perceptual cues. We extend this literature by investigating how the location of a particular product in a horizontal array of *identical* products from the same brand impacts the perceptions of individual products in the array. Our work thus builds on previous research in two important ways: First, lay beliefs about popularity no longer apply to a situation in which identical units of a single brand are considered. Second, by focusing on perceptions of a specific product unit, rather than brand-wide perceptions or choice, we develop a novel conceptualization describing how consumers perceive product essence in arrays of product replicates.

We test our propositions across three studies and find consistent support. In study 1, 147 undergraduate business students participated in a single-factor study with three conditions involving purchasing Tylenol. We showed participants a (virtual) shelf with five side-by-side facings of Tylenol, and asked them to imagine taking the leftmost vs. center vs. rightmost package. As the essence of Tylenol is its ability to relieve pain, our DV comprised two nine-point ques-



tions about Tylenol's efficacy ( $r=.77$ ). A one-way ANOVA on this composite revealed a significant effect of product location ( $p=.03$ ): The center product ( $M=7.07$ ) was perceived as more effective than both the leftmost ( $M=6.21$ ;  $p=.01$ ) and rightmost product ( $M=6.43$ ,  $p=.05$ ).

Study 2 built on study 1 by allowing participants to consume the product taken from the left vs. center vs. right of a display. We informed 120 students that they would be participating in a taste test, and they therefore needed to cleanse their palates with saltine crackers. Participants were exposed to five packages of saltine crackers and instructed to take and eat a package from the center vs. edge (left vs. right side was counterbalanced). Next, they rated the effectiveness of the consumed crackers at cleansing their palates on a 7-point agree-disagree scale. An independent-samples  $t$ -test revealed that the center crackers ( $M=3.00$ ) were rated significantly more effective than crackers from either edge ( $M=2.18$ ,  $p<.01$ ). As we described saltine crackers as "an ideal product to cleanse your palate" at the study's outset, these results support our proposition that products from the center (vs. edges) are perceived to possess more product essence.

Our final study built on the prior studies in three critical ways: First, we allowed participants to freely choose a product themselves, instead of asking their perceptions of a product we manipulated them to choose. Second, we manipulated whether participants had a goal to choose a product high vs. low in essence. Third, we measured to what extent the chosen option was perceived to possess the products' essence, aiming to show that essence perceptions mediate choice.

Participants in study 3 were 150 Mturk workers who were asked to imagine buying a brownie for a friend. We manipulated whether their friend wanted vs. did not want to indulge, therefore activating a goal to choose a brownie with high vs. low essence. We showed participants an array of five brownies and asked which they would choose. Afterwards, we asked participants to indicate their agreement with two statements about the chosen piece exemplifying the essence of indulgence (adapted from Newman and Dhar 2014). Results showed that activating a goal to choose the most (least) indulgent brownie led to significantly greater (lower) likelihood of choosing the brownie in the middle ( $p<.01$ ). Further, choice was mediated by perceptions that the center (edge) pieces had greater (less) indulgent essence than other pieces.

Together, these studies show that the horizontal location of even identical products impacts product perceptions. Specifically, consumers perceive that products towards the center of a display have greater product essence than those towards the edge. These results thus both make theoretical contributions (by showing that a gravitational density metaphor describes how consumers perceive the essence of multiple identical products) and have practical implications for retailing and other contexts in which multiple product replicates are displayed together.

## System Justification and the Preference for Atavistic Products

### EXTENDED ABSTRACT

Consumers do not always prefer the most technologically advanced products. In cities throughout the world, one can find shops selling vinyl records, people riding single-gear bicycles and cafes serving pour-over coffee drinks. The popularity of these relatively antiquated products and services is puzzling given the existence of functionally superior alternatives, which are often cheaper. The present research interprets this phenomenon as an instantiation of atavism and seeks to explain it through the lens of system justification theory (Jost and Banaji, 1994; Kay and Zanna, 2009). Atavism is

defined as the "recurrence of, or reversion to a past style, manner, outlook, approach, or activity" (Merriam-Webster, 2016). In its everyday use, atavism often refers to the preference for "retro" goods, services, methods of production, and ways of life. Importantly, the current research proposes that atavism can be distinguished from nostalgia, which typically refers to a preference for products from one's own past (Holbrook and Schindler, 1991).

The current studies investigate how preferences for atavistic products are related to more fundamental psychological motivations to view one's broader social system as just, fair, and good (i.e., system justification theory; Jost and Banaji 1994). Several recent studies have identified an import causal link between system justifying ideologies and a preference toward "essential" explanations. For example, recent experiments have shown that threats to the social system enhance the belief that various social phenomena are due to inherent, essential causes (Brescoll, Uhlmann, and Newman 2013) as well as preferences for products that provide a source of stability, such as national brand products (Cutright, Wu, Banfield, Kay, and Fitzsimons 2011). Drawing on this work, we propose that atavistic products may serve to satisfy system justifying motives because those products are seen as reflecting the core, or *essence* of the particular product category and therefore, consuming them provides a source of stability when the broader social system is threatened.

Study 1 tested the relationship between atavism and system confidence. Specifically, this study examined whether lower system confidence is significantly correlated with the preference for atavistic products. In constructing the stimuli for Study 1, we were mindful of two potential confounds related to inferences about antiques. Therefore, we constructed pairs of actual products (e.g., the choice of a record player versus an mp3 player) that were the same price and were both new. A pretest confirmed that one product was rated as more functional, while the other was rated as more "essential" to the product category.

Participants indicated which product they preferred for eight product pairs. Participants then indicated their perception of system stability-instability using an established eight-item System Confidence Scale (Kay and Jost, 2003). Participants also completed two additional scales. One was a twelve-item Self-Concept Clarity Scale (Campbell et al., 1996), which assesses the extent to which one's self-beliefs are consistent and stable. A second was the Meaning in Life Questionnaire (MLQ; Steger and Frazier, 2005). Consistent with our hypothesis, we observed a significant negative correlation between atavism and system confidence,  $r = -0.15$ ,  $p = 0.05$ . That is, participants who were lower in system confidence showed a greater preference for the atavistic products (over the functionally superior products). However, we did not observe significant correlations between atavism and the other constructs.

Study 2 provided converging evidence for the unique relationship between system-justifying motives and atavism by testing causality. Further, this study provided a source of discriminant validity among consequences by examining whether system-justifying motives also affect established measures of nostalgia. Using an established manipulation of system-justifying motives, participants were randomly assigned to either the system threat condition or the system affirmation condition. (Jost et al., 2005). Then, participants completed atavism proneness (adapted from Holbrook, 1993) and nostalgia proneness scales (adapted from Marchegiani and Phau, 2013). As hypothesized, manipulations of system threat (vs. system affirmation) selectively enhanced atavistic beliefs but not nostalgic beliefs. These results support that system justifying motives is an antecedent of atavism, and theoretically differentiate the concept of atavism, a

general longing and preference for antiquated products, from nostalgia, a general longing for objects associated with one's own past.

Study 3 assessed the role of essentialism in enhancing preference for atavistic products. First, participants read a short paragraph either endorsing or refuting the idea of a product category *essence*. Then, participants indicated their atavistic preferences using the same measure as Study 1. As predicted, participants provided higher valuation of atavistic products when the notion of a product category essence was endorsed than when the same idea was refuted.

Although Study 2 demonstrated a unique effect of manipulating system threat on atavistic proneness index, it did not provide direct evidence that manipulating system threat increases atavistic preferences. In Study 4 participants were randomly assigned to either a system threat or system affirmation condition (cf. Study 2). Then, participants rated their preference for atavistic products (similar to the ones used in Study 1). Replicating previous study results, merely exposing participants to a news article that activated system justifying motives significantly enhanced participant's preference for atavistic products over functionally superior alternatives.

Atavism is a fascinating consumer phenomenon that has been relatively unexplored in the literature. This paper identifies the psychological mechanisms underlying preferences toward atavistic products. In addition to highlighting one of the psychological motives underlying atavism, the current studies also help illuminate the connections between atavism, system justification and psychological essentialism. Consistent with previous research showing that people endorse essentialist explanations in cases of system threat (Brescoll, Uhlmann, Newman, 2013), we show that people show a preference for atavistic products when their broader social system is threatened.

### Too Much of a Good Thing? Consumer Response to Changes in Brand Essence

#### EXTENDED ABSTRACT

The value of consumer-brand bonding is well documented (MacInnis, Park, & Priester, 2009). The current research investigated a potential disadvantage. We investigated consumer responses to modifications in the magnitude of associations central to the brand – changes that either dampen or augment brand essence. For example, suppose that the association most strongly linked to Mountain Dew is “exciting.” Both managerial actions that make Mountain Dew appear less exciting (dampen), and actions that make the brand appear even more exciting (augment), represent a change in brand essence.

We have proposed that consumer responses to such changes depend on the degree of self-brand connection (SBC) (Escalas & Bettman, 2003). We expected high degree SBC consumers to respond negatively to changes that *dampen* brand essence, as such changes reduce the brand's ability to express self-identity. However, we expected that responses to changes that *augment* brand essence depend not only on the degree of SBC, but also on the part of the consumer's self to which that brand connects. If the brand is connected to the consumer's ideal self, then augmentation of that brand's essence increases the brand's ability to signal an ideal identity (i.e., it increases the brand's efficacy as an instrument for self-enhancement). Conversely, if the brand is connected to the consumer's actual self, then such changes can reduce the perceived similarity between the actual self and the brand (i.e., it decreases the brand's efficacy as an instrument for self-verification). We conducted three studies to investigate our predictions.

Study 1 applied a brand acquisition context. The design was 2 (brand connection: low vs. high)  $\times$  2 (self-identity: ideal vs. actual)

$\times$  2 (brand essence change: dampen vs. augment), with consumer response as the dependent variable.

The participants (MTurk,  $N = 526$ ) self-selected individual target brands (according to condition) and reported the three associations they considered most descriptive of “their” brand. Subsequently, the participants read a scenario describing the acquisition of “their” brand. The scenario stated that the acquisition would either dampen or augment (according to the condition) brand essence in terms of the three brand associations the participants had evaluated as most descriptive. The acquirer was a fictitious venture capital company. Finally, we measured the participants' responses to the acquisition.

As expected, the results showed that the participants in the high SBC condition responded more negatively to changes that *dampen* brand associations, compared to participants in the low SBC condition ( $M_{low} = 28.33$  vs.  $M_{high} = 16.09$ ,  $p < .01$ ).

Our theory suggests that self-identity makes a difference only in one situation; that is, when consumers are highly connected to the brand and when associations are augmented. In this situation, the responses of those in the actual SBC condition will be more negative compared to those in the ideal SBC condition. The results supported this prediction ( $M_{ideal\ self} = 54.34$  vs.  $M_{actual\ self} = 44.91$ ,  $p < .01$ ). No such difference was found in the other conditions ( $M_{ideal\ self} = 34.60$  vs.  $M_{actual\ self} = 31.25$ ,  $p = .28$ ).

In Study 2 ( $N = 131$ ), we utilized real changes in brand architecture at a college. The data were collected in two waves. First, two months before the students learned about the changes, we measured their ideal and actual SBC to the college. Subsequently, after the changes were made public, we arranged an information meeting in which we informed the students that the changes would augment the current brand essence of the college to make it even more serious, professional, and business oriented (pretested as the brand's essence). Finally, we measured the participants' responses to the changes.

As predicted, regression analysis revealed a positive effect of ideal SBC ( $b = .36$ ,  $t(128) = 3.33$ ,  $p < .01$ ) and a negative effect of actual SBC ( $b = -.24$ ,  $t(128) = -2.49$ ,  $p < .02$ ) on the response to the brand essence augmentation. The correlation between ideal and actual SBC was only moderate ( $r = .45$ ,  $p < .01$ ), and multicollinearity statistics were acceptable (tolerance = 0.81, VIF = 1.25).

Study 3 applied a brand essence augmentation scenario. Participants (MTurk,  $N = 207$ ) were randomly assigned to two groups of a single-factor (ideal vs. actual SBC) design. We followed a similar procedure as in Study 1, except that all the participants read a scenario about a repositioning that augmented the essence of “their” brand. Finally, we measured the response to the brand essence augmentation, as well as the brand's efficacy for self-enhancement and self-verification.

ANCOVA showed significant differences between groups in response to the repositioning ( $M_{ideal\ sbc} = 65.60$  vs.  $M_{actual\ sbc} = 57.17$ ,  $F(2, 204) = 5.34$ ,  $p < .03$ ). Bootstrapping analysis showed that self-enhancement efficacy ( $a_1b_1$  path:  $b = .13$ , CI 95%: .05 to .23), but not self-verification efficacy ( $a_2b_2$  path:  $b = -.03$ , CI 95%: -.07 to .02), mediated the effect of ideal SBC on consumer response. This result indicates that when consumers learn about changes that augment brand essence, higher degrees of ideal SBC will be associated with an increase in that brand's self-enhancement efficacy, and thus a positive response. Further analyses showed that self-verification efficacy ( $a_2b_2$  path:  $b = -.07$ , CI 95%: -.13 to -.03), but not self-enhancement efficacy ( $a_1b_1$  path:  $b = -.02$ , CI 95%: -.10 to .06), negatively mediated the effect of actual SBC on consumer response. This result indicates that higher actual SBC was associated with de-

creased brand's self-verification efficacy, and thus more negative responses to changes that augment existing brand associations.

Our results show that consumers with a high degree of SBC respond more negatively to changes that dampen brand associations compared to others. Counterintuitively, changes that augment brand associations can also lead to unfavorable consumer sentiments in certain instances. When brand connection was linked to an ideal self-identity, changes that augmented brand essence increased the brand's ability to signal an ideal identity. Conversely, when brand connection was linked to actual self-identity, augmenting brand essence reduced the perceived similarity between the self and the brand, causing brand identification to deteriorate.

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# What Can We Trust? Perceptions of, and Responses to, Fake Information

Chair: Jared Watson, New York University, USA

## **Paper #1: Red Flag! The Consequences of Alerting Consumers to Fake Reviews**

Jared Watson, New York University, USA

Amna Kirmani, University of Maryland, USA

## **Paper #2: Can “Related Articles” Correct Misperceptions from False Information on Social Media?**

Yu Ding, Columbia University, USA

Mira Mayrhofer, University of Vienna, Austria

Gita V. Johar, Columbia University, USA

## **Paper #3: Asymmetry in Susceptibility to Fake News due to Political Orientation**

Hyerin Han, University of Minnesota, USA

TzuShuo Ryan Wang, University of Minnesota, USA

Akshay R. Rao, University of Minnesota, USA

## **Paper #4: Perspectives on “Is Anything Real Anymore? Living in a World of Fake Information” and the Changing Values of Information**

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Merrie Brucks, University of Arizona, USA

### **SESSION OVERVIEW**

As consumer reliance on digital information increases, it is important that the information is credible. Unfortunately, consumers encounter more fake reviews (Luca and Zervas 2016) and fake news (Byers 2017; Lewandowsky et al. 2017) than ever before. Some websites, like Yelp and Facebook, have employed strategies to decrease the prominence of fake information on their platforms. Do these strategies work? Does it depend on the audience? What about other available information? These are the fundamental questions that are addressed in this session.

While consumers generally accept information they encounter as honest (Gilbert 1991), the prominence of fake information online calls for an investigation into how consumers process this information, given the salient veracity concerns. This session takes a multi-methods approach to exploring this topic by combining traditional experiments with other forms of primary data and secondary data to provide comprehensive accounts of how consumers respond to fraudulent information, such as fake reviews and fake news. Across the four papers, we demonstrate how consumers form perceptions regarding the veracity of the information, and how they respond when it is deemed fake.

In the first paper, Watson and Kirmani investigate consumer responses to fake review alerts. They demonstrate that consumers attempt to correct for fake reviews, but may also seek justice, depending on the valence of the fake reviews. Next, Ding, Mayrhofer, and Johar investigate how “related articles” can help reduce the effects of fake information. They demonstrate that related articles disputing a reader’s political ideology does not decrease the believability of the news, but related articles disputing the findings of news that is counter to their political ideology does decrease believability. Following this, Han and Rao continue the investigation in the political domain and demonstrate an asymmetric response to the acceptance of ambiguous claims. Republicans are more likely to accept, and less likely to fact check, claims in the presence of other Republicans, compared to Democrats. Lastly, Lane and Brucks present a conceptual overview of today’s information challenges, integrating the findings of

prior literature and the other papers in this session to provide a path forward to investigating questions in the “information age”.

Taken together, these four papers contribute to the literature by investigating similarities and differences in information acquisition and processing from the past to today. Practically, they also hold significant implications for current societal issues where fake information is more pervasive than ever before. With a diverse blend of methodologies and theoretic lenses applied to this issue, this session should have broad appeal to audiences interested in word-of-mouth, fake information, and consumer judgments and decision-making, more broadly.

## **Red Flag! The Consequences of Alerting Consumers to Fake Reviews**

### **EXTENDED ABSTRACT**

Defined as those written with the intent to mislead or deceive, fake reviews appear to be a major concern online. Recent research suggests that upwards of 15% of online reviews may be fake (Luca and Zervas 2016). And this seems to be consistent with industry perceptions, as Yelp has disclosed that they remove roughly 20% of their reviews for lacking credibility and helpfulness. Even Amazon, which has sued over 1100 creators of fake reviews, is facing a fake review problem that is “worse than ever” (Tuttle 2015; Woolcott 2017). Indeed, an entire industry has arisen around the creation of fake reviews, as “online reputation management” firms will post positive reviews for your business, and negative reviews for your competitors, for a nominal fee (Segal 2011). This would suggest that the fake review problem may be more pervasive than academics have previously considered.

In an effort to increase transparency, some websites (e.g., Yelp and TripAdvisor) place temporary fake review alerts on a brand’s page when they catch that brand involved with fake reviews. For example, once Yelp identifies that a brand has attempted review fraud (e.g., purchasing fake reviews, incentivizing positive reviews, etc.), that brand’s sub-page within Yelp will feature an alert for the next 90 days (Curtis 2014). These alerts, explain the brand’s infraction to consumers. What happens to the brand during and after such an alert? Do consumers penalize the brand? Do consumers remember brands which previously had alerts? These are some of the questions we address.

Whereas prior research has investigated the characteristics of fake reviews (Feng et al. 2012) or the characteristics of brands that solicit fake reviews (Mayzlin, Dover, and Chevalier 2014; Luca and Zervas 2016), we investigate how fake review alerts affect consumer responses to reviews. Reviews help consumers make informed decisions (Gilbert 1991), but fake review alerts may activate persuasion knowledge (Friestad and Wright 1994), leading consumers to attempt to correct for any perceived sources of bias (Campbell and Kirmani 2000). In addition to accuracy motives, consumers may also seek justice for the manipulation attempt when they can attribute the blame to a source (Ward and Ostrom 2006; Grégoire, Tripp, and Legoux 2009). Fake positive reviews are likely to come from the brand itself, whereas fake negative reviews are likely to come from an unknown competitor, meaning that the desire for justice will be greater in the presence of fake positive, versus negative, review alerts.

Study 1 (n = 1885) uses reviews web-scraped from Yelp to examine brand ratings before, during, and after a fake review alert is



displayed. We also examine the effect of the alert on “recommended” reviews and “not recommended” reviews which Yelp considers more likely to be fake. As such, this study addresses the effect of a fake review alert on both fake and authentic reviews. A 2 (review type: not recommended, recommended)  $\times$  3 (90-day time period: before alert, during alert, after alert) ANOVA on brand ratings yielded main effects of review type ( $p < .001$ ) and time period ( $p < .001$ ), qualified by a significant interaction ( $p = .015$ ). *Before* the alert, ratings were significantly higher for the not recommended reviews ( $M_{\text{not recommended}} = 4.64$ ,  $M_{\text{recommended}} = 4.01$ ;  $F(p < .001)$ ), consistent with the greater likelihood of not recommended reviews being fake. *During* the alert, ratings were marginally higher for the not recommended reviews ( $M_{\text{not recommended}} = 3.26$ ,  $M_{\text{recommended}} = 2.98$ ;  $p = .07$ ), suggesting that the alert decreases the prevalence of fake reviews. *After* the alert, ratings were not significantly different for review types ( $M_{\text{not recommended}} = 4.19$ ,  $M_{\text{recommended}} = 4.04$ ;  $p > .35$ ), which suggests that fake review alerts may have a long-lasting impact in reducing the volume of fake reviews.

Study 2 ( $n = 278$ ) used a controlled lab experiment to test consumer responses to both fake positive and negative review alerts. A 2 (fake review alert: negative, positive)  $\times$  3 (time period: before alert, during alert, after alert) repeated measures ANOVA on brand evaluation yielded a main effect of the alert ( $p < .001$ ), qualified by a significant interaction ( $p < .001$ ). As expected, this study replicated the findings of a fake positive review alert exhibited in Study 1 ( $M_{\text{before}} = 2.62$ ,  $M_{\text{during}} = 2.44$ ,  $M_{\text{after}} = 2.64$ ), while demonstrating the inverse pattern for fake negative review alerts ( $M_{\text{before}} = 2.63$ ,  $M_{\text{during}} = 3.02$ ,  $M_{\text{after}} = 2.82$ ).

Study 3 ( $n = 150$ ) demonstrated our asymmetric mediation process where the perception of average rating accuracy mediates both fake negative ( $\beta = -.08$ ;  $CI_{95\%} = [-.166, -.017]$ ) and positive ( $\beta = -.12$ ;  $CI_{95\%} = [-.252, -.019]$ ) review alerts, but the desire for justice only mediates fake positive review alerts ( $\beta = -.22$ ;  $CI_{95\%} = [-.380, -.117]$ ). While Study 4 ( $n = 310$ ) demonstrates the interaction between a fake review alert and salient aggregate information ( $p < .001$ ). Without the salient aggregate information, our same pattern emerges in the presence of a fake positive review alert ( $M_{\text{negative}} = 2.08$ ,  $M_{\text{positive}} = 3.03$ ;  $p < .001$ ), but this is attenuated in the presence of the aggregate information ( $M_{\text{negative}} = 2.43$ ,  $M_{\text{positive}} = 2.73$ ;  $p = .017$ ). Thus, refocusing consumers’ attention on the authentic information can attenuate their need to correct.

Taken together, the results of these four studies demonstrate the effect of a fake review alert on consumers’ subsequent brand ratings. We show that a bias is created as a result of the fake review alerts, but can be attenuated by re-emphasizing the aggregate information after presenting the fake review alert. These results have significant implications for websites which use fake review alerts and consumers who encounter them. We suggest that websites carefully consider how they deploy fake review alerts to avoid biasing their consumers and creating suboptimal outcomes.

## Can the Presentation of “Related Articles” Correct Misperceptions from False Information on Social Media?

### EXTENDED ABSTRACT

One way in which social media platforms such as Facebook can help build a better-informed populace is to provide information that includes multiple points of view. For example, Facebook provides “Related Articles” in the news feed in the face of potentially false headlines. Can providing “Related Articles” correct beliefs? If so, for whom will those articles be influential? This research aims to investigate these questions.

The majority of American adults consume news that is spread on social network sites (Gottfried and Shearer 2016), putting the quality of this news content in the spotlight. Fake news has become a major concern for society as well as the networks themselves, as users seem unequipped to cope with the vast number of such stories (e.g. Lewandowsky et al. 2017). In the context of the 2016 US presidential campaign, the notion of fake news spreading on social media has been highly discussed and defined as being a threat to our common understanding of the truth (Jun, Meng, and Johar 2017). One possible way to curb the spread of fake news is to encourage users to fact-check information (Amazeen 2017). A few studies investigated interventions that could increase user’s fact-checking behavior (e.g., Pennycook and Rand 2017; Nyhan et al. 2017), and our research aims to contribute to this literature.

One possible way to get consumers to fact-check is to incorporate Facebook’s “related articles” function. Bode and Vraga (2015) showed that corrections to a fake headline, displayed by the Facebook algorithm diminished user’s misperceptions regarding stories related to scientific facts. Misinformation is also, if not more, of a challenge in the context of political topics. Based on the theory of motivated reasoning (Kahan 2016), it is especially difficult to correct misperceptions if they are congruent with a person’s current belief. We aim to advance our understanding of corrective interventions on social media by focusing on how the political orientation of readers interacts with the political stance of news headlines to affect beliefs. Further, we test whether and how the presentation of related articles can correct misbeliefs.

Experiment 1 recruited 72 Republicans and 109 Democrat participants in the U.S. through mTurk. Participants were asked to read six Facebook posts in a random order and to rate the perceived truth of each post’s headline. Four posts were the manipulated target posts and two were filler posts held constant across participants. A pretest showed that Republicans were more likely to perceive two out of four headlines to be true [A: “Obama did in fact unconstitutionally spy on Trump throughout the presidential election.”  $M_{\text{Republicans}} = 3.31$  vs.  $M_{\text{Democrats}} = 1.80$ ,  $t(1,125) = 6.87$ ,  $p < .001$ ; B: “Nearly \$7 of every \$10 donated to presidential candidates in this election cycle from the oil and gas industry has gone to the Democratic party.” 3.07 vs. 2.11,  $p = .01$ ] and Democrats were more likely to perceive the other two headlines to be true [C: “President Trump is cutting the CDC budget by 80 percent.” 2.20 vs. 3.10,  $p < .001$ ; D: “Melania Trump plagiarized her statement on Women’s History Month from Michelle Obama.” 2.40 vs. 3.94,  $p < .001$ ]. Similar to the 4-condition design as in Bode & Vraga (2015), participants read the Facebook headlines with two “related articles” below the headlines. These two “related articles” were designed as follows: either both confirmed the headline, both debunked the headline, one confirmed and one debunked the headline, or both were irrelevant messages. Participants were asked to rate their perceived truth of each headline on a 5-point (1-definitely false, 5-definitely true) scale.

We created matching vs. mismatching conditions based on political affiliation and message. Results showed that “related articles” had no effect on perceived truth of headlines when the headlines matched participants’ political stances ( $F(3,177) = 0.30$ ,  $p = .84$ ). This suggests that Facebook’s efforts to use these headlines to correct false belief are not effective; means are fairly high across conditions ( $M_{\text{irrelevant}} = 3.28$ ,  $M_{\text{confirm}} = 3.35$ ,  $M_{\text{debunk}} = 3.19$ ,  $M_{\text{mixed}} = 3.36$ ). However, when headlines mismatched participants’ political stance, both confirm and debunk articles reduced perceived truth of the headlines, compared to unrelated and mixed articles ( $F(1,177) = 3.72$ ,  $p = .055$ ). In other words, people respond to debunking efforts for claims that they already tend to disbelieve ( $M_{\text{irrelevant}} = 2.64$ ,

$M_{confirm} = 2.37$ ,  $M_{debunk} = 2.21$ ,  $M_{mixed} = 2.5$ ). What is surprising here is that confirming a mismatched headline counterintuitively reduces beliefs, especially for Republicans ( $M_{irrelevant} = 3$ ,  $M_{confirm} = 2.59$ ,  $M_{debunk} = 2.5$ ,  $M_{mixed} = 2.97$ ). Skepticism of the corrective message that goes against one's prior beliefs may be responsible for this effect.

We conducted Experiment 2 with 94 Republicans and 173 Democrats with a similar procedure as in Experiment 1. Results showed no effect for any intervention (compared to the unrelated articles condition) on beliefs in matched ( $M_{irrelevant} = 3.38$ ,  $M_{confirm} = 3.43$ ,  $M_{debunk} = 3.25$ ,  $M_{mixed} = 3.37$ ;  $p = .73$ ) or mismatched claims ( $M_{irrelevant} = 2.40$ ,  $M_{confirm} = 2.58$ ,  $M_{debunk} = 2.30$ ,  $M_{mixed} = 2.26$ ;  $p = .24$ ). The only glimmer of hope is that debunking works for Democrats in this study ( $M_{irrelevant} = 3.49$ ,  $M_{confirm} = 3.67$ ,  $M_{debunk} = 3.24$ ,  $M_{mixed} = 3.42$ ;  $F(1,169) = 2.98$ ,  $p = .086$ ).

After introducing disputed flags in December 2016, Facebook began to use "Related Articles" in August 2017, followed by using "trust indicators" for publications in December 2017 and collaborating with Google from March 2018 (Larson 2017; Bradshaw and Nicolaou 2018), to stem misinformation. More research is urgently needed to find out whether providing additional information in the form of related articles can work under certain conditions. This study highlights the fact that research is also needed to investigate the underlying mechanism of how related articles reduce truth perceptions. Further research is also needed to understand how inferences regarding the source of related articles (sponsored vs. algorithm found) can moderate this effect.

### Asymmetry in Susceptibility to Fake News due to Political Orientation

#### EXTENDED ABSTRACT

Recent Congressional testimony indicates that purveyors of fake news might have reached one hundred twenty six million American users in 2016 (Byers 2017). Further, in the 2016 Presidential election, fake news stories shared over social media substantially favored Donald Trump over Hillary Clinton (Allcott and Gentzkow 2017; Silverman 2016; Narayanan et al. 2018). The observation that fake news favored Trump over Clinton indicates an asymmetry in the supply of fake news, implying that there might be a corresponding asymmetry in the demand for and/or susceptibility to fake news. If there is an asymmetry in susceptibility to fake news, then it would be valuable to identify the cause of this differential susceptibility and the mechanisms that might reduce this susceptibility.

It is well established that conservatives and progressives differ on numerous traits. In particular, conservatives are more likely to accept vague statements as true because they have a low need for cognition and rely on intuitive, heuristic-based cognitive processing. As a consequence, they are less likely to question the truth content of ambiguous claims, and therefore, the manifestation of the truth bias is likely to be higher for conservatives than for progressives. In addition to this main effect, we predict that the manifestation of the truth-bias (and associated reduction in vigilance) will be enhanced when conservatives are in the company of other conservatives. This prediction is based on the finding that conservatives "...possess a stronger desire to share reality with fellow ideologues..." (Stern et al. 2014). An individual's desire to share reality reflects a desire to receive social verification, and in an environment in which shared reality is high because of the presence of like-minded others, perceptions of in-group consensus will tend to be high as well. The presence of the in-group renders the social environment benign since the in-group represents positive social information due to a sense of shared reality. This sense of safety will in turn lead to a decline

in vigilance and an increase in the truth-bias. Since progressives' need to share reality with fellow ideologues is weaker, the differences in vigilance and manifestation of the truth-bias when in the presence of the in- versus out-group will likely be less pronounced among progressives than among conservatives.

Study 1 tests our core premise, that Republicans in the presence of Republicans would display higher levels of truth bias and lower levels of vigilance. Participants logged onto a simulated online news website where they evaluated 36 ambiguous statements (Jun et al. 2017). Participants could identify each statement as true or false, or, they could raise a fact-checking "flag". In Group Republican (vs. Group Democrat) condition, participants evaluated the statements ostensibly in the company of 103 others currently logged in who were largely from "red" (vs. "blue") states. Participants responded to the question about their political affiliation after evaluating all statements. The results revealed that Republicans tended to identify more statements as true ( $p < .05$ ) and flag fewer statements ( $p < .05$ ) in the Group Republican condition compared to in the Group Democrat condition. No significant differences emerged for a similar comparison among Democrats in both true rates and flagging rates ( $p > .70$ ).

Study 2 had two goals: a) to replicate Study 1; and b) to examine whether Republicans' tendency to display the truth-bias is mediated by shared reality and perceived consensus. We included a Group Unidentified condition in which there was no mention of the political orientation of others. We expanded the set of statements into two sets of 25 statements that had either a conservative or progressive tone respectively (Jun et al. 2017). In order to measure shared reality, participants were asked how important it was that they see the world in a similar way as people who generally share their beliefs do, and to measure perceived consensus, participants were asked their perception of the percentage of the others who were logged who had made judgments similar to theirs (Stern et al. 2014). When responses to the two sets of statements were combined, Republicans identified more statements as true ( $p < .02$ ) and flagged fewer statements ( $p < .03$ ) in the Group Republican condition compared to the Group Democrat condition, and the Group Unidentified condition. Democrats did not exhibit significant differences in both true rates ( $p > .80$ ) and flagging rates ( $p > .70$ ) across conditions. Republicans in the presence of Republicans experienced a greater level of shared reality, which was associated with higher perceived consensus, which was ultimately associated with higher true rates.

In Study 3, we test the idea that, because of their higher motivation to share reality and perceive in-group consensus, Republicans would anchor on base rate information provided by Republicans more so. In the High (vs. Low) suspicion condition, participants were told that 103 other participants (Republican or Democrat) had seen 36 statements and concluded that 28 (vs. 4) statements needed to be flagged. We find that Democrats tend to anchor on the flagging rates of prior participants regardless of their party affiliation. However, Republicans anchor on the flagging rates of Republican others more so than Democrat others.

To what extent is the shared reality motive likely to drive Republican's behavior with respect to the truth bias and vigilance not only contemporaneously (Studies 1 and 2) and retrospectively (Study 3), but also prospectively? We examine this issue in Study 4 by making participants accountable to prospective participants. Participants were informed that after they were done, 103 Republican or Democrat participants would evaluate the same statements, and the focal respondent's overall ratings of the statements would be presented to these participants. Focused tests revealed that the true rate displayed by Republicans who were accountable to other Republicans was significantly lower ( $p < 0.02$ ) and their flagging rate was

marginally higher ( $p < 0.07$ ) than that of Republicans accountable to other Democrats, indicating that a sense of accountability to the in-group contributed to a reduction in the truth bias among Republicans. Democrats did not exhibit significant differences in true and flagging rates across conditions.

### Perspectives on “What Can We Trust? Perceptions of, and Responses to, Fake Information” and the Changing Values of Information

#### EXTENDED ABSTRACT

We find ourselves in the midst of the fourth industrial revolution, characterized by increasing velocity, breadth, and depth of information (Schwab, 2017). The explosive growth of digital sources has facilitated access to massive amounts of information while various forms of social media have contributed complexity due to the presence of anonymous, deceptive, and unmediated sources. Live video feeds, consumer review platforms, social media, etc. have allowed consumers to influence the information environment as they are themselves influenced. Prior to the current “Information Age,” communication of the news, advertising, or other information largely proceeded through a limited number of mass media outlets, such as national television networks, radio, magazines, and newspapers, and was filtered by competent, trained media workers governed by regulated standards (e.g., media and advertising regulations) and a widely-held responsibility to inform the public as a whole with little incentive to appeal to or bias information toward micro-niches. This fundamental shift in information creation and communication raises important questions about information behavior in a new age.

Our conceptual framework builds on insights into human information behavior gleaned from decades of research in economics, psychology, and marketing. Seminal investigations questioned the “rational” economic model of information behavior, beginning with Simon’s ideas of bounded rationality (e.g., Simon, 1955). Bettman’s “decision tenets” (1970, 1971) introduced cognitive theories of information processing to marketing and charted the path for research on consumer information behaviors, including the processes of attention, learning, memory, information search, judgment, and decision-making. As this research stream was unfolding, a parallel literature developed in social psychology on attitudinal responses to persuasion attempts (HSM Chaiken, 1980, 1987; ELM Petty and Cacioppo, 1986). This work was closely followed by research which questioned implicit assumptions about the roles of emotion and consciousness, and contributed toward unveiling how emotion affects information search, processing and decisions. For example, researchers demonstrated an important role for mood (e.g., Johnson & Tversky, 1983; for review, Schwarz & Clore, 1996), anticipated regret (Zeelenberg, 1999; Connolly & Zeelenberg, 2002), and other emotion-based motivations in information processing models (e.g., feelings-as-information model, Schwarz, 1990). Furthermore, research on self-image, self-esteem maintenance, etc. indicated that people seek and avoid information for purposes quite orthogonal to accuracy of attitudes and quality of choices. These findings questioned the implicit (and often explicit) assumption that consumers collect and process information to form accurate attitudes and to make better decisions (e.g., Bettman, Luce, and Payne, 1988) given the properties of the human information-processing system and of task environments (Simon, 1990). For example, literature on consumer information avoidance (for review, see Golman, Hagmann, and Loewenstein, 2017; Sweeny et al., 2010) demonstrates that consumers actually avoid information for purely psychological reasons even when it could improve decision quality. In fact, clinical psy-

chologists have argued that errorful decision strategies are necessary for mental health, coining the term “illusions” to replace terms like “error” and “bias” – (Taylor & Brown, 1988).

Beyond these augmentations, we also question the common assumption that people collect and process information for the purpose of forming accurate attitudes and to make better decisions. New provocative findings suggest a novel and important role for social influences in digital information use, past utilitarian value or regulating one’s personal emotions and self-perceptions. For example, Jun, Meng, and Johar (2017) find people are less vigilant, and thus less likely to fact-check, in social settings. Similarly, a recent study finds that the majority of people who share Internet links with others never opened the link themselves (Dewey, 2016). These findings suggest that the social context of information affect how it is processed in fundamental ways. Recognizing the new questions raised by the availability and nature of online social medias, the papers in this session investigate a range of consumer information behaviors related to the value of information that people find in various social media contexts. Together, the findings shed light on situations in which consumers react to differing aspects of deceptive or false information, including the source (Watson and Kirmani, this session) the content (Ding, Mayrhofer, and Johar, this session) and the in- or out-group membership status (Han and Rao, this session). Identifying these findings as being part of a bigger conceptual whole, we integrate recent work in our field with phenomenological observations to organize and envision a new perspective on the role of information in consumers’ daily lives, providing a conceptual contribution, discussion, and framework for future research on the topic (as proposed by MacInnis, 2011).

Building on previous research streams that focused on attitude accuracy, decision quality, and psychological health, we conceptualize information behavior as serving social functions. Specifically, whereas the value of information is the means to achieve accuracy in the economic models and the reaching of a desired emotional state in the more recent psychological models, we highlight the social value of information, such as affiliating or dissociating with reference groups and achieving a “shared reality” (Hardin & Higgins, 1996) with important others. Given the large and growing impact of social media, we argue that placing social value alongside the more deeply-researched cognitive and personal outcomes provides a better understanding of information behavior today. In other words, information behavior may include any single motivation (i.e., utilitarian, emotional, affiliative) or some combination of motivations. Furthermore, we note that these motivations may sometimes be in opposition to each other, such as uncritical consumption of fake news or intentional avoidance of socially disapproved scientific information. We provide a set of propositions that outline when each motivation may or may not be expected to surface, and the behavioral outcomes of these motivations. In this way, we integrate information processing literature with research on group behaviors, primarily from findings in social psychology and sociology. We propose that the accuracy of information is devalued when social considerations are salient, if the information can facilitate connection (dissociation) with desirable (undesirable) others. We will discuss how this view alters the roles of important variables, such as source credibility and self-efficacy.

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# Secrecy and Consumer Behavior

Chair: Dongjin He, Hong Kong Polytechnic University, Hong Kong

## **Paper #1: Secrecy Prompts Nonconformity-Avoidance in Consumption Choice**

Dongjin He, Hong Kong Polytechnic University, Hong Kong  
Yuwei Jiang, Hong Kong Polytechnic University, Hong Kong  
Gerald J. Gorn, Hong Kong Polytechnic University, Hong Kong

## **Paper #2: Secret Consumption in Close Relationships**

Kelley Gullo, Duke University, USA  
Danielle J. Brick, University of New Hampshire, USA  
Gavan J. Fitzsimons, Duke University, USA

## **Paper #3: "A Tale of Two Secrets": Examining the Diverging Effects of Secrecy on Consumption Enjoyment**

Xiaojing Yang, University of Wisconsin-Milwaukee, USA  
Xiaoyan Deng, The Ohio State University, USA  
Lei Jia, The Ohio State University, USA

## **Paper #4: The Secrecy Effect: Secret Consumption Polarizes Product Evaluations**

Maria A. Rodas, University of Minnesota, USA  
Deborah Roedder John, University of Minnesota, USA

### **SESSION OVERVIEW**

Secrecy is a ubiquitous part of life (Kelly, 2002), and almost everyone keeps secrets. Prior research on secrecy in psychology has primarily focused on understanding the antecedents and consequences of secrets. However, there is little consumer research on the topic even though hiding consumption-related activities is common (e.g., Goodwin 1992; Vanhamme and de Bont 2008). This session presents a set of papers that address one important question: how will secrecy influence consumer behaviour? These four papers flow nicely from incidental secrecy (paper 1) to inherent consumption-related secrecy (papers 2-4); and are from both interpersonal perspectives (papers 1-3) and intrapersonal perspectives (paper 4).

The first two papers examine the domain-independent impact of secrecy. In the first paper, He, Jiang, and Gorn examine the effect of incidental secrecy on consumer conformity. They find that the experience of secrecy increases consumers' tendency to avoid nonconformity in their consumption choice. They further show that this effect is driven by secret-keepers' desire to avoid social attention, and it is attenuated when consumers perceive themselves as having high self-control capacity. The second paper by Gullo, Brick, and Fitzsimons examines how keeping secrets from one's romantic partner affects a person's relationship satisfaction. It is found that keeping a secret for avoidance-reasons leads individuals to more guilty feelings, compared to keeping a secret for promotion-reasons. And this feeling of guilt can have a positive effect on one's relationship satisfaction for people who perceive distance in their relationship, because it signals that the secret keeper cares about the relationship.

The other two papers examine the influence of secrecy on secrecy-related consumptions. In the third paper, Yang, Deng, and Jia explore how secret consumption affects consumer enjoyment. They show that keeping a consumption activity as a secret has a polarizing effect on consumption enjoyment such that secrecy increases consumption enjoyment when the expected social response from others is positive but decreases consumption enjoyment when their expected social response is negative. From an intrapersonal perspective, the fourth paper by Rodas and John provides converging evidences to this polarizing effect. The authors demonstrate that prompting secret

consumption results in more extreme product evaluations because secret increases preoccupation about the target product. This effect is further found to be moderated by distraction and consumers' need for cognition.

In summary, the four papers in the current special session (all in advanced stages) identify a number of antecedents and consequences of secrecy in the consumption context and examines the impact of secrecy on consumer behaviour in secrecy-related and secrecy-unrelated domains. Given the variety of the questions addressed and the variety of situations examined in the empirical work carried out, this session is likely to appeal to a broad set of conference attendees, including those interested in social conformity, relationship satisfaction, consumer enjoyment, and product evaluation, and the factors that affect them.

## **Secrecy Prompts Nonconformity-Avoidance in Consumption Choice**

### **EXTENDED ABSTRACT**

As human beings, we all have our secrets, be it a surprise party to celebrate a friend's birthday, a poor performance in an exam, or an affair that if exposed might ruin one's marriage. Secrecy is an unavoidable outcome of our socialization process (Kelly 2002; Simmel 1950), and an important concept in the consumption domain (e.g., Goodwin 1992; Vanhamme and de Bont 2008). Consumers often keep consumption-related secrets such as gifts or an adult magazine delivered in a nondescript package. Despite the prevalence of secrecy, relatively little research has explored the consequences of keeping secrets, especially in the consumer arena. In the current research, we examine the impact of incidental secrecy on consumer conformity, a domain that, at first glance, would seem unlikely to be affected if the person is keeping a secret about something that has nothing to do with a product choice that is to be made.

Secret-keepers constantly worry about both their own disclosure of the secret and others' discovery of it (Larson and Chastain 1990; Ragins, Singh, and Cornwell 2007). The likelihood of both types of secret disclosure are intimately related to the amount of social attention the individual receives. Social attention is often a precursor to social interaction, and with social interaction comes the risk of disclosure of the secret (Ashton, Lee, and Paunonen 2002; Sprecher et al. 2013). In the current research we propose that since social attention represents a potential threat to the secret-keeper, secrecy will induce a desire to avoid social attention. Nonconformity, which is generally defined as a behavior or belief that is inconsistent with norms or standards (Nail, Macdonald, and Levy 2000), makes people stand out and attracts more social attention. Putting them together, we hypothesize that secrecy will decrease consumer nonconformity in consumption choices, and the effect will be mediated by the desire to avoid social attention.

One important reason why secret-keeping consumers are motivated to avoid social attention is that they are afraid they may leak out the secret. If this is true, then the effect of secrecy on the tendency to conform should be attenuated or eliminated if consumers worry less about self-disclosure, such as the situations when consumers perceive themselves as having high self-control capacity. People with high self-control capacity tend to be good at managing their lives, saving money, keeping secrets, fulfilling promises, controlling their emotions, and so forth (e.g., Mukhopadhyay and Johar 2005;

Tangney, Baumeister, and Boone 2004; Zhang and Shrum 2008). If consumers believe that they have a relatively high self-control capacity, they should worry less about leaking their secrets to others, and the effect of secrecy on the avoidance of social attention and consumer nonconformity should be weakened.

Three studies provide supportive evidence for our hypotheses. Study 1 tested our basic proposition. To manipulate secrecy, US participants ( $N = 90$ ) first completed a writing task, in which they either wrote about a secret they were keeping (adopted from Slepian et al. 2012) or the food items they ate in a recent day. Next, they proceeded to a shopping task, in which we measured conformity by observing their choice between a majority-endorsed product option (i.e., having a 76% market share) or a minority-endorsed option (i.e., having a 24% market share). We found that secrecy decreases consumer nonconformity by reducing the choice percentage of the minority-endorsed option.

Study 2 tested our proposed underlying attention-avoidance mechanism through a process-by-moderation approach. US participants ( $N=393$ ) were assigned to a 2 (secrecy: secrecy vs. control)  $\times$  2 (perceived social attention: low vs. high) between-subjects design. We first manipulated participants' perceived social attention using a reading task (Wan, Chen, and Jin 2017). In the low (vs. high) attention condition, the article argued that people actually get much less (vs. more) attention from others than they think. After reading the article, participants completed the same episodic secrecy manipulation that was used in study 1, and a nonconformity measure similar to the one used in study 1. Results indicated that the effect of secrecy on consumers' nonconformity avoidance was mitigated when participants were induced to believe that the level of attention others pay to them is low.

Finally, study 3 examined the moderating role of perceived self-control capacity. US participants ( $N=193$ ) were assigned to a 2 (secrecy: secrecy vs. control)  $\times$  2 (perceived self-control capacity: high vs. low) between-subjects design. Participants in the high (low) self-control condition first read a fake scientific article about how human beings are good (bad) at self-control. Then after the same secrecy manipulation as in study 1, participants were asked to imagine that they were shopping for a backpack and reported their purchase intention of four backpacks, one of which being a nonconformity option (Huang, Dong, and Mukhopadhyay 2014). As expected, secrecy decreases participants' intention to purchase the nonconformity option, and this effect is weakened when participants perceive themselves having high self-control capacity.

As the first to investigate the relationship between secrecy and consumer conformity and the social attention-avoidance mechanism driving it, this research extends the secrecy literature by revealing a novel consequence of secrecy in an unrelated domain. The current research enriches our understanding of consumers' tendency to (dis) conform to others in their product choices.

## Secret Consumption in Close Relationships

### EXTENDED ABSTRACT

You watched a Netflix shows, indulged in a candy bar at work, or took the liberty to overspend on a pair of shoes, and chose not to tell your romantic partner about this consumption—a little secret. Secrets are not something you usually keep from your partner, but perhaps keeping your consumption secret helps to avoid a fight or hurt feelings. Are secrets always bad? Research on secrets suggests secrets are always bad for both the self (e.g., guilt, anxiety; e.g., Kelly and Yip 2006) and the relationship (e.g., satisfaction, break ups; e.g., Caughlin et al. 2009).

However, this research has primarily focused on secrets that are highly consequential, such as cheating, and has not examined the role of consumption. How, then, might secrets about consumption impact the self and relationship? Furthermore, how might the motivation for keeping a secret influence outcomes in the relationship? Building on the secrets literature (e.g., Caughlin and Afifi 2004; Easterling et al. 2012; Lane and Wegner 1995; Simmel 1950) and the feelings as information theory (e.g., Schwartz 1990), we suggest that while consumption secrets can have a negative impact on the self, their downstream effects can have either a neutral or an ironically beneficial impact on the relationship. Specifically, we suggest that keeping a secret for avoidance-reasons (e.g., not wanting to be judged) leads to worse outcomes for the self by increasing feelings of guilt than keeping a secret for promotion-reasons (e.g., wanting to help a partner stick to a goal). Further, we predict that those feelings of guilt—which can only occur when you care about the object of guilt (e.g., Tangney and Dearing 2003)—can have a beneficial downstream for people who have ambiguous attitudes or feelings about their relationship: feelings of guilt from the secret will *signal* to the secret keeper that they must care about the relationship (i.e., feelings as information), and therefore they feel more satisfied in the relationship overall. On the other hand, consumption secrets should have no impact (positive or negative) on relationship satisfaction for people who already have strongly positive attitudes toward their relationship—they already know they care about the relationship, so feelings of guilt from the secret should not be informative for them.

We test these hypotheses across four studies that examine different types of relationships and different types of consumption. We first conducted a pilot study with 151 individuals ( $M_{\text{age}}=32.34$ ) who were in a relationship. They described a time when they kept a consumption secret from their partner that their partner still does not know about. If they could not think of an example, participants were asked to imagine one. 98% of participants described a real (vs. imagined) time they kept consumption secret from their partner, suggesting that secret consumption is a prevalent phenomenon in relationships.

Studies 1 and 2 tested how different motivations for keeping a secret affect feelings of guilt. In study 1, 119 couples ( $M_{\text{age}}=40.5$ ) were recruited at a local farmer's market. Both members of the couple completed a questionnaire individually. Couples were randomly assigned to describe a time when they kept consumption a secret from their partner for either promotion- (e.g., wanting to help the partner stick to a diet) or avoidance-reasons (e.g., not wanting a partner to judge the consumption). Then, all participants indicated feelings of guilt after the secret consumption (single, Likert-scaled item) and whether their partner found out. We conducted analyses using multi-level modeling with individuals nested within couples. We examined whether motivation predicted feelings of guilt, controlling for whether their partner found out. In line with predictions, keeping a consumption secret from a romantic partner for avoidance-motivated reasons leads to marginally greater feelings of guilt than promotion-motivated secrets ( $B=.48, p=.07$ ).

Study 2 conceptually replicated these results in a lab setting using a different relationship type: roommates. 118 undergraduates ( $M_{\text{age}}=20.6$ ) who were currently living with a roommate came into the lab during the reading week before finals. They were asked to imagine that their roommate was going to the library with a goal to study and do well on exams. Then, participants imagined that they decided to go to a party (i.e., an experience consumption) that night and chose not to tell their roommate. We manipulated whether the motivation for keeping the secret was for avoidance- (e.g., don't want roommate to judge you) or promotion-reasons (e.g., want help

roommate stay focused on their goal). Participants then indicated how guilty they would feel. In line with the previous findings, keeping a secret for avoidance-reasons ( $M=2.41$ ) resulted in significantly greater feelings of guilt than keeping the same secret for promotion-reasons ( $M=1.86, p<.05$ ).

Study 3 examined the downstream consequences of feelings of guilt from a secret on relationship satisfaction, testing whether guilt has beneficial outcomes for individuals who hold ambiguous attitudes about their relationship by signaling that they must care about the relationship. 249 individuals ( $M_{age}=33.5$ ) who were in a relationship completed this 2Xcontinuous study on Mturk. Similar to study 1, participants imagined keeping a secret from their romantic partner for either promotion or avoidance reasons. In this study, they imagined eating a candy bar and then not telling their partner. Then, participants indicated how guilty they would feel, completed a relationship attitudes measure (Vangelisti et al. 2005) and, as the dependent measure, a relationship satisfaction measure (Rusbult et al. 1998). Moderated mediation analyses, with relationship attitude as the b-path moderator, reveal the predicted pattern of results (95% CI[.004, .189]). Feelings of guilt from the avoidance-motivated secret increase relationship satisfaction for people who have more ambiguous attitudes toward their relationship and have no impact for people who have strongly positive attitudes toward their relationship.

We demonstrate across four studies that, while consumption secrets from close others can have negative outcomes for the self when kept for avoidance-motivated (vs. promotion-) reasons, feelings of guilt from the secret can have either a *neutral* or an ironically *beneficial* impact on relationships depending upon the attitudes about relationship. Additional studies testing the underlying process will be conducted before ACR.

### “A Tale of Two Secrets”: Examining the Diverging Effects of Secrecy on Consumption Enjoyment

#### EXTENDED ABSTRACT

Research on secrecy has painted a largely grim picture of the effects of secrecy on the secret keeper’s psychological and physical well-being (Kelly 2002). Our research, however, investigates conditions under which secrecy leads to positive (and negative) effects on consumption enjoyment. We posit that in consumption settings, although sometimes consumers hide a secret (e.g., binge drinking issues) because they want to avoid the negative responses that could be triggered once people from whom the secret is kept discover the secret, on many other occasions consumers keep a secret (e.g., planning a surprise party) because they want to boost the positive responses that could be obtained from the person from whom the secret is kept upon secret revelation.

Drawing from research on secrecy (Lane and Wegner 1995) and anticipated utility (Kahneman, Wakker, and Sarin 1997), we predict that secrecy has a polarizing effect on consumption enjoyment, dependent on whether the consumption activity is expected to evoke positive or negative social responses. Specifically, when a consumption activity is expected to elicit negative responses from others (“negative social responses”), keeping the consumption activity as a secret (vs. not as a secret) not only creates burden, but also causes consumers to dread the negative consequences of secret revelation, leading to reduced consumer enjoyment. In contrast, when a consumption activity is expected to elicit positive responses from others (“positive social responses”), although keeping the consumption activity as a secret (vs. not as a secret) is mentally depleting, this negative effect stemming from the secret keeping process is often

overpowered by savoring the positive outcomes of secret revelation, resulting in increased consumer enjoyment.

Study 1 ( $n = 169$ ) featured a 2 (secrecy: secretive vs. non-secretive)  $\times$  2 (social response: positive vs. negative) between-subjects design. Participants read a scenario in which a protagonist planned a vacation with the significant other. Social response was manipulated by whether or not the significant other was expected to like the vacation plan. Secrecy was manipulated by whether or not the protagonist planned the vacation (booking flights, hotels, and tickets) secretly and therefore had to suppress the urge to confide the plan to the significant other. Participants assessed the protagonist’s consumption enjoyment, and savoring and dread during the experience (1 = very little to 9 = very much). Results suggested that an interaction of secrecy and social response ( $F(1, 165) = 31.32, p < .001$ ) emerged, such that when the protagonist expected the significant other to like the vacation idea, keeping the consumption activity as a secret enhanced enjoyment ( $M_{secretive} = 8.27$  vs.  $M_{non-secretive} = 7.16$ ;  $F = 15.03, p < .001$ ); whereas when the protagonist expected the significant other to dislike the vacation idea, hiding the consumption activity as a secret reduced enjoyment ( $M_{secretive} = 6.17$  vs.  $M_{non-secretive} = 7.33$ ;  $F = 16.31, p < .001$ ). We also found evidence for a moderated mediation such that secrecy increased (decreased) enjoyment in the positive (negative) condition through the savoring-dread index ( $b = .86, SE = .23$ ; 95% confidence interval [CI] = .50 to 1.46).

In experiment 2 ( $n = 280$ ), which employed a 2 (social response: positive vs. negative)  $\times$  2 (social distance: close vs. distant) between-subjects design, we examine how social distance influences the effects of secrecy on enjoyment. Social distance between the secret keeper and the person from whom the secret is kept should moderate the effects of secret keeping on consumption enjoyment, such that the effects of secrecy on enjoyment are more pronounced when social distance is close. Participants were asked to recall a past secret consumption experience which met our requirements of social response (the consumption is likely to receive a positive [negative] social response) and social distance (keeping a consumption activity as a secret from someone close [not close] to them) and to report their consumption enjoyment. Analysis revealed an interaction of social distance and social response ( $F = 7.83, p = .01$ ), such that participants reported higher enjoyment if they were keeping the secret from someone they felt close to than from someone they did not feel close to ( $M_{close} = 7.92$  vs.  $M_{distant} = 7.18$ ;  $F = 4.40, p = .04$ ); whereas when the recalled secret consumption was expected to elicit negative social response, participants reported lower enjoyment if the secret was kept from close others than from distant others ( $M_{close} = 5.21$  vs.  $M_{distant} = 5.84$ ;  $F = 3.46, p = .06$ ).

Study 3 was designed to examine the moderating role of preoccupation with the secret. For consumption eliciting negative social responses, a negative linear trend between level of preoccupation and consumption enjoyment exists: consumption enjoyment decreases as the level of preoccupation increases. For a secret consumption activity with positive expected social responses, a curvilinear relationship between level of preoccupation and consumption enjoyment exists: consumers enjoy the consumption experience most when they are moderately preoccupied with the secret. This effect occurs because the negative effect of keeping a secret is overwhelming in the high preoccupation condition. Participants took part in a 2 (social response)  $\times$  4 (level of preoccupation: high vs. moderate vs. low vs. control) between-subjects design. The experiment was similar to the procedure of study 1 with the exception that level of preoccupation was manipulated by how often the secret consumption activity came into the consumers’ mind. Trend analyses indicated that, in the negative social response condition, a significant negative linear trend of



level of preoccupation emerged ( $F = 26.49, p < .001$ ) such that the higher the preoccupation with the secret, the lower the consumption enjoyment. By contrast, in the positive social response condition, a significant quadratic trend of level of preoccupation emerged ( $F = 3.55, p = .06$ ) such that the protagonist enjoyed the experience most when he or she was moderately preoccupied with the secret.

Across three experiments, we found support for our theory that keeping a consumption activity as a secret has a polarizing effect on consumption enjoyment, increasing enjoyment when social response is positive but reducing enjoyment when social response is negative.

### The Secrecy Effect: Secret Consumption Polarizes Product Evaluations

#### EXTENDED ABSTRACT

Much of the advertising we see depicts people enjoying the consumption of a product in the company of other people. Recently, however, advertisers are also beginning to depict people consuming products in secret. For example, Breyer's advertises its line of gelato by showing a couple waiting for their children to go to bed so they can keep their gelato consumption a secret. King's Hawaiian's advertises its dinner rolls through a humorous ad showing a man keeping his consumption of dinner rolls secret by hiding them in a hidden wall cabinet. This development raises an interesting question: Is it possible that consumers like a product more if they are prompted to think about consuming it in secret?

We propose and find evidence that prompting secret consumption results in more extreme (polarized) product evaluations, and that this is driven by increased preoccupation about the target product. We define secret consumption as consuming a product with the intent of hiding the consumption from others. Secret consumption is a prevalent phenomenon among consumers. In a study we conducted, 60% of women and 44% of men reported having engaged in secret consumption, across product categories such as chocolate, ice cream, alcohol, and video games.

We look to theories of secrecy (Lane and Wegner 1995) and attitude polarization (Tesser 1978) to explore the effects of secret consumption. In brief, when people are prompted to think about their consumption as secret, they become preoccupied with thoughts about the product they have consumed. Thoughts about the product continue to pop into mind, resulting in increased thinking about the product. This increased thinking leads to a polarization of product evaluations. Thus, increased thinking about a consumed product results in more positive (negative) evaluations for liked (disliked) products.

Support for these conclusions are reported in six studies, where we assigned women to either a secret or non-secret consumption condition, and then asked them to consume and evaluate a familiar food item (chocolate, cookies). Across studies, we incorporate three different manipulations for the secret consumption condition, as well as including measures of preoccupation in later studies. In addition, the later studies (studies 3-6) were conducted in a field setting (at a large State Fair in the U.S.), where we were able to examine the robustness of our findings with a broad population.

The first two studies demonstrate the secrecy effect using two different manipulations for the secret consumption conditions. For study 1, we asked women in the secret condition to imagine eating a brand of chocolate in secret; women in the non-secret condition did not receive this instruction. For study 2, we asked women to read a print ad for a brand of chocolate. Women in the secret condition read an ad encouraging consumption of the chocolate in secret, while women in the non-secret condition read an ad without mention of secret consumption. In both studies, women who were prompted to

think about eating the chocolate in secret had more positive evaluations of the chocolate versus women in the non-secret condition.

In the next two studies, we provide further evidence regarding the effects of secret consumption: (1) the secrecy effect on product evaluations is due to preoccupation; (2) prompting secret consumption has a polarizing effect on product evaluations; and (3) the effects of our secret consumption manipulations are due to prompting the idea of secrecy, rather than the private or public nature of the consumption setting, with a 2 (secret vs. non-secret consumption)  $\times$  2 (public vs. private setting) between-subjects design. Participants were randomly assigned to consume the product in secret (either in a private booth or at a table with others around) or in non-secret (either in a private booth or at a table with others around). We asked them to taste and then evaluate the product. We also included a measure of how preoccupied they were with the consumed product. Mediation analyses confirmed that preoccupation was the mediator of the relationship between consumption setting (secret vs. non-secret) and product evaluations. To provide evidence for attitude polarization, we used a well-liked product in study 3 (cookies) and a disliked product in study 4 (high-cocoa dark chocolate). As expected, we found that prompting secret consumption resulted in more positive evaluations for the liked product (mediated effect=.36, SE=.11, 95%CI=.17 to .61), but more negative evaluations for the disliked product (mediated effect=-.18, SE=.12, 95%CI=-.53 to -.03).

The final two studies examined moderators of the secrecy effect. In study 5, we found that the secrecy effect disappears when people are distracted during consumption. Further, we show that preoccupation with the consumed product mediates the interaction effect between distraction (present vs. absent) and consumption setting (secret vs. non-secret). In study 6, we found the secrecy effect is stronger for people higher in NFC due to greater preoccupation with the secretly-consumed product. Further, our findings show that preoccupation mediates the interaction between NFC and consumption setting (secret vs. non-secret).

Does prompting secret consumption affect product evaluations? Across six studies, we show that it results in more extreme or polarized product evaluations. This effect was observed across different methods of prompting secret consumption, different product categories (cookies, chocolate), consumption settings (public vs. private), and research settings (lab, field).

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# Consumer Agency in an Era of Boycotting and Boycotting

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## Paper #1: Immigration, Abortion, and Gay Marriage – Oh My!

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## Paper #2: Unintended Customer Consequences of Corporate Lobbying

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Kelly D. Martin, Colorado State University, USA

Neeru Paharia, Georgetown University, USA

Sandeep Arora, University of Manitoba, Canada

## Paper #3: Market Structure and Firm Engagement in Divisive Political Issues

Chris Hydock, Georgetown University, USA

Neeru Paharia, Georgetown University, USA

Sean Blair, Georgetown University, USA

## Paper #4: Who Gets Credit? Who Gets Blame? The Role of Agency in Ethical Production

Neeru Paharia, Georgetown University, USA

### SYMPOSIUM OVERVIEW

With increasing frequency, consumers are wielding their power in the market through acts such as boycotts and “boycotts” in order to demonstrate their agency, express their views, and hold companies accountable. Brands have also recently been taking active political positions both voluntarily and involuntarily (e.g. in February of 2018 several firms such as Delta Airlines, Dick’s Sporting Goods cut ties with the National Rifle Association). These trends bring up a number of relevant questions: Should brands take active political positions? Should they lobby? Should they give consumers power? From a consumer’s perspective, what are the consequences of such actions? This session explores a wide range of factors related to the topics of consumer agency and brands’ political actions, addressing a number of critical issues in light of these recent trends. The first paper by *Weber, Hydock, Joireman, and Sprott* provides evidence of firm political advocacy (FPA) as a new phenomenon, and demonstrates that FPA interacts with consumers’ political orientation, and differentiates FPA from corporate social responsibility. Because little is known about how consumers respond to potentially-divisive FPA, this work provides novel perspectives on a growing phenomenon.

The second paper by *Vadakkepatt, Martin, and Arora* investigates the role of corporate lobbying on customer satisfaction. Empirical analyses with an unbalanced panel of 164 publicly traded firms, tracked from 1998 to 2014, show that firm lobbying is significantly, negatively related to customer satisfaction. Importantly, customers need not know about a firm’s lobbying activities for it to impact customer satisfaction. However, subsequent analyses with customers shows that when they are made aware, satisfaction suffers further.

The third paper by *Hydock and Paharia* explores the conditions under which firms should (or should not) take active political positions for issues unrelated to their business (e.g. gun control, gender and bathrooms, etc.). This work demonstrates that it depends on how many players are in the market, and whether the firm is a first mover. When there are only a few player in the market, taking a political position can hurt, but when there are many players in the market, it can help. Further, firms benefit most when they are the first mover to

take a political position in a category. If they are the second mover, they should take the opposite political position.

The fourth paper by *Paharia* looks at agency at a more micro-level, demonstrating made-to-order business models increase consumers’ interest in ethical attributes. Because consumers feel more agency in the act of production they are more likely to weigh ethical attributes more heavily.

Taken together, this set of papers opens up several new avenues of research in the area of brands, politics, and agency. Each paper includes a complete set of experiments and provides process evidence that can stimulate new research ideas and provide insights in this emerging area. Given the recent trends, and applicable questions, this session is likely to appeal to a broad set of conference attendees interested in corporate social responsibility, agency, and political action.

## Immigration, Abortion, and Gay Marriage – Oh My!

### EXTENDED ABSTRACT

Firms’ involvement in the political process historically represented a lucrative strategy to pursue a firm’s financial interests by managing policy and reducing risk (Lawton McGuire, and Rajwani 2013). More recently, firms are increasingly taking positions on controversial issues; for example, in July 2012, Chick-Fil-A had donated approximately \$5.5 million to anti-gay groups and more recently, in February of 2018, a litany of major firms (e.g., Delta Airlines, Dick’s Sporting Goods) cut ties with the NRA following their continued fight against laws regulating gun ownership. In conjunction with firms’ increased involvement in divisive political issues, a recent Pew Research Center study (2017) revealed that, since 1994, American political values have shown increasing polarization, shifting from a unimodal distribution (where most people are moderate) toward a bimodal distribution (where most people are either quite liberal or conservative). Firms previously avoided this danger by engaging in less controversial social activism through Corporate Social Responsibility (CSR) initiatives, which resulted in positive outcomes for firms (Sen, Du and Bhattacharya 2016). However, given that consumers increasingly believe social change should come from business (Brownstein 2016), firms may feel heightened pressure to engage in political activism, despite the uncertain consequences. Accordingly, in the present paper, we develop and test an integrative framework capturing consumer responses to FPA.

Juxtaposing CSR and FPA, our core contention is that while CSR and FPA both convey what a firm values, FPA is more likely than CSR to convey the political values of a firm, which interact with consumers own political orientation. We report a series of studies shedding light on the recent rise in FPA (vs. CSR), how consumer political orientation influences responses to FPA, and how responses to FPA and CSR differ. Further, we demonstrate that while the interaction of FPA and consumers’ political orientation produces both positive and negative effects on consumers’ attitude toward a brand, it has disproportionately negative effects on willingness to pay (WTP) for the firms products.

In our first study, we document evidence of a rise in FPA over time, and specifically a greater rise in FPA than CSR. To address this question, we conducted an archival analysis of New York Times (NYT) articles published between 1970 and June 2017 (~4.1 million articles). A Poisson regression based on keyword selection and



coding of CSR vs. FPA articles over time revealed a significant interaction of year and article type ( $b = 0.097$ ,  $p < .01$ ), with simple slopes revealing a positive effect of year for CSR ( $b = 0.019$ ,  $p < .1$ ) and FPA ( $b = 0.103$ ,  $p < .01$ ), but a greater increase in FPA articles over time, motivating further investigation of consumers' response to FPA.

In our second study, we directly compare consumer attitudes to CSR and FPA as a function of consumers' political orientation (PO). Respondents read one of 20 scenarios resulting from a 2 (Type of Action: CSR vs. FPA)  $\times$  2 (Position: Liberal vs. Conservative)  $\times$  5 (Context) between-participants design; a (control) condition read that firm had decided to move offices. Participants indicated their attitude toward the company, which served as the primary measure. A set of analyses was conducted to illustrate the differential response to FPA vs. CSR. First, we fit participants' brand attitudes to unimodal vs. bimodal distributions. In all scenarios, FPA produced a bivalent response, but CSR produced a univalent response. We then compared CSR and FPA on several dimensions likely to differentiate the two actions. Relative to CSR, FPA was seen as significantly ( $p < .001$ ) more controversial ( $M = 5.21$  vs.  $3.23$ ), more likely oriented toward influencing social policy ( $M = 5.11$  vs.  $4.81$ ), less appropriate ( $M = 4.09$  vs.  $5.45$ ), and less oriented toward social responsibility ( $M = 4.43$  vs.  $5.44$ ). Finally, we ran a regression to assess the effect of brand action (FPA vs. CSR), brand position (liberal vs. conservative), and participant PO. The analysis indicates that, relative to CSR, FPA results in less favorable attitudes overall, and that firm FPA ( $\beta = .55$ ,  $p < .001$ ) interacted with consumer political orientation to a greater extent than CSR ( $\beta = .13$ ,  $p < .001$ ). Together, these results suggest consumer responses to FPA and CSR are fundamentally different.

In our third study, we demonstrate that while FPA induces a bivalent effect on attitude, it has a negative effect on WTP. That is while consumers' attitude toward a brand equally reflects the alignment and misalignment between firm FPA and their own PO, their WTP is disproportionately affected by misalignment relative to alignment of firm FPA and participant PO. In a study, participants read about two firms with similar offerings; they then read that one firm supports gender identity based bathroom laws (liberal FPA), biological gender based bathroom laws (conservative FPA), or moved offices (control). Participants then reported their attitude and WTP for each firm. For brevity, we report here that relative to the control condition, there was no effect on average attitude toward a firm engaging in FPA (collapsing liberal and conservative positions); some consumers attitudes increased, some decreased, but the net effect was null. However, relative to the control condition, we see that when a firm engaged in FPA, WTP for their products decreased (22 cents,  $p < .01$ ).

The present work offers four key contributions. First, by examining the intersection between consumers' and firms' political orientation, we complement and extend recent research on political orientation at the consumer and firm levels, which has largely developed along separate lines. Second, we underscore the generalizability of the FPA phenomenon by studying responses across a range of contexts. Third, we examine whether consumers' tendency to avoid politically-misaligned firms outweighs their tendency to gravitate toward politically-aligned firms, highlighting an important asymmetry in responses to FPA. Fourth, in differentiating FPA from CSR, we show that while political orientation does influence responses to CSR, FPA is much more likely to be interpreted through a political lens, resulting in bivalent, more politically-polarized, and less favorable responses.

## Unintended Customer Consequences of Corporate Lobbying

### EXTENDED ABSTRACT

Corporate lobbying, defined as "any communication made on the behalf of a client to a member of Congress, congressional staffers, the President, White House staff and high-level employees of nearly 200 agencies, regarding the formulation, modification or adoption of legislation" (The Center for Public Integrity, Lobbying FAQ, 2006), is the most common form of corporate political investment in the United States (Hillman et al. 2004; Chen, Parsley and Yang 2015). Firms devote millions of dollars to lobbying, with many Fortune 500 companies spending more on lobbying than on taxes (Huffington Post 2012). In fact, lobbying has become such an integral part of a firm's non-product market strategy that today, many firms house their own, internal lobbyists. Although most companies still prioritize spending in their product market environments, lobbying expenditures have swelled to a point that U.S. companies now spend more on lobbying the House and Senate than the amount spent by taxpayers to operate these legislative wings (Drutman 2015). Evidence strongly suggests that lobbying is increasing, and only will continue to do so (Martin et al. 2018).

Given growing lobbying prevalence, understanding whether and how lobbying impacts customers is of crucial importance to academics and practitioners alike. Yet, while studies have examined the impact of lobbying on a firm's financial market performance (e.g., Borisov, Goldman and Gupta 2015; Chen, Parsley and Yang 2015), to date no study has examined the manner in which a firm's lobbying can affect its customers. Indeed, there is reason to believe that a firm's lobbying efforts can have significant customer effects mainly because customers disapprove of business-government interconnections (Public Affairs Council 2017) and a firm's involvement with politics is the number one cited motive for customers to boycott a brand (YouGov 2017; see also Klein, Smith, and John 2004). Against this backdrop, the current research examines the relationship between lobbying and customer satisfaction, a leading measure of customer reactions to a firm's products and a marketing metric that has been shown to impact a firm's accounting and financial measures of performance (e.g., Fornell et al. 2006; Fornell et al. 2016).

More precisely, we examine two pathways through which lobbying can impact customer satisfaction – the firm pathway and the customer pathway. In the firm pathway, lobbying impacts customer satisfaction through its effect on the product market environment and does not rely on customer knowledge of a firm's lobbying efforts. In the customer pathway, lobbying impacts customer satisfaction through customer knowledge and potential customer disapproval of a firm's lobbying efforts. Importantly, while we expect lobbying's impact on customer satisfaction through the customer pathway to be negative, a priori it is unclear how lobbying impacts customer satisfaction through the firm pathway. On the one hand, a firm's lobbying efforts can positively affect customer satisfaction by allowing firms to secure scarce and valuable resources to improve product offerings to the benefit of customers, thereby enhancing satisfaction (Cameron 2012; Duchin and Sosyura 2012). On the other hand, lobbying can also negatively affect customer satisfaction by diverting a firm's attention from product markets to government affairs. Such a shift in focus may either neglect or damage core value producing activities which include those that support customer expectations, perceived quality, and perceived value—widely acknowledged satisfaction determinants (e.g., Anderson and Sullivan 1993).

We examine the effect of lobbying on customer satisfaction through the firm pathway using an unbalanced panel of 164 public



firms tracked over 16 years. We then explore how customers respond to firm lobbying knowledge using experiments with 700 customers and the actual companies and products they use. Findings contribute to marketing theory and practice in four important ways.

First, this research is a foundational study linking firm lobbying (as opposed to other areas of strategic focus) to customer mindset metrics, which are an underutilized but centrally important performance outcomes in marketing (Katsikeas et al. 2016; Kumar 2016). In spite of the many benefits firms seek through lobbying, as well as their heightened spending on it, we find that lobbying hurts satisfaction regardless of whether customers know the extent to which firms lobby. This finding is especially telling given that lobbying has positive effects on firm performance metrics (e.g., Martin et al. 2018).

Second, we disentangle how the particular reasons for which companies lobby can differentially affect customer satisfaction. To the best of our knowledge, this is the first study to examine individual effects of specific lobbying issues on any firm performance outcome. We analyze lobbying issue effects on customer satisfaction in two stages. First, we aggregate all issues into either product market or non-product market classes, and find only product market issues significantly affect customer satisfaction. We then narrow focus to specific product market issues related to a firm's advertising and innovation efforts. We find lobbying for advertising issues increases customer satisfaction while lobbying for patent issues lowers customer satisfaction, supporting our assertion that it is not just how much the firm lobbies but also what the firm lobbies for that matters. Further testing shows key firm stakeholders (i.e., customers and investors), may have different perspectives of what lobbying issues are important.

Third, we contribute to knowledge by demonstrating both a firm-side and a customer-side route through which lobbying can affect satisfaction. The set of effects borne out in our secondary data are closely mirrored through customer experiments where respondents report on lobbying behaviors of companies whose goods and services they already use. For firms, this evidence suggests that it is not just that complacency may shift firm focus away from offering customers greater value, and hence hurting satisfaction. Our findings show that growing disapproval of business-government relationships also may encourage negative customer behaviors.

## Market Structure and Firm Engagement in Divisive Political Issues

### EXTENDED ABSTRACT

Recently, brands have increasingly taken divisive political positions on issues that are unrelated to their core offerings. For example, Chick-fil-a's (Amazon's) CEO came out against (for) gay marriage, Hobby Lobby sought exemptions on covering birth control, Paypal dropped plans for an office in North Carolina following the state's bathroom bill, Microsoft denounced DACA repeal, and a handful of brands dropped programs tied to the NRA, due to their position on gun regulation. While these positions might be spurred by a variety of events, come in a variety of forms, and be attributable to the brand directly or indirectly, they similarly involve taking sides in a divisive socio-political debate.

This behavior makes sense given consumers are increasingly looking for corporations to spur change (Brownstein 2016). However, at the same time, Americans have become more polarized politically, suggesting there are few political positions a brand can "safely" take. Taking a position on a divisive issue by nature results in some consumers supporting/opposing it. What's more, existing research suggests that consumers may react more negatively to brands'

sociopolitical stance that they oppose than positively to brands' sociopolitical stance they support; consumers punish brands more for unethical CSR relative to ethical CSR (Folkes and Kamins 1999; Trudell and Cote 2009).

Given the greater negative response toward brand actions consumers disliked compared to the positive response to brand actions consumers favor, we would anticipate that when a brand takes a divisive political stance (assuming the population is evenly split on the issue) that consumers would be less likely to choose that brand over a competitor, relative to when they did not take a divisive political stance. However, literature on consumer choice tells us that choice context can have an important impact on consumer's decisions (Chernev 2003; Sela, Berger, and Liu 2009). Specifically, when provided with a larger choice set, consumers attempt to make the choices they feel are most justifiable (Sela, Berger, and Liu 2009). Accordingly, we anticipate that market structure, the number of competitors in the market, will moderate the effect of brands' divisive socio-political stances on likelihood of choosing a brand relative to a competitor. Specifically, because larger choice sets drive consumers to make more justifiable choices, in a more competitive market a brand that takes a divisive socio-political position will be more likely to be chosen, relative to when it does not take a divisive political position.

In our first three experiments, we test this hypothesis – with three types of divisive socio-political issues – as participants choose a shirt; participants randomly assigned to a competitive (15 brands each offering on shirt) or oligopoly (2 brands, each offering a shirt) market condition. In the experimental condition, participants read that one of the brands took one side of a divisive socio-political issue; experiment 1a "support Democrats/Republicans," experiment 1b "support gun control/rights," experiment 1c "support gender identity/biological gender." While one position may invoke greater support than its opposite (e.g. 70/30, 40/60) – by collapsing across positions and comparing the net effect of making a politically divisive position to the control, we simulate the response to a brand taking one side of a 50/50 issue.

In each study we see an interaction of market structure and condition (socio-politically divisive issue vs control),  $ps < .05$ ). Further, we see that in an oligopoly, consumers were less likely to choose a brand that took a divisive socio-political position (Experiment 1a and 1c  $ps < .05$ , Experiment 1b  $p = .2$ ), but in a competitive market (15 competitors) consumers were more likely to choose a brand that took a divisive socio-political position ( $ps < .05$ ). Notably, in experiment 1c participants were told that they would actually (2.5% chance) really receive their choice.

In our next study, we provide a boundary condition for the positive effect of divisive socio-political stances on consumer choice. Specifically, because greater choice set size leads consumers to make more justifiable choices, we anticipate that when a second brand follows a first, and makes the same divisive stance, consumers will not be more likely to choose them as doing so would be less justified than choosing the courageous first brand. Following this logic, we should anticipate that if the second brand takes the opposite position, it will improve that brand's likelihood of being chosen relative to in the control condition, because among those supporting this "opposite" side of the divisive socio-political position this is the only justifiable choice. Accordingly, study 2 involved 4 conditions all in a competitive market for running shoes (10 brands) where a first mover takes a position (pro-life or pro choice) and a second mover takes no position (condition 1), the same position (condition 2), or the opposite position (condition 3). There was also a fourth control condition where the first mover and second mover do not take posi-

tions. The first mover increased market share relative to the control (10%) in all conditions (second mover no position: 25%,  $p < .001$ , second mover same position: 25%,  $p < .001$ , second mover opposite position: 30%  $p < .001$ ), but the second mover only increased market share when taking the opposite position to the first mover (22%) relative to the same position (7%,  $p < .001$ ) or the control condition (8%,  $p < .001$ ).

Over four studies, we demonstrate that two important market variables impact consumer choice behavior following brands' divisive socio-political positions. Specifically, because in competitive markets consumers choose more justifiable brands, they are more likely to choose a brand taking a divisive stance relative to in an oligopoly. Further, we find that brands taking divisive socio-political stances are only seen as justifiable choices when they are the first to take a particular side, suggesting that for follower brands to benefit from divisive positions in a competitive market, they must take a unique position.

### Who Gets Credit? Who Gets Blame? The Role of Agency in Ethical Production

#### EXTENDED ABSTRACT

Nike offers consumers the ability to customize their own shoes with Nike ID. Custom Ink allows customers the opportunity to design their own t-shirts. On-demand printing companies allow customers to order out-of-print and rare titles. The dominant wisdom of these made-to-order business models is that consumers want more ability to tailor product attributes to increase preference fit (Franke, Schreier, and Kaiser 2010). However, allowing consumers to have greater control over product attributes also blurs the lines of who is the producer and who is the consumer.

Recent research has looked at how consumers value customized products based on *product attributes* (e.g. style, color, etc.) (Franke, Schreier, and Kaiser 2010). The present research builds on this work by examining how consumers respond to *process attributes* when given more agency. We argue there is an unintended consequence of agency – that consumers will weigh process variables differentially between when they assume the role of a consumer (no control over production) versus when they assume the role of a producer (some control over production). We theorize that when consumers are given agency as producers, they are explicitly given power to tailor their own product attributes, but also experience an unintended consequence of assuming greater responsibility and agency for process attributes. Specifically looking at process variables that have been defined as ethical attributes in the marketing literature (Irwin and Walker Naylor 2009) (e.g. environmental and labor) we explore how consumers view ethical process attributes when they have a role in production. We find that when consumers have “producer agency” (e.g. ordering products on demand, customization, preorders), they disfavor products made with negative ethical process attributes more than if they only had “consumer agency” (e.g. buying what is already in inventory). Furthermore, we find this effect is reversed when there are more positive ethical process attributes (e.g. fair trade production, recycled products). Because consumers feel more responsible for production, producer agency can lead to feelings of anticipated guilt or gratification depending on the favorability of the production process. Finally, we explore how diffusion of responsibility plays a role.

In study 1, with 527 Mechanical Turk participants using a 2 (agency: consumer agency vs. producer agency) X 3 (ethicality: negative vs. control vs. positive) between subjects design, participants considered the purchase of a bag. In the consumer agency conditions participants were told the bag was in inventory. In the producer

agency conditions participants were told the bag would be custom-made after it was ordered. In the positive and negative conditions participants were told whether the company payed a living wage or not. In the control condition no ethical information was given. Participants rated their purchase intentions, and anticipated feelings of guilt and gratification.

We found a significant interaction between agency and ethicality ( $F(1, 523)=5.62, p=.004$ ) on purchase intention. In the negative conditions, participants indicated a lower purchase intention in the producer agency condition than in the consumer agency condition ( $M=2.14$ , vs.  $M=3.02$ ;  $F(1, 523)=9.24, p=.002$ ); there was no significant difference based on agency in the control condition or in the positive conditions. In the negative conditions, guilt mediated the relationship between agency and purchase intentions (guilt: .22, CI: .04, .55).

In study 2 we used a mixed design to better control for a price quality trade-off for ethical products. 361 student participants were randomly assigned to a consumer agency or a producer agency condition and read about both a book printed on standard paper for \$11 and a book printed on recycled paper for \$14. In the consumer agency conditions they were told the book was in inventory, and in the producer agency condition they were told it would be printed on demand. We again found a significant interaction ( $F(1, 356)=9.32, p=.002$ ). Participants indicated a lower purchase intention for regular version of the book in the producer agency condition than in the consumer agency condition ( $M=6.69$  vs.  $M=7.24, t(357)=2.53, p=.01$ ), but indicated a significantly higher purchase intention for the recycled version of the book ( $M=3.94$ , vs.  $3.31, t(358)=2.67, p=.008$ ). Through mediation analyses we found that participants anticipated feeling more guilt with the regular version of the book and more gratification with the recycled version of the book in the producer agency condition compared to the consumer agency conditions.

In study 3, our goal was to attenuate the effect by addressing feelings of consumer diffusion. We predicted that we could reduce feelings of diffusion in the consumer agency condition by limiting the number of items in stock. 242 Mechanical Turk participant were assigned to one of three between subjects conditions (producer agency, consumer agency, and low diffusion). Participants were taken through a process of choosing a shirt to increase realism. In the consumer agency and low diffusion conditions participants were told this shirt was being chosen from inventory. In the producer agency condition participants were told this shirt was being custom made. After making choices about the shirt's physical attributes participants were told they could pay an additional \$4.99 for the shirt to be fair trade. In the low diffusion condition participants were then told there was only one standard shirt and one fair trade shirt left in inventory.

We found a significant effect of condition on purchase intentions ( $F(1, 236)=3.67, p=.027$ ). Participants indicated a higher purchase intention for the fair trade option in the producer agency condition than in the consumer agency condition ( $M=4.0$  vs.  $M=3.13, t(236)=2.44, p=.016$ ). Participants also indicated a higher purchase intention in the low diffusion condition than in the consumer agency condition ( $M=3.94, SD=2.15$  vs.  $M=3.13, SD=2.1, t(236)=2.31, p=.022$ ).

A final study 4 demonstrates a similar effect of producer agency in a field experiment using Facebook's advertising platform. This research demonstrates how agency in production can influence consumer behavior with respect to the production process. We found that producer agency increases the importance of ethical process attributes. Accordingly firms can use producer agency to enhance (or diminish) the importance of ethical attributes.

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# Size and Shape Matter

Chairs: Camilla Song, University of Florida, USA  
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## **Paper #1: “Slim-As-Luxury” Effect: Product Shape as Input to Luxury Perceptions**

Ji (Jill) Xiong, National University of Singapore, Singapore  
Yu Ding, Columbia University, USA  
Gita V. Johar, Columbia University, USA

## **Paper #2: “But, will you think it’s important to use mouthwash?” How Visual Communication of a Set Impacts Perceived Set Completeness and Item Importance**

Miaolei (Liam) Jia, University of Warwick, UK  
Xiuping Li, National University of Singapore, Singapore  
Aradhna Krishna, University of Michigan, USA

## **Paper #3: Changing the World, One Word at a Time: The Effect of Font Size on Prosocial Intention**

Rima Touré-Tillery, Northwestern University, USA  
Ayelet Fishbach, University of Chicago, USA

## **Paper #4: The Unbearable Smallness of Being: How Feeling Physical Small Influences Decision Delegation**

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Yanping Tu, University of Florida, USA  
Rima Touré-Tillery, Northwestern University, USA

### **SESSION OVERVIEW**

Size and shape are two basic dimensions of product design and shopping environment. Not only do they influence our perceptions and preferences of products or product assortments (e.g., Maimaran and Wheeler 2008; Raghurir and Krishna 1999), but they also change our decision processes in fundamental ways (Meyers-Levy and Zhu 2007). In this symposium, we present four papers that explore the impact of size and shape, with a focus on two specific outcomes—judgment of products and product sets (papers 1 and 2) and inferences of outcome efficacy and decision efficacy (papers 3 and 4).

**Paper 1** asks whether the shape of a product—slim or normal— influences how luxurious the product appears. The authors propose that, because (1) consumers evaluate products in the same way as they evaluate human body shape and (2) people with higher socioeconomic status are typically slimmer, consumers perceive slim-shaped products as more luxurious than normal-shaped ones. Further, this slim-as-luxury effect is stronger among those who endorse the link between body slimness and high status more.

Moving to evaluations of a set of products that jointly fulfill the same need (e.g., an oral care collection which includes toothpaste, mouthwash and dental), **Paper 2** finds that people perceive a set of products that are placed in a circular (vs. angular) shape to be more complete, and hence perceive each component to be more important. The authors further identify (1) the distinctiveness of visual cues and (2) the degree of familiarity with component items as two boundary conditions.

In the context of prosocial behavior, **Paper 3** documents that when people use a larger font size to fill out a pledge form, they infer their actions will be more impactful, which further leads to a greater prosocial motivation. Importantly, this effect occurs only when the donor’s primary motivation is to influence outcomes, rather than to signal that they care (i.e., focusing on outcome efficacy).

**Paper 4** investigates the consequence of feeling physically small, as a result of encountering larger-than-self stimuli in the shop-

ping environment. The authors reason that, people carry over the belief that a small body size means less control over one’s physical environment to decision making, and experience less decision efficacy when feeling physically small. To cope with this negative state, they delegate decisions (a direct resolution path) when an external decision agent appears to possess efficacy (e.g., group consensus, expert advice), but rely on themselves (a symbolic resolution path) when the agent does not possess efficacy (e.g., a random recommendation algorithm).

This session contributes to the literature on how physical attributes in the marketing environment influence evaluations of products (papers 1 and 2) and inferences about one’s action and decision efficacy (paper 3 and 4). It will appeal to a wide audience interested in sensory marketing, prosocial behavior and compensatory consumption.

## **“Slim-As-Luxury” Effect: Product Shape as Input to Luxury Perceptions**

### **EXTENDED ABSTRACTS**

In an increasingly crowded marketplace, product design plays a critical role in drawing consumer attention and engagement. Product shape is one element of design and different product shapes can be observed within the same product category. For example, different beverage brands use distinct bottle shapes to distinguish themselves from each other. In early 2017, Fiji released its new slim-shaped water bottle to fit consumers’ active lifestyle. Galliano, an Italian herbal liqueur, is well recognized for its notably skinny and tall bottle shape.

Past findings suggest that holding the absolute volume constant, slimmer containers (i.e., greater height/weight ratio) are perceived to be bigger (Raghurir and Krishna, 1999), and therefore consumers believe that they have consumed more liquid from a slim (vs. wide) container (Wansink and Ittersum, 2003). Through its impact on perceived volume, the slimness of a product package has also been found to affect product preference and purchase intention (Raghurir and Greenleaf 2006). However, little is known about how product shape can influence consumers’ perception of the product value. We propose that consumers evaluate product shape in the same way that they evaluate human body shape. Specifically, because of various reasons (e.g., healthier food and more exercise), people who have higher socioeconomic status are more likely to maintain a slim body shape, especially in developed countries (McLaren 2007; Pampel, Denney, and Krueger 2012). Moreover, people have internalized this association between slim body shape and its symbolic value of high status (Rudman 2004). Given that people tend to imbue the features of human beings to objects and nonhuman creatures (Epley, Waytz, and Cacioppo 2007), we hypothesize that people generalize their belief about human body shape and its association with social status onto products.

Therefore, we propose a “slim-as-luxury” effect, such that people perceive slim-shaped (vs. normal-shaped) products as more luxurious, and posit that the effect is stronger for people who believe that high status individuals tend to be slimmer than lower-status individuals. We conducted five experiments to test our hypotheses.

Experiments 1A ( $n = 116$ ) and 1B ( $n = 100$ ) tested the basic slim-as-luxury effect. In Experiments 1A, a within-participants design, participants were asked to draw the contours of two beverage



bottles, one for high-end and one for low-end market. The ratio of height/width served as the dependent measure of the bottle's slimmness. Results showed that participants drew a larger ratio for the high-end (vs. low-end) market beverage ( $M_{high} = 3.71$  vs.  $M_{low} = 2.71$ ;  $t(115) = 5.92, p < .001$ ). Experiment 1B replicated the effect with a between-participant design, holding the height of the bottles constant. Results from both studies demonstrate that people tend to draw slimmer bottles for a luxury beverage than for a non-luxury beverage, supporting our slim-as-luxury hypothesis.

Experiment 2 ( $n = 220$ ) tested the slim-as-luxury effect in a gift-giving context with a choice measure. Participants read a gift-giving scenario that involved making a choice between two fitness trackers. One tracker was more functional with a normal shape and the other one was less functional with a slim shape. Participants were asked to choose between the two fitness trackers for their friend, who was described as either an exercise-lover or an exercise-lover with luxurious tastes. A chi-square test revealed that participants were more likely to choose the slim tracker as a gift for their luxury-oriented friend (40%) than for their non-luxury-oriented friend (16%;  $\chi^2(1) = 15.18, p < .001$ ). Results from Experiment 2 supported our proposed slim-as-luxury effect in a product choice context, suggesting that consumers may choose a slimmer product when they focus on the symbolic value of products, even at the cost of sacrificing functionality.

Experiment 3 tested the proposed mechanism by examining whether consumers' beliefs about status-associated body shapes would moderate the slim-as-luxury effect. A pretest showed that people in the U.S. believe high status people are slim whereas people in India do not hold the same belief. Participants from the U.S. and India were recruited (279 from the U.S. and 384 from India) to evaluate the luxuriousness of a given product, which was either a slim-shaped or a normal-shaped air purifier (1 = *not luxurious at all*, 9 = *extremely luxurious*). U.S. participants rated the slim-shaped (vs. normal-shaped) air purifier as more luxurious ( $M_{slim} = 7.24$  vs.  $M_{normal} = 6.71, F(1,654) = 5.25, p = .017$ ) compared to Indian participants who rated the normal-shaped (vs. slim-shaped) air purifier as more luxurious ( $M_{slim} = 6.30$  vs.  $M_{normal} = 6.86, F(1,654) = 7.47, p = .005$ ). The interaction effect was significant ( $F(1,654) = 12.35, p < .001$ ).

In Experiment 4, we measured participants' beliefs about human body shape and status, rather than using country as a proxy measure. We used a 2 (product shape: normal vs. slim; between)  $\times$  2 (product: chocolate and speaker; within) mixed factorial design and measured beliefs. Participants ( $n = 121$ ) rated the luxuriousness of a chocolate and a speaker, either with a slim or normal product shape, on a 9-point scale. They also indicated their belief about the status-associated with body shapes by selecting the body type that represented high status people (1 = very slim, 7 = very wide). As hypothesized, for both products, the results yielded a significant interaction effect between product shape and people's belief ( $b_{speaker} = -.95, t(117) = 2.76, p = .007$ ;  $b_{chocolate} = -1.12, t(117) = -3.07, p = .003$ ), demonstrating that the slim-as-luxury effect was stronger for participants who believed that high status people tend to have a slim body shape.

Results from five experiments support the hypothesis that people rate slim (vs. normal-shaped) products as more luxurious. The effect is driven by beliefs that high status people tend to have a slim body shape. This belief regarding human body shape is overgeneralized to products. Further research is needed to investigate the boundary conditions for this effect as well as to establish how the shape cue interacts with other cues (e.g., exclusiveness) to affect consumers' luxury perceptions.

## "But, will you think it's important to use mouthwash?" How Visual Communication of a Set Impacts Perceived Set Completeness and Item Importance

### EXTENDED ABSTRACTS

Consumers frequently utilize a "set" of products to achieve an overarching goal. For example, they may use toothbrush, toothpaste, dental floss, and mouthwash to keep their teeth healthy. How can marketers increase the likelihood that all these products that aim to achieve the goal of "keeping teeth healthy" are purchased, and that all necessary actions are performed?

Building on the literature on the perceived completeness of *single* objects (Hagtvedt 2011; Sevilla and Kahn 2014), we propose the concept of perceived *set* completeness, and define it as "the state or condition of having all the necessary or appropriate parts."

In this research, we focus on how visual communication of a set of items can impact perceived set completeness, and thereby affect the perceived importance of the components of the set. Extending recent work on circular (vs. angular) shape effects (Jiang et al. 2016; Zhu and Argo 2013), we propose that circular (vs. angular) shapes are associated with a greater sense of completeness. Therefore, having a set of items placed in a circular (vs. angular) shape would increase consumers' perceived completeness of the set, and in turn increases the perceived importance of each component of the set.

We first conducted a pilot study to test the strength of association between circular shape and completeness. Participants ( $n=118$ ) were shown six shapes (i.e., triangle, square, rhombus, circle, rectangle, and trapezium) and asked to indicate which shape gave them the greatest feeling of completeness. We found that 67.8% of the participants indicated that circle gave them the greatest feeling of completeness (32.2% chose one of the five angular shapes;  $p < .001$ ).

Next, study 1 examined the effect of shape on set completeness perception. Participants ( $n=125$ ) were asked to view a flyer on the prevention measures for the Zika virus. When the study was conducted, the Zika virus was widespread in the city. Four prevention measures were listed in the flyer and each was illustrated with a figure and verbal descriptions. In the circular (vs. angular) condition, the measures were grouped in a circle (vs. square). After the participants have viewed the flyer, they were asked to indicate the extent to which the four measures formed a complete prevention process for the Zika virus (1 = not at all, 7 = very much). An ANOVA revealed that participants perceived the set of measures to be more complete when the measures were grouped in a circular (vs. angular) shape ( $M_{circular} = 4.75, M_{angular} = 4.26; p = .02$ ).

Study 2 tested the effect of shape on behavior. Participants ( $n=82$ ) were shown either a circular or square plate of similar size with four partitions, and were asked to pick as many snacks as they wanted. Each partition contained a type of snack. Using the variety of the snacks picked by participants (minimum = 1, maximum = 4) as the dependent variable, an ANOVA revealed that participants picked more types of snacks when the snacks were placed in a circular (vs. angular) plate ( $M_{circular} = 1.84, M_{angular} = 1.44; p = .035$ ). Similarly, using the total number of snacks picked by participants as the dependent variable, an ANOVA revealed that participants also picked more snacks when the snacks were placed in a circular (vs. angular) plate ( $M_{circular} = 2.21, M_{angular} = 1.54; p = .005$ ).

Study 3 investigated whether set completeness mediates the effect of shape on component importance. Participants ( $n=123$ ) viewed an ad for an oral care product collection (including toothpaste, mouthwash, and dental floss). In the circular (vs. angular) condition, the collection was grouped in a circle (vs. square). Two dependent variables were measured: (1) the completeness perception of the set;

and (2) product importance. We asked participants to rate the importance of mouthwash – which was not in the oral care routine for most participants. We found that a circular (vs. square) shape made participants perceive the product collection to be more complete ( $M_{\text{circular}} = 4.67$ ,  $M_{\text{angular}} = 4.30$ ;  $p < .05$ ), and the mouthwash to be more important ( $M_{\text{circular}} = 4.48$ ,  $M_{\text{angular}} = 3.97$ ;  $p = .05$ ). A mediation analysis further revealed that the completeness perception fully mediated the effect of shape on component importance.

Study 4 ( $n=293$ ) examined the moderating role of distinctive visual cues. We predict that distinctive visual cues (e.g., colors) will reduce completeness perception, and thereby attenuate the effect of circular shapes. We employed a 2 (shape: circle vs. square) 2 (component color: same-color vs. different-color) between-subjects design. In the same-color condition, we used the same design as we did in study 3. In the different-color condition, we used different background colors for the three component products. Participants responded to the same importance measure used in study 3. A two-way ANOVA revealed a significant interaction ( $p = .04$ ). Contrast analyses revealed that when the background of the components had the same color, a circular (vs. square) shape made participants perceive the mouthwash to be more important ( $M_{\text{circular}} = 4.48$ ,  $M_{\text{angular}} = 3.91$ ;  $p = .02$ ); when the components had different background colors, the shape manipulation did not affect mouthwash importance ( $M_{\text{circular}} = 3.96$ ,  $M_{\text{angular}} = 4.07$ ; *NS*).

Finally, study 5 ( $n=200$ ) tested whether familiarity with component items decreases the shape effect. We employed a 2 (shape: circular vs. angular) 2 (have been to New York: yes vs. no) between-subjects design with the first factor manipulated and the second factor measured. Participants first viewed an advertisement for New York City, which included five places. In the circular (vs. angular) condition, the places were grouped in a circle (vs. rectangle). The dependent variable was perceived set completeness. We found a marginally significant interaction ( $p = .08$ ). Contrast analyses revealed that for participants who had never been to New York, circular (vs. angular) shape made them perceive the set to be more complete ( $M_{\text{circular}} = 5.20$ ,  $M_{\text{angular}} = 4.71$ ;  $p = .07$ ); however, for participants who had been to New York before, shape did not affect set completeness perception ( $M_{\text{circular}} = 4.54$ ,  $M_{\text{angular}} = 4.67$ ; *NS*).

## Changing the World, One Word at a Time: The Effect of Font Size on Prosocial Intention

### EXTENDED ABSTRACTS

Expecting to have an impact toward achieving a goal is a powerful motivator. In the context of prosocial behavior, research shows people are motivated to help when they expect to have an impact on the cause under consideration (Duncan 2004; Bartels 2006; Fetherstonhaugh, Slovic, Johnson, and Friedrich 1997; Jenni and Loewenstein 1997). For example, the mere illusion of impact created by providing donors with specific (vs. generic) information about how funds will be used (Cryder Loewenstein, and Scheines 2013) or by describing recipients as nearby (vs. far away; Touré-Tillery and Fishbach 2017) motivates people to give more. The present research goes beyond the content of charitable appeals to examine how the size of the font used to fill out a pledge form can influence people's expectations that they can have a prosocial impact, and hence their prosocial intentions.

Imagine filling out a charitable pledge form online to help provide school supplies to disadvantaged children, such that everything you type is in a font larger than (vs. the same size as) the rest of the form. Would you pledge more money? We propose and find across four studies, that producing such a visual effect increases people's

expectations of impact, leading them to express greater prosocial intentions (e.g., larger monetary pledges). In all experiments, the font-size manipulation started on the first screen of the survey, where participants provided their consent, and participants answer a filler question so they would experience the font size before making their pledges. Participants pledged real earnings or potential raffle winnings from completing the study. We modelled pledge amounts through zero-inflated Poisson regressions.

**Experiment 1** tested the effect of font size on pledge amounts and the self-inferential nature of this process. The experiment employed a 2 (font size: large vs. regular)  $\times$  continuous (self-diagnostics score) between-subjects design. Three hundred fifty-seven residents of a metropolitan area in the United States (219 female,  $Median_{\text{age}} = 35-44$ ;  $Mode_{\text{age}} = 25-34$ ) read a charitable appeal, completed a pledge form in a large (vs. regular) font, and completed the self-diagnostics scale (SDS, Touré-Tillery and Light, 2018) to measure the extent to which they tend to make self-inference from their own behaviors. We found participants pledged higher amounts in large (vs. regular) font ( $b = -1.15$  (.096);  $z = -11.96$ ,  $p < .001$ ). Furthermore, we found the predicted interaction of font size  $\times$  self-diagnostics ( $b = .029$  (.0023);  $z = 12.81$ ,  $p < .001$ ), such that this effect occurred only at higher levels of SDS ( $z$ s between 1.96 and 2.03,  $p$ s between .05 and .043).

**Experiment 2** tested the meditating role of expected impact, employing a 2 (font size: large vs. regular) between-subjects design. Two hundred US-based participants (96 female,  $M_{\text{age}} = 34.46$ ,  $SD_{\text{age}} = 11.07$ ) recruited from Amazon's Mechanical Turk (MTurk) read a charitable appeal, indicated the extent to which they would expect their donation to have an impact, and completed a pledge form in a large (vs. regular) font. We found participants who completed the form in a large font pledged more money ( $M = \$6.85$ ,  $SD = \$6.85$ ) than those who completed it in a regular font ( $M = \$5.80$ ,  $SD = \$5.81$ ,  $\beta = .12$  (.057),  $z = 2.05$ ,  $p = .041$ ;  $r = .16$ ). Finally, this effect was mediated by expected impact (Model 4:  $a \times b = 1.02$  (.38),  $z = 2.70$ ,  $p = .007$ );  $a = 1.01$  (.32);  $t(192) = 3.21$ ,  $p = .002$ ;  $b = .099$  (.015),  $z = 6.62$ ,  $p < .001$ ;  $c = .0073$  (.059),  $z = .12$ ,  $p = .90$ ).

In **Experiment 3** we tested the moderating role of expected impact, which we operationalized through the effectiveness of the charity. The experiment employed a 2 (font size: big vs. regular)  $\times$  3 (charity effectiveness: none/control vs. low vs. high) between-subjects design. Five hundred ninety-five participants (291 female,  $M_{\text{age}} = 54.96$ ,  $SD_{\text{age}} = 13.83$ ) recruited from a large consumer panel read a charitable appeal and completed a pledge form in a large (vs. regular) font. Depending on the condition, they also read that the charity under consideration is highly effective, highly ineffective, or they received no effectiveness information—as in previous studies. We found a predictable main effect of effectiveness, and replicated the font-size effect in the no-information condition: participants pledged larger amounts when writing in large font ( $M = 11.53$ ,  $SD = 7.72$ ) than in regular font ( $M = 8.94$ ,  $SD = 7.91$ ;  $b = 0.099$  (.044),  $z = 2.23$ ,  $p = .026$ ). However, there were no effects in the other two conditions.

Finally, **Experiment 4** tested the moderating role of donors' primary motivation: making an impact (outcome) versus signaling. The experiment employed a 2 (font size: large vs. regular)  $\times$  2 (motivational focus: outcome vs. signaling) between-subjects design. Three hundred and ninety-eight US-based participants (159 female,  $M_{\text{age}} = 32.99$ ,  $SD_{\text{age}} = 11.30$ ) recruited through Prolific Academic read a charitable appeal and completed a pledge form in a large (vs. regular) font. Depending on the condition, the appeal emphasized donating to "make a difference" or to "show that you care." We found the predicted interaction of font size  $\times$  motivational focus ( $b = .24$  (.079),  $z = 3.06$ ,  $p = .002$ ), such that the font-size effect emerged

only in the outcome condition ( $M_{\text{large}} = \$7.38, SD_{\text{large}} = \$6.88; M_{\text{small}} = \$5.67, SD_{\text{small}} = \$5.41; b = .19 (.057), z = 3.37, p = .001$ ).

Taken together, these results show the effect of font size on pro-social intentions stems from fluctuations in expected impact. Specifically, typing in a large (vs. regular) font increases people's expectations that their actions will make a difference, and this assurance in turn increases their motivation to act. These results have obvious implications for charitable organizations that solicit donations online. The results also suggest decision makers should consider font size when measuring pro-social intentions (e.g. voting intentions) to minimize systematic errors.

## The Unbearable Smallness of Being: How Feeling Physical Small Influences Decision Delegation

### EXTENDED ABSTRACTS

Consumers often encounter stimuli that make them feel physically small by contrast, such as when seeing background pictures that feature the vastness of nature during online shopping or standing in shopping malls with high ceilings. Because how consumers perceive themselves influences how they make decisions (Gao, Wheeler, and Shiv 2009; Touré-Tillery and Fishbach 2015), we explore the impact of feeling physically small on consumer decision with a focus on decision delegation.

Since a smaller body size inevitably means less control over one's physical environment (e.g., ant vs. elephant; toddler vs. adult), we propose that the carry-over effect of feeling physically small in the decision-making context is a weakened sense of decision efficacy, an aversive state. Further, we propose that people can either directly or symbolically resolve this "unbearable" state (see Mandel et al. 2017 for a review) by engaging in different levels of decision delegation. Specifically, when an external decision agent appears to possess efficacy (e.g., group consensus, expert advice), people engage in direct resolution by outsourcing the agent's efficacy, resulting in more delegation. On the contrary, when the external decision agent does not possess efficacy (e.g., a random recommendation algorithm), people engage in symbolic resolution by relying more on themselves, as the action of making decisions per se can bolster the sense of efficacy (Langer 1975; Su et al. 2016; Zuckerman et al. 1978), resulting in less delegation. Five studies tested this framework.

Experiments 1-3 tested the direct resolution path. In **Experiment 1**, we had participants select silhouettes of different sizes to represent themselves when the reference objects were larger than the self (e.g., a tall building; small condition) or of similar size to the self (e.g., a desk; control condition) (adapted from van Elk et al 2016; pre-tested), following which participants made brand choices with information on the majority's decisions (i.e., wisdom-of-the-crowd; adapted from Dong and Zhong 2017). We found that participants "copied" the majority's choice more often in the small ( $M=3.25, SD=1.52$ ) than control condition ( $M=2.82, SD=1.66, t(281)=2.28, p=.023$ ).

**Experiment 2** tested the mediating role of decision efficacy in the direct resolution path. Participants imagined shopping for a TV online and viewed images of four TV models, with either photos of the Milky Way (small condition) or a flower (control condition) as screensavers. They then wrote about their thoughts about the screensavers and reported confidence of making a wise TV choice (i.e., self-reported decision efficacy). Next participants read the specification information and learned that they can either make a choice by themselves or "choose the best-seller." Participants were more likely to choose the best-seller in the small (12.2%; 12/98) than control condition (4.1%; 4/101;  $(1)=4.23, p=.04$ ), and self-reported decision efficacy mediated the effect ( $=2.01; p=.044$ ; Iacobucci 2012).

**Experiment 3** used a moderation approach to test the theory, predicting that it only holds for individuals whose decision efficacy is chronically lower in a given context. We had participants make stock decisions (adapted from Huang et al. 2014) with the opportunity to delegate these decisions to a financial company, whose advertisement and brand logo employed images of giant mountains (small condition) or no images at all (control condition). Afterwards, participants took a financial literacy test (James et al. 2012). We found the predicted interaction of feeling small by financial literacy ( $p=.017$ ; floodlight region significant below 4.01), with the effect significant only among those low on financial literacy (i.e., with chronically low decision efficacy in this context).

**Experiment 4** tested the symbolic resolution path, by using a random algorithm which does not possess any decision efficacy as the external decision agent. We first elicited thoughts about feeling small (or not) by having participants view a picture of the galaxy and write down three thoughts in the format "In the vast universe, I..." or a picture of color blocks and wrote in the format "I..." We then offered participants an opportunity to win a lottery and measured whether they would like to select the lottery ticket by themselves or let a random algorithm decide for them. Results show that feeling small reduced the likelihood of using the random algorithm (12.3%; 10/81 vs. 25.4%; 18/71;  $(1)=4.26, p=.039$ ).

Finally, **Experiment 5** tested both the direct and symbolic resolution paths, using a 2 (feeling small vs. control)  $\times$  2 (majority's choice reflects decision efficacy vs. not) between-participants design. We first manipulated perceived self-size as in Experiment 1 and then had participants fill out either a Knowledge or Preference Survey (adapted from Griskevicius et al 2006), with information on the majority's choice. We informed participants that questions in the Knowledge (vs. Preference) survey had correct answers (vs. only elicited personal taste), and thus the majority's choice reflects the collective decision efficacy (vs. no information). We measured the frequency of following the majority's choice and found the predicted interaction ( $F(1, 275)=7.23; p=.008$ ). Whereas feeling physically small led participants to follow the majority's choice more often when answering the Knowledge survey ( $=4.60$  vs.  $=4.23, F(1,275)=2.84; p=.093$ ), the reverse was true when they answered the Preference survey ( $=3.46$  vs.  $=3.91; F(1, 275)=4.50, p=.035$ ). This interaction pattern rules out "feeling powerless" as an alternative since feeling powerless fosters a communal orientation (Rucker, Galinsky, and Dubois 2012) which increase compliance with others' decision regardless of others' decision efficacy.

Taken together, we show that feeling physically small lowers people's perceived decision efficacy and document two seemingly opposite paths that people use to resolve this "unbearable" state. Our research contributes to literature on compensatory consumption (Mandel et al. 2017) as well as offer implications on how subtle cues in marketing environment can influence choice delegation and compliance.

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# Soup to Nuts: A Complete Recipe for Goal-Pursuit Success

Chair: Adelle X. Yang, National University of Singapore, Singapore

## **Paper #1: The “Break-in” Effect: A Token Gesture Can Increase Task Initiation and Prevent Goal Abandonment**

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Babu Gounder, National University of Singapore, Singapore  
Rajesh Bagchi, Virginia Tech, USA

## **Paper #2: A Theory of Goal Maintenance: A Distinct and Vivid Pre-Goal Self Predicts Post-Goal Maintenance Behavior**

Elicia John, University of California Los Angeles, USA  
Hal Hershfield, University of California Los Angeles, USA  
Suzanne Shu, University of California Los Angeles, USA

## **Paper #3: Want to Stick to Your Goals? Think about “Dissimilar” Alternatives that You’ve Forgone!**

Hye-young Kim, Booth School of Business, University of Chicago, USA  
Oleg Urminsky, Booth School of Business, University of Chicago, USA

## **Paper #4: Mere and Near Completion**

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### **SESSION OVERVIEW**

Goals are not easy to attain. People commonly experience difficulty in almost every stage of goal pursuit from the initiation of goal-relevant behaviors, to the maintenance of goal progress, and to the completion of goal pursuit. How can we help people overcome the barriers to achieve success in goal pursuit? And how can we leverage psychological insights to facilitate people’s goal pursuit? This proposed session presents four papers that answer these questions in different stages of the goal pursuit process. From the initiation of goal pursuit (paper 1), to the maintenance of a goal (paper 2), the furthering of progress (paper 3), and to the completion of goal pursuit (paper 4), these four papers provide distinct and critical insights that effectively tackle the barriers in goal pursuit, and present substantial evidence on real behavioral consequences.

Yang, Gounder, and Bagchi examine the initiation stage of goal pursuit. They posit that people find the first step in task initiation to be extra daunting because it is perceived as a big step breaking the psychological barrier between pre-pursuit and in-pursuit phases. To help ease people into the in-pursuit phase, they propose and find that token “break-in” gestures, such as randomly marking task materials, can effectively increase the likelihood of task initiation and reduce the likelihood of goal abandonment.

John, Hershfield, and Shu test a theory of goal maintenance. They theorize that emotions elicited from the perceived discrepancy between the pre-goal self and the current self will keep motivating goal-congruent behaviors during goal pursuit and following goal attainment. In five studies, they find that making salient the past-versus-present contrast of the self in actual weight loss goal pursuits consistently leads to greater success in maintaining the progress achieved after a goal is attained.

Kim and Urminsky explore factors that enhance further progress in goal pursuit. They focus on how perceived similarity between forgone options informs goal progress and thus prompts more goal-congruent choices in subsequent goal conflict situations. In five experiments conducted in a variety of domains, they demonstrate that highlighting the dissimilarity between forgone options increases per-

ceived goal progress, which in turn increases the likelihood of goal-congruent choices.

Ruan, Polman, and Tanner investigate the completion of goals and identify a distinct source of motivation that comes into play near the end of goal pursuit – the pleasure from the mere completion of goal means, which is independent from that of achieving the goal reward per se. They show in a series of experiments how this previously overlooked factor contributes to the motivation towards goal completion and the evaluation of complete versus incomplete goal pursuits, shedding light on when and why people are most driven by goal completion.

In sum, these papers provide a comprehensive view on the process of goal pursuit, suggest new actionable behavioral interventions, and deepen our understanding of the barriers and facilitators to success.

## **The “Break-in” Effect: A Token Gesture Can Increase Task Initiation and Prevent Goal Abandonment**

### **EXTENDED ABSTRACT**

Many goal pursuits fail at the stage of task initiation—starting is half the battle, as many proclaim. Even when an initial task is well within one’s capabilities, the thought of task initiation can feel so overwhelming that people often end up procrastinating and eventually abandoning the goal altogether. How can people overcome their fear of task initiation and be less likely to abandon goals?

In this research, we examine a behavioral intervention for task-initiation failures. We theorize that the identification of a goal prompts people to categorize tasks by goal-relevance, which creates a virtual barrier between pre-pursuit and in-pursuit phases in their mental representation. Consequently, the small first step of task initiation tends to be perceived as a big step that breaks the virtual barrier and enters one into the in-pursuit phase. We thus posit a successful “nudge” intervention may rest in helping people accidentally cross this virtual barrier. In particular, we hypothesize that a token “break-in” gesture—a simple action conceptually irrelevant to the goal pursuit yet perceptually moves people from the pre-pursuit phase to the in-pursuit phase, can facilitate task initiation and reduce goal abandonment. Three experiments demonstrate the effectiveness of “break-in” token gestures (e.g., leaving inadvertent marks on task materials), including two studies with real behavioral consequences and one with process evidence on the role of perceived dauntingness. This research sheds new light on task initiation failures and joins the growing literature on leveraging behavioral insights to improve goal implementation (Dai, Milkman and Riis 2015, Rogers and Milkman 2016, Tu and Soman 2014).

In Study 1, 151 students were recruited to a laboratory for a take-home individual research assignment in exchange for a performance-based \$5 Amazon e-gift card. Participants were randomly assigned to 2 (break-in vs. control) between-subjects conditions. After learning about the topic of the take-home assignment, participants were given an honor code sheet and an answer sheet. The honor code, which participants signed and handed back to the experimenter, stated that participants would only use the internet for the assignment without help from others. The answer sheet, which participants took home inside a folder, contained further instructions about the assignment including questions to answer. After participants wrote down

## A Theory of Goal Maintenance: A Distinct and Vivid Pre-Goal Self Predicts Post-Goal Maintenance Behavior

### EXTENDED ABSTRACT

We develop and test a theory of goal maintenance which posits that individuals who achieve a life-changing goal – such as getting out of debt, becoming sober, or losing a substantial amount of weight – are more likely to maintain the progress achieved during goal attainment if they psychologically distance themselves from their pre-goal self and routinely engage in activities that activate memories of their past, less flattering self. This new model is an extension of self-discrepancy theory (Higgins, 1987), as it relates discrepancies in self-state representation to motivation and intertemporal behavior. We posit that the accessibility and closeness of the prior, pre-goal self, when activated, will continue to elicit emotions that motivate behavior of the current, improved self. We are currently applying this model of goal maintenance to weight loss maintenance. Through five studies, we explore whether accessibility and perceived closeness of the overweight past self predicts successful weight maintenance after a weight loss goal has been achieved.

Study 1, a survey of 400 Amazon Mechanical Turk subjects who reportedly lost at least 10% of their body weight, revealed correlational evidence that weight maintainers are more likely to see themselves as psychologically distant from their past, overweight selves and are also more likely to activate memories of their past, overweight selves compared to weight regainers. Regression analysis was performed on the survey dataset to determine what, if any, behaviors consistent with our proposed theory explain weight loss outcomes when controlling for demographic factors - such as age, race, and gender. Consistent with our theory, the analysis revealed that posting before-and-after pictures of oneself on social media ( $p < 0.1$ ), feeling motivated when thinking about weight regain ( $p < 0.01$ ), and feeling psychologically distant to one's past, overweight self ( $p < 0.01$ ) were predictive of weight maintenance.

Study 2, an online study of 220 participants from the school's Behavioral Lab subject pool who reportedly lost at least 10% of their body weight, provided evidence that manipulating the vividness of the past, overweight self activates implicit goal maintenance behavior, conducive to sustaining weight loss. We used willingness to pay (WTP) for healthy and unhealthy products and services to measure participant's motivation to maintain weight. Eligible participants were randomly assigned to three conditions: a baseline condition, where the past self was not made salient; a past self condition, where the past self was made salient; and a past self contrast condition, where the past self and closeness to the past self were made salient. The DV was a WTP task for specific products and services (e.g. an all-you-can-eat buffet, a pound of grapes, a slice of cheesecake, a one-on-one personal training session, and a one-hour tennis lesson). Figure 1 displays the results for all three conditions. A one-way MANOVA indicated that assignment to condition significantly affected participants' WTP ( $p < 0.0002$ ). Participant motivation levels to maintain weight loss increased when the past self was made salient ( $M = 11.06$ ,  $SE = 0.20$ ) and increased even further when the past self and closeness to the past self were made salient before the WTP task ( $M = 11.45$ ,  $SE = 0.19$ ), as compared to the baseline condition ( $M = 10.40$ ,  $SE = 0.19$ ). Accordingly, accessibility of the past self in memory and evaluations of closeness between the past self to the current self appear to work cooperatively to increase goal-related motivation.

Study 3, a text and sentiment analysis of over 400 blogs from a popular weight management website, demonstrated that those more

the honor code and their name, the experimenter handed them a pen with green ink to complete the answer sheet with, ostensibly for the digital transcription of their answer sheet. Participants were asked to either scribble on the upper margin of the answer sheet (break-in condition) or the honor code sheet (control condition) to test out this pen. Even though the scribble action was irrelevant to the content of the assignment, we theorize that the scribble on the answer sheet would serve as a token "break-in" gesture because leaving a mark on the task material would shift participants from the pre-pursuit phase to the in-pursuit phase and render the assignment task less daunting. By contrast, the scribbles on the honor sheet would not have such an effect because it belonged to the pre-pursuit phase.

Participants had about three weeks to submit their completed answer sheet. We recorded both the time of participants' initial access to the submission link and the time of task submission. The records indicate that more participants in the "break-in" condition initiated the task (52.0%) compared with those in the control condition (35.5%,  $\chi^2(1) = 4.16$ ,  $p = .041$ ,  $w = .17$ ). Moreover, more participants in the "break-in" condition (50.7%) completed the task compared with those in the control condition (32.9%,  $\chi^2(1) = 4.90$ ,  $p = .027$ ,  $w = .18$ ). The "break-in" gesture was effective at increasing both task initiation and goal completion. Among those who submitted the answer sheet, a similar number of questions were answered correctly between conditions ( $M_{\text{break-in}} = 3.61$  vs.  $M_{\text{control}} = 3.56$ ,  $t = .20$ ,  $p > .250$ ), suggesting similar motivation and task difficulty between conditions.

We further examined the effect of "break-in" gestures on reducing goal abandonment as a behavioral intervention in Study 2 and to shed light on the process in Study 3. In Study 2, 255 MTurkers completed two sequential surveys about the adoption of a new exercise routine at the start of a new year. Participants were asked to download a 2-page guideline for the exercise routine and to report back in two weeks. The "break-in" condition differed from the control condition in an ostensible attention check question, which either asked participants to manually highlight each instance of an arbitrary word in the document and save the highlights, or asked them to manually search for the same arbitrary word without highlighting the word. Two weeks later, more participants in the "break-in" condition reported having tried the exercise than those in the control condition, controlling for individual fixed effects (86.3% vs. 77.8%;  $b = .77$ ,  $SE = .37$ ,  $Wald = 4.34$ ,  $p = .037$ ).

In Study 3, 249 MTurkers were asked to imagine having to read a recently published scientific report in the next few days among other job duties. The first page of the printed report was either tainted by an accidental coffee spill or not, the image of which was visually presented to participants. Despite the stain from the spill being obviously goal-irrelevant and explicitly described as incidental, it reduced perceived task dauntingness ( $M_{\text{break-in}} = 4.13$ ,  $SD = 1.96$  vs.  $M_{\text{control}} = 4.67$ ,  $SD = 1.74$ ;  $t = -2.29$ ,  $p = .023$ ,  $d = .29$ ) and increased the self-reported likelihood to start the task as planned ( $M_{\text{break-in}} = 5.57$ ,  $SD = 1.40$  vs.  $M_{\text{control}} = 5.07$ ,  $SD = 1.68$ ,  $t(247) = 2.53$ ,  $p = .012$ ,  $d = .32$ ). Perceived dauntingness mediated the effect of the "break-in" token gesture on the predicted likelihood of task initiation (indirect effect  $b = .10$ ,  $SE = .05$ ,  $p < .001$ ,  $CI [.02, .23]$ ). No difference was found in other dimensions of task perception including difficulty and motivation. Last, an ongoing study was designed to shed more light on the underlying mechanism.

successful in weight loss and maintenance focus less on the future and use more discrepancy language than those less successful. Blog posts were evaluated using the Linguistic Inquiry and Word Count (LIWC) software (Pennebaker, Francis & Booth, 2007); specifically, sentiment categories that may indicate focus on the past self and distinctions between the past and current selves – including discrepancy, verb tense (i.e. past, current, future), compare, and difference scores – were analyzed. The regression results indicate that the blogs of those more successful in weight loss or maintenance express less negative emotions ( $p < 0.01$ ), are less future focused ( $p < 0.05$ ), and are more likely to express the cognitive process of discrepancy ( $p < 0.1$ ). Overall, the natural language processing analysis suggests that successful weight loss outcomes are associated with language that includes greater discrepancy content and is focused significantly less on the future.

Study 4 aimed to test these ideas in a causal setting. Using a longitudinal study of 32 subjects from the school's Behavioral Lab subject pool, Study 4 provided preliminary evidence that constant reminders of a past, overweight self through digital media can lead to more successful weight maintenance over time among individuals who recently met a weight loss goal. Participants assigned to a baseline condition received two inspirational quotes via email each week over a four-week period, and participants assigned to the past self contrast condition received the same inspirational quotes via email, but their messages also included their personal before-and-after weight loss pictures as a vivid reminder of their past selves. Over the four-week period, participants in the baseline condition gained 0.02% ( $SD = 1.52\%$ ) weight on average whereas those in the past self contrast condition lost 0.4% ( $SD = 2.21\%$ ) weight on average. These results are consistent with our theory. However, this effect did not reach conventional levels of statistical significance due to our small sample size. Seven subjects did not complete the study by participating in the final weigh-in.

In Study 5, we used the same methodology as Study 4, but we evaluated effects over 12 weeks instead of four weeks, and we recruited 49 subjects from the Behavioral Lab subject pool to participate in the study. Over the 12-week period, participants in the baseline condition gained 1.01% ( $SD = 2.20\%$ ) weight on average whereas those in the past self contrast condition gained 0.28% ( $SD = 2.68\%$ ) weight on average. The difference in weight change between conditions was not statistically significant at conventional levels; however, the weight increase in the baseline condition was statistically different from zero ( $p = 0.032$ ) whereas the weight increase in the past self contrast condition was not statistically different from zero ( $p = 0.60$ ), suggesting maintenance on average in the latter but not the former.

**Want to Stick to Your Goals?  
Think about “Dissimilar” Alternatives that You’ve  
Forgone!**

**EXTENDED ABSTRACT**

Past research demonstrates that thinking about forgone alternatives influences utility from a chosen option. Consumers obtain higher utility when choosing a virtue from a mixed set that contains both vices and virtues than choosing from a homogeneous set that only contains virtuous options (Dhar & Wertenbroch, 2012). Further, Sagi and Friedland (2007) suggest that when choosing from diverse alternatives, evaluations of a chosen option depend on the summed utility of all of the unchosen alternatives, not just the second-best alternative's utility.

We explore how the similarity of forgone alternatives impacts perceived goal progress and subsequent decisions. Specifically, we find that when consumers consider dissimilar (vs. similar) goal-inconsistent alternatives that they could have chosen, they believe that they have achieved more progress towards their goal. Further, they are then more likely to stick to the goal in a subsequent choice. However, considering dissimilar (vs. similar) unchosen options impacts goal perceptions only when the focal goal is personally relevant. Our findings are replicated in varying goal-conflict situations (saving vs. spending: study 1, donating vs. spending: study 2, healthy vs. tasty food: studies 3 to 5), including real choices (Study 5).

Study 1 ( $N = 124$ ) provides an initial demonstration of the effect of forgone-option similarity on perceived goal progress. We employed saving (vs. spending) as a widely shared goal—in our pre-test ( $N = 142$ ), 96% of people indicated they currently endorse saving as their active personal goal. All participants were first asked to write down how they would like to spend \$150 for themselves. Next, they were asked to briefly list two similar (dissimilar) alternative ways to spend the same amount of money, and explained why the three ways are similar (dissimilar) from one another. After the alternative-listing phase, participants imagined a situation in which they had decided to save an unexpected \$150 of income, instead of spending it on one of the alternatives. Participants then indicated how much progress, contribution, or achievement they think they would have made towards their savings goal (averaged into a perceived goal progress score,  $\alpha = .91$ ), as well as good feeling about themselves, decision satisfaction, and decision difficulty.

The manipulated similarity of considered alternatives significantly impacted perceived goal progress. Despite considering the same objective savings, participants who generated dissimilar alternative ways of spending reported higher perceived progress ( $M_{\text{dissimilar}} = 5.51$  vs.  $M_{\text{similar}} = 5.05$ ,  $p = .04$ ). However, option similarity did not yield any significant differences on the other measures, including choice difficulty.

In study 2 ( $N = 375$ ), we employed donation as a goal context to examine whether the personal relevance of a focal goal moderates the effect of option similarity on goal progress perception. The goal's relevance was manipulated by having participants read an article stressing the importance of either individual donors (like the participants) or of a few wealthy donors, and participants then generated alternative uses for donated money. When the goal was relevant, those who generated dissimilar (vs. similar) alternatives felt that donating yielded greater progress ( $M_{\text{dissimilar}} = 5.97$  vs.  $M_{\text{similar}} = 5.30$ ,  $p < .01$ ). However, when the donation goal was less relevant, similarity of the alternatives did not affect perceptions of donating ( $M_{\text{dissimilar}} = 5.45$  vs.  $M_{\text{similar}} = 5.45$ ,  $p = .98$ ). A 2 (similarity: similar vs. dissimilar) X 2 (salience: high vs. low) ANOVA confirmed a significant interaction ( $F(1, 371) = 5.87$ ,  $p = .01$ ), even after controlling for the attractiveness of the alternatives that participants generated.

Study 3 ( $N = 469$ ) extends the previous findings in three ways: 1) measuring pre-existing differences in individuals' goal relevance, 2) generalizing to a different goal context (dieting), 3) providing pre-set alternatives, instead of using self-generated alternatives. All participants imagined being on a diet and choosing to have apple chips instead of high-calorie snacks. They were shown 3 high-calorie alternative snacks they could have chosen, either in the same category (e.g., 3 different flavors of donuts) or in different categories (e.g., 1 donut, 1 cupcake, 1 chocolate), and evaluated perceived goal progress. Replicating our previous results, we observed a significant interaction between manipulated similarity and measured goal relevance (measured by Concern with Food and Eating subscale of Restraint Questionnaire [Herman and Mack 1975];  $F(1, 458) = 8.92$ ,  $p$



< .01). The more the dieting goal was personally relevant, the higher progress participants felt by forgoing dissimilar (vs. similar) goal-inconsistent alternatives.

Study 4 ( $N = 174$ ) measured subjective goal progress based on individuals' actual experiences, rather than an imagined situation, and tested the consequences for subsequent goal pursuit. As in previous studies, participants showed higher perceived goal progress when they were assigned to consider their own past dissimilar (vs. similar) unhealthy alternatives ( $M_{\text{dissimilar}} = 5.23$  vs.  $M_{\text{similar}} = 4.71$ ,  $p = .01$ ). Furthermore, when making a subsequent hypothetical choice, participants were more likely to choose a healthy food when they thought about dissimilar (vs. similar) unhealthy options to a prior healthy choice (51% vs. 83%,  $p < .01$ ). A mediation analysis revealed that higher perceived goal progress due to considering dissimilar alternatives mediated increased choice share of the healthy option ( $b = .32$ , 95% CI = [.02, .87]).

Finally, in study 5 ( $N = 223$ ), we replicated the effect on consequential choices in a naturalistic setting among people who had actually engaged in their exercising goal. When gym-goers who had just completed their workout were asked to recall dissimilar activities they could have done instead of exercising reported higher perceived goal progress ( $M_{\text{dissimilar}} = 4.73$ ) than 1) those asked to recall similar alternatives ( $M_{\text{similar}} = 4.25$ ,  $p = .05$ ) and 2) those not asked to recall any alternatives ( $M_{\text{control}} = 4.00$ ,  $p < .01$ ). Further, participants were more likely to choose a healthy energy bar subsequently after recalling dissimilar alternatives (64% vs. 39% (similar;  $p < .01$ ) vs. 45% (control;  $p = .04$ ).

Taken together, these results can advance our understanding about the role of choice set in goal-pursuit behavior. Our findings offer practical insight into how to enhance motivation by merely shifting which forgone alternatives people focus on.

## Mere and Near Completion

### EXTENDED ABSTRACT

What motivates people to pursue goals? Extant research converges on the idea that goals are cognitive representations of desired end-states (Bargh 1990; Ferguson and Cone 2013; Fishbach and Ferguson 2007) and the positivity associated with these desired end states is what imbues goals with motivational force (Atkinson 1974; Tolman 1932). For example, in a punch-card-style loyalty program, the acquisition of rewards is a desirable end state and the motivation to collect stamps originates in the desire to acquire rewards.

In this research, however, we suggest an additional source of motivation that is entirely distinct from the particular desired end-state obtained by fulfilling a goal. Specifically, we argue that, quite separate from the reward for completing a goal, people are also motivated by the fact that the mere completion of goal means (e.g., collecting the required number of stamps in a loyalty program) is satisfying in its own right. Put simply, people like to complete things – it feels satisfying. Apparent as it may seem, the motivation to complete per se has been largely overlooked in extant goal research. While it has been shown that people do seek the mere completion of things (Halkjelsvik and Rise 2015; Ovsiankina 1928), we are unaware of any research directly exploring how a motivation to merely complete interacts with the pursuit of a desirable end-state in determining aggregate motivation to pursue the goal. The current research was envisaged to disentangle the two, and to show that a desire for mere completion represents a distinct motivation guiding progress toward goal completion.

Building on the proposition that mere completion is satisfying in its own right, we further propose that 1) people will become

gradually insensitive to the size of goal reward (e.g., \$3 vs. \$10) as the distance to completing a goal decreases, because of the increase in the motivation to seek mere completion, and that 2) people will prefer a goal that is almost complete over one that is already complete, because the former implies that they will get to complete it, and therefore reap the hedonic benefits that accompany a feeling of completion.

We have run 14 studies in total. We will next report five of them that are central to testing our hypotheses.

Study 1 tested the utility of mere completion. It required participants to do a boring task – clicking on buttons on a computer screen. Participants were informed that the computer would tell them to stop when they had reached the total required number of clicks. In the complete-set condition, participants were stopped after they had clicked all nine buttons ten times each. In the incomplete-set condition, they were stopped after they had clicked eight of the nine buttons ten times each. Although complete-set participants repeated the boring task more times, at the end of the study, they felt overall better ( $M = 4.34$ ,  $SD = .80$ ) than incomplete-set participants ( $M = 4.05$ ,  $SD = .73$ ;  $F(1, 120) = 4.43$ ,  $p = .037$ ). Study 1 also included two measures of the feeling of completion, both of which mediated the effect of our manipulation on feelings, with the indirect effects significantly differing from zero ( $\beta s > .09$ , 95% confidence intervals [CIs]  $\subset$  [.01, .77]).

Study 2 tested the hypothesis regarding how much people value a goal that is almost complete vs. one that is already complete. Participants were told that they had collected either six or seven stamps in a loyalty program where they could get \$3 after collecting seven stamps. Contradicting pure economic considerations, participants charged a higher price for six stamps ( $M = 4.98$ ,  $SD = 5.23$ ) than seven stamps ( $M = 3.32$ ,  $SD = 2.27$ ;  $F(1, 183) = 8.01$ ,  $p = .005$ ). We name this effect as the one-away effect. Consistent with our theory, Study 3 found that expected excitement of collecting the next stamp mediated the one-away effect ( $\beta = -.65$ , 95% CI: [-1.33, -.04]), and Study 4 showed that the one-away effect disappeared when the acquisition of reward was not associated with the eventual completion of collecting stamps (e.g., for a loyalty card that has twelve slots and awards \$3 for every 6 stamps collected, the acquisition of the first \$3 reward leaves six slots unstamped.) Figure 1 summarizes the main results of Study 4.

Study 5 tested the hypothesis regarding scope-(in)sensitivity to the size of a goal reward. Study 5 represented a 2 (Progress: 1 stamp vs. 9 stamps)  $\times$  2 (Reward: \$3 vs. \$10) between-participants design. Participants were told that they had collected either one stamp or nine stamps in a loyalty program that offered either \$3 or \$10, depending on the condition they were randomly assigned to. Participants then indicated to which extent they were motivated to collect the next stamp. A two-way ANOVA between progress and reward a significant interaction effect ( $F(1, 654) = 4.82$ ,  $p = .029$ ). Although participants were significantly more motivated by the larger reward (vs. smaller reward) when completion progress was low (1 stamp of 10) ( $M = 4.87$ ,  $SD = 1.51$  vs.  $M = 4.11$ ,  $SD = 1.63$ ;  $F(1, 654) = 19.53$ ,  $p < .001$ ); when completion progress was high (9 stamps out of 10), there was no difference in motivation between the smaller and larger reward sizes ( $M = 5.35$ ,  $SD = 1.56$  vs.  $M = 5.58$ ,  $SD = 1.54$ ;  $F(1, 654) = 1.66$ ,  $p = .198$ ). Thus, as we anticipated, when the goal was near completion, participants became insensitive to reward size. Participants were equally motivated to complete the goal regardless if the reward size was smaller or larger.

The current research has important implications. In theoretical terms, this research demonstrates the important role of mere completion in determining motivation and influencing decision making and

bridges findings in seemingly disparate research domains (e.g., consumer collection, loyalty programs, curiosity, the sunk-cost fallacy, the mere urgency effect). In practical terms, our research explains why consumers sometimes neglect their loyalty rewards, and reveals how marketers can use strategies based on mere completion to increase the persuasiveness of their promotions.

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# The New Era of Luxury Consumption

Chair: Yajin Wang, University of Maryland, USA

## **Paper #1: When Does Slow Mean Luxurious?: The Effect of Product Motion Speed in Brand Communications on Status Perceptions**

SungJin Jung, INSEAD, Singapore  
David Dubois, INSEAD, France

## **Paper #2: Out of Your League: Women's Luxury Products as Signals to Men**

Yajin Wang, University of Maryland, USA  
Vladas Griskevicius, University of Minnesota, USA  
Qihui Chen, Peking University, China

## **Paper #3: The Dark Side of Luxury: The Social Costs of Conspicuous Consumption**

Christopher Cannon, Northwestern University, USA  
Derek D. Rucker, Northwestern University, USA

## **Paper #4: Sustainable Luxury: a Paradox or a Desirable Consumption?**

Jennifer Sun, Columbia University, USA  
Silvia Bellezza, Columbia University, USA  
Neeru Paharia, Georgetown University, USA

### **SYMPOSIUM OVERVIEW**

The growth of luxury consumption has been one of the biggest trends in marketing over the last two decades. During this time, sales of luxury goods have skyrocketed from \$80 billion to over \$900 billion per year and the number of luxury brand users has more than tripled from 90 million to 450 million worldwide (D'Arpizio 2017). Many new research and practical questions are raised in the new era of luxury consumption: What constitutes of luxury products? What information does luxury products communicate to the audience in different contexts? How do audience perceive luxury consumers? To answer these questions, this session provides new insights and novel findings from four papers that explore the new meanings of luxury and status.

The first paper examines a novel factor, time, and how it interacts with luxury products. Across four studies, the authors show that slow (vs. fast) motion in the advertising for luxury products heightens status perception and leads to more positive evaluations of the brand.

The second paper investigates how luxury products can be used in a new context: in a romantic relationship. The authors propose that women use luxury products as signals about their mating preference to potential romantic partners. Four studies show that women's desire for luxury products are triggered by mate selection motivate.

The last two papers examine how luxury consumers are perceived in the social context. Both paper provide novel theoretical frameworks to reconcile the potential positive and negative social impressions made about luxury consumers. The third paper develops a new framework to examine when consumers are likely to benefit and be punished for luxury consumption. Four studies show that although consumers with luxury products are perceived to have higher status, they are also perceived to be less warm. Finally, the fourth paper explores the underlying reasons behind consumers' negative perceptions of high-end luxury consumption. Despite the fact that luxury goods are actually sustainable, as they last longer and have higher resale value than ordinary goods, four studies demonstrate that luxury consumers are seen as wasteful because their purchases

are deemed unnecessary. Further, this negative bias diminishes when luxuries are framed as long-lasting investments.

Taken together, this set of papers opens up several new avenues of research in the area of luxury and status consumption. Each paper includes a complete set of experiments and provides process evidence that can stimulate new research ideas and provide practical insights in the area of luxury and status consumption. Given the variety of settings and questions, this session is likely to appeal to a broad set of conference attendees interested in luxury goods, status, social signaling, and branding.

## **When Does Slow Mean Luxurious?: The Effect of Product Motion Speed in Brand Communications on Status Perceptions**

### **EXTENDED ABSTRACT**

When asked to define luxury, Christian Blanckaert, former Chairman and CEO of Hermès, responded "It is mastering the balance between timelessness and timeliness." The current research focuses on one prevalent manifestation of time: the motion speed of products in brand communications. Past research has shown that brands can convey status to consumers through various visual means, such as adding art to product packaging and design (Hagtvedt and Patrick 2008), varying the prominence of brand logos (Han, Nunes, and Drèze 2010), and adjusting interstitial space in retailing (Sevilla and Townsend 2016). Despite considerable interest in the visual cues of status, little is known about how motion may also shape status perceptions. This omission is surprising given the growing importance of video advertising in the current multimedia environment (Google/Ipsos Connect 2017).

Although unexplored in the social sciences, anecdotal evidence suggests that slow motion is used in theatre and novel writing to signify high status. For example, consider the following advice from the editors of *Writer's Digest*: "...To make a villain more imposing, let him slow down. Show readers that he's in no hurry to commit his evil deed—he has such high status that he can walk slowly and still catch the person fleeing frantically through the woods" (2017, 112; see also Johnstone 2012). Moreover, advertising textbooks discuss the pervasive use of slow motion as a visual tool to emphasize luxury, especially in car ads (Brierley 1995; Wells et al. 1992).

Building on this potential relationship, we posit that moving products presented at a slower speed are perceived as having higher status—the respect and admiration from an audience (Magee and Galinsky 2008; Dubois and Ordabayeva 2015). As a result, the products are seen as more desirable. We measure a product's desirability through consumers' likelihood to share word-of-mouth (WOM) about the product with others (Angelis et al. 2012). We further show that this effect of motion speed on status perceptions is attenuated for products of non-luxury brands for whom status is not relevant.

In study 1A, 197 Mechanical Turk (MTurk) participants were randomly assigned to one of two conditions (slow vs. fast). Participants watched a video clip featuring a bottle of red wine purportedly made by a small premium winery. They saw the wine being poured into a glass. The clip was three times slower in the slow condition (15s) than the fast condition (5s). Then participants rated the wine on status perceptions using three items (prestigious, luxurious, high status; Ward and Dahl 2014). The wine was perceived as hav-

ing higher status in the slow ( $M=5.20$ ,  $SD=1.16$ ) than fast condition ( $M=4.82$ ,  $SD=1.34$ ;  $F(1, 195)=4.61$ ,  $p=.033$ ).

In study 1B, 197 MTurk participants were randomly assigned to one of two conditions (slow vs. fast). Participants watched a video clip of a rotating ring purportedly made by Chanel. The clip was four times slower in the slow condition than the fast condition. To keep viewing time constant (about 25s) across conditions, the clip in the fast condition was repeated three times. Next, participants were told to imagine that their female friend was thinking of buying a ring and indicated how likely they were to recommend the ring to the friend. Then they rated the ring on status perceptions using the same three items. Participants were more likely to recommend the ring in the slow ( $M=4.56$ ,  $SD=1.69$ ) than fast condition ( $M=3.81$ ,  $SD=1.69$ ;  $F(1, 195)=9.54$ ,  $p=.002$ ). Furthermore, the ring was perceived as having higher status in the slow ( $M=5.67$ ,  $SD=1.29$ ) than fast condition ( $M=5.18$ ,  $SD=1.42$ ;  $F(1, 195)=6.23$ ,  $p=.013$ ). Status perceptions mediated the relationship between motion speed and recommendation likelihood (indirect effect=.23,  $SE=.099$ , 95%  $CI=[.059, .46]$ ).

In study 2, 367 participants on Prolific Academic were randomly assigned to one of two conditions (luxury vs. non-luxury). They were told to imagine that they were marketing managers of a luxury (vs. non-luxury) brand that sells high-end, premium (vs. cheap, affordable) jewelry. They were informed that their task was to create a video ad for the brand's newly released earrings. Participants were given two motion speed options for the ad: a faster option and a slower option. Each option was accompanied by a video clip featuring a pair of earrings going around in circles. The two video clips were identical except the video clip for the slower option was two times slower than the video clip for the faster option. Participants were more likely to choose the slower motion speed option in the luxury (73.47%) than non-luxury condition (62.57%;  $p=.026$ ).

In study 3, 194 MTurk participants were randomly assigned to a 2 (motion speed: slow vs. fast)  $\times$  2 (brand type: luxury vs. non-luxury) between-subjects design. Participants watched the same video clips from study 1B, except the clip was not repeated in the fast condition. Thus, in both conditions, the clip featured the ring once (26s in the slow condition; 8s in the fast condition). Participants in the luxury (vs. non-luxury) condition were told that the ring was made by Chanel (vs. Forever 21). Next, participants rated the ring on status perceptions using the same items as in prior studies.

A two-way ANOVA on status perceptions revealed a significant motion speed  $\times$  brand type interaction ( $F(1, 190)=4.33$ ,  $p=.039$ ). The ring was perceived as having higher status in the slow ( $M=6.11$ ,  $SD=.95$ ) than fast condition ( $M=5.38$ ,  $SD=1.23$ ) when the ring was made by Chanel ( $F(1, 190)=5.93$ ,  $p=.016$ ). However, no difference emerged between the slow ( $M=4.32$ ,  $SD=1.83$ ) and fast conditions ( $M=4.48$ ,  $SD=1.78$ ) when the ring was made by Forever 21,  $F(1, 190)<1$ ,  $p=.60$ . Thus, the effect is attenuated for non-luxury brands presumably because the status benefits conferred by a slower motion speed are less relevant to such brands.

The current research provides evidence that a slower motion speed can enhance status perceptions with consequences for consumers' willingness to share WOM about the product. Future studies will investigate the mechanism(s) underlying this effect.

### **Out of Your League: Women's Luxury Products as Signals to Men**

#### **EXTENDED ABSTRACT**

Conspicuous consumption has been shown to serve an important role in a romantic relationship context. The main findings of this stream of work demonstrate that luxury goods can help men to attract

romantic partners. For example, when a mate attraction motivation is activated, men were found to desire for luxury goods (Griskevicius et al. 2007; Sundie et al., 2011). Although there is less research examining the role of women's conspicuous consumption in romantic relationships, one conclusion from the previous research seems to suggest that mate attraction is unlikely to trigger women's conspicuous consumption desire. Instead, women's luxury consumption is found to be linked with a different mating motivation: to deter female rivals (Wang and Griskevicius 2014). However, we propose that women would use luxury products as effective signals to men in romantic relationships, and it is not intended to attract them.

Besides mate attraction, there is another important task for people to successfully start a relationship: select a mate (Buss and Schmitt 1993). Across history and cultures, women have shown to be the choosers in the relationships and are more cautious in mate selection (Buss 1989, Trivels 1972). Being the chooser seems to require less effort, but it can be costly when there are too many options, especially ones with unclear qualities. Therefore, it is adaptive for women to develop strategies to discern and select men with desirable traits that are associated with important reproductive value (Li et al. 2002; Li and Kenrick 2006). One of the most important values that women look for is men's ability and willingness to provide resources (Buss 1989; Li et al. 2002). Taken together, we propose that a mate selection motive would increase women's conspicuous consumption as a signal to men about their mating standards especially related to financial resources. We further propose that men should be able to read this signal and react as expected: men with fewer financial resources should be less interested in pursuing women with luxury (vs. non-luxury) products. However, men with more financial resources should not be affected by women's conspicuous consumption. We tested our predictions in four experiments.

Study 1 examined whether activating a mate selection motive would trigger women's desire for conspicuous luxury products. 160 female participants were randomly assigned to one of two between-subject conditions: (1) mate selection; and (2) mate attraction. These motivations were activated by manipulating women's perceived sex ratio. In the mate selection condition, participants read an article talking about "more men for every woman for today's students"; whereas in the mate attraction condition, the corresponding article talked about "fewer men for every woman for today's students". Desire for luxury goods was measured by two sets of items: spending relative to peers and preference between two versions (basic vs. luxurious) of the same product (Griskevicius et al. 2007; Sundie et al. 2011). Results of these two DV sets consistently showed that activating a mate selection motive led women to show greater desire for conspicuous luxury products than a mate attraction motive ( $M=4.32$  vs. 3.59,  $p<.001$ ;  $M=4.56$  vs. 3.94,  $p=.005$ ).

Study 2 further demonstrated that a mate selection motive only triggered women's desire for public visible luxury goods but not the ones often used in private. The study had a 2 (condition: mate selection vs. control)  $\times$  2 (product type: conspicuous vs. non-conspicuous) mixed-design. In the mate selection condition, participants imagined they were at a party with men of mixed quality, and she felt a little overwhelmed by too much attention from them. In the control condition, participants imagined a typical day of doing laundry (Griskevicius, Shiota, and Nowlis 2010). Participants were then asked about their preference for the level of luxury for both public and private luxury goods (adapted from Wang and Griskevicius 2014). Results showed that participants in the mate selection condition indicated a significantly stronger preference for public luxury products than the control group ( $M=4.16$  vs. 3.56,  $p<.05$ ). However, there was no



significant difference in the conditions for private luxury products ( $M = 3.67$  vs.  $3.53$ ,  $p = .59$ ).

Study 3 examined the specificity of the audience, testing whether a mate selection motive is most likely to trigger women's desire for conspicuous consumption when they face primarily undesirable (vs. desirable) men. Female participants were asked to imagine that they were single and planned to create a profile for an online dating platform. Due to the high volume of men on the website, the women could design different personal profile versions targeting different visitors. Participants in the desirable audience condition were asked to create the personal profile for men who were primarily above their standards for a mate, whereas participants in the undesirable audience condition were asked to create a personal profile for men who were primarily below their standards. Consistent with our predictions, across three different product categories (e.g., clothes, car, leisure activity), there were significantly more women in the undesirable audience condition who chose to display luxury (vs. non-luxury) items in their profiles than women in the desirable audience condition.

Finally, study 4 examined the effectiveness of the signal, testing whether displaying luxury products is effective as a filter for potential mates based on their financial resources. For such display strategy to be an effective mate selection signal, sporting luxury goods should only decrease the motivation for men with low fanatical capabilities to further engage with the woman. However, such luxury signals should not affect men's interests in the woman if they have affluent financial resources. Consistent with our theory, the results of study 4 showed that men at a lower income level were less interested in asking out the woman with luxury (vs. non-luxury) possessions ( $p < .01$ ). In contrast, for men with higher income levels, the difference was no longer significant ( $p = .67$ ). Furthermore, a moderated mediation showed that men's confidence to support future family mediated the decreased interest only from men with lower (vs. higher) levels of income.

### The Dark Side of Luxury: The Social Costs of Conspicuous Consumption

#### EXTENDED ABSTRACT

Veblen (1899/1981) introduced the term conspicuous consumption in reference to the purchase and display of expensive items by the rich to convey their wealth and standing to others (see also Sundie et al., 2011). Research over the last decade has examined conspicuous consumption more generally in the form of individuals that wear brands with visible logos, parade one's products in highly visible locations, name-drop the brands one owns or likes, and attend events where one's status is recognized (Ferraro, Kirmani, & Matherly, 2013; Griskevicius et al., 2007; McFerran & Argo, 2014; Nelissen & Meijers, 2011; Rivera, 2010; Sundie et al., 2011; Wang & Griskevicius, 2014).

A key finding within the literature is that conspicuous consumption appears to be a powerful social influence strategy to obtain compliance and preferential treatment (Lee, Ko, & Megehee, 2015; Nelissen & Meijers, 2011). For example, Nelissen and Meijers (2011) found that actors received more money from a partner who wore a shirt with a luxury brand logo (i.e., Lacoste) compared with a non-luxury brand logo. Similarly, Lee, Ko, and Megehee (2015) found that individuals who wore luxury brands (e.g., Louis Vuitton) versus non-luxury brands or no logos were viewed as more suitable for an internship, deserving of a higher salary, and received larger charitable donations.

Thus, the current perspective is that conspicuous consumption is a powerful influence strategy. In contrast, the present work explores the idea that such conspicuous consumption can backfire. We draw upon the person perception literature in which the broad dimensions of agency and communion are used to categorize people (Abele and Wojciszke 2007, 2014) the authors hypothesize that (a. High-status individuals such as doctors, professors, and CEOs are often perceived to be warmer or equally warm as less stereotypically prestigious careers such as construction worker and fast food worker (Fiske and Dupree 2014). Despite this relationship, we propose that conspicuous consumption can reduce social influence via communal (e.g., warmth) attributions. We explore two potential underlying mechanisms for this effect: impression management/ulterior motives (Godfrey, Jones, and Lord 1986; Leary and Kowalski 1990) and envy (Fiske et al. 2002). Finally, we propose that the social influence of conspicuous consumption depends on the diagnosticity of the warmth (vs. status) perception.

*Experiment 1.* Participants ( $N = 119$ ) were presented with either a picture of a man in a t-shirt (non-conspicuous condition) or a man wearing an identical shirt displaying a Gucci trademark (conspicuous condition). Replicating prior work, we found that participants perceived the conspicuous (vs. non-conspicuous) consumer to have higher status ( $M = 4.81$  vs.  $M = 3.83$ ;  $t(117) = 4.50$ ,  $p < .001$ ). However, participants perceived the conspicuous (vs. non-conspicuous) consumer to also have lower warmth ( $M = 3.96$  vs.  $M = 4.62$ ;  $t(117) = -3.06$ ,  $p = .003$ ). In addition, we found that participants perceived the conspicuous (vs. non-conspicuous) consumer to have higher ulterior motives ( $M = 5.14$  vs.  $M = 2.20$ ;  $t(117) = 11.10$ ,  $p < .001$ ), but not greater feelings of envy ( $p = .234$ ). Ulterior motives mediated the relationship between conspicuous consumption and warmth perceptions.

*Experiment 2.* The second experiment aimed to conceptually replicate experiment 1, with a different luxury brand. We also measured envy from other people's perspective, to rule out socially desirable responding. Participants ( $N = 120$ ) were presented with a picture of a purse with no label (non-conspicuous condition) or a visible Burberry checkered pattern (conspicuous condition). Participants were then asked to imagine the woman that owns it. Replicating experiment 1, participants perceived the conspicuous (vs. non-conspicuous) consumer to have higher status ( $M = 5.57$  vs.  $M = 5.05$ ;  $t(118) = 2.37$ ,  $p = .019$ ), but lower warmth ( $M = 3.71$  vs.  $M = 4.35$ ;  $t(118) = -2.57$ ,  $p = .011$ ). In addition, we found that participants perceived the conspicuous (vs. non-conspicuous) consumer to have higher ulterior motives ( $M = 5.41$  vs.  $M = 3.89$ ;  $t(118) = 5.19$ ,  $p < .001$ ). As in the first experiment, ulterior motives mediated the relationship between conspicuous consumption and warmth perceptions.

*Experiment 3.* The third experiment demonstrates consequential social influence. Participants ( $N = 115$ ) were assigned to read two questionnaires, presumably filled out by other participants. One of the questionnaires mentioned luxury brands, whereas the other questionnaire did not (counterbalanced in terms of mentioning luxury brands and presentation order). Participants were asked to choose a participant to work with in an upcoming task for either the job of corporate publicist (i.e., status-diagnostic role) or a human resources coordinator (i.e., warmth-diagnostic role). A significant relation emerged between conspicuous consumption and job type ( $\chi^2 = 38.42$ ,  $p < .001$ ), such that more participants chose the actor that engaged in conspicuous (vs. non-conspicuous) consumption for the corporate publicist (vs. human resources coordinator) job.

*Experiment 4.* This final study demonstrates a boundary condition for the dark side of luxury. Participants ( $N = 102$ ) were assigned to one of the two conditions from the first experiment. In addition,

we measured lay beliefs that luxury good consumers typically have ulterior motives. We found that impression management lay beliefs moderated the link between luxury good consumption and warmth inferences ( $B = -.24$ ,  $SE = .11$ ,  $t = -2.15$ ,  $p = .034$ ). Whereas 66% of participants perceived the conspicuous (vs. non-conspicuous) consumer to have lower warmth, 34% of participants perceived the conspicuous and non-conspicuous consumers to be equally warm.

The present work allows for a better understanding of *when* and *why* conspicuous consumption is an effective social influence strategy. Observers infer from conspicuous consumption both higher status and lower warmth. This negative social reaction is primarily driven by perceptions of ulterior motives rather than envy. The social influence of conspicuous consumption depends on what attributes observers view as diagnostic in the decision context. Moreover, the effectiveness of the social influence of conspicuous consumption also depends on observers' own lay theories.

### Sustainable Luxury: a Paradox or a Desirable Consumption?

#### EXTENDED ABSTRACT

Is it better to spend \$1,000 on one high-end luxury product or \$250 on four mid-end ordinary products? What if the high-end product is more durable and lasts much longer? How do we view consumers who choose quality over quantity? In line with the notion "you buy cheap, you buy twice," one may think that buying high-end luxury products is more sustainable as these goods last longer and have resale potential on secondhand markets. Through web-data scraped from multiple retailers and secondhand markets (e.g., Poshmark, Tradesy), we indeed find that luxury products are more diffused and have higher resale value compared to ordinary products ( $M_{luxury} = \$86.5$  vs.  $M_{ordinary} = \$41.2$ ,  $p = .001$ ) on these marketplaces. However, past findings also suggest that users of luxury goods are seen as extrinsically motivated and are not liked by others (Van Boven, Campbell & Gilovich, 2010; Christopher & Barry, 2000).

We seek to directly compare the two spending habits — consumption of luxury, high-end goods versus mid-end, ordinary goods — and deepen our understanding of inferences that consumers draw in response to these buying habits. Across a series of studies, we demonstrate that consumers negatively view purchasers of more durable, high-end products because these purchases are deemed unnecessary and superfluous. Furthermore, we show that this negative bias is attenuated when luxury purchases are framed as investments and we explore boundary conditions of the effect.

In Study 1, we establish that luxury consumption is perceived to be a wasteful and materialistic behavior. In a 2-condition, between-subjects design, participants ( $n = 138$ ; lab) judged a shopper spending \$300 on one high-end pair of shoes (*luxury* condition) versus spending the same amount on three mid-end pairs of shoes for \$100 (*ordinary* condition). Compared to the ordinary shopper, the luxury shopper was viewed as more wasteful and materialistic ( $M_{luxury} = 4.0$  vs.  $M_{ordinary} = 3.1$ ,  $p = .001$ ).

In Study 2, we replicate our finding using more calibrated stimuli (e.g., price of the products, based on a pretest with 225 online and 207 lab participants), while controlling for the end functionality of the product (that is, purchasing shoes for work vs. leisure, Keinan, Kivetz & Netzer, 2016). Participants ( $n = 243$ ; online), split across gender, rated a shopper – Sam or Sally – in a 2 (consumption: *luxury* vs. *ordinary*)  $\times$  2 (function: *leisure* vs. *work*) between-subjects design. Again, we find that the luxury shopper was seen as more wasteful and materialistic ( $M_{luxury} = 5.2$  vs.  $M_{ordinary} = 4.4$ ,  $p = 0.001$ ) regardless of whether the purchase was for work or leisure. In addition, we

coded the open-ended comments and identified four main themes. Mediation analyses based on such themes revealed that luxury consumption was perceived to be more wasteful and materialistic (versus consumption of ordinary products) because the purchase was deemed unnecessary and superfluous (0.31; 95% CI from 0.16 to 0.52). Study 3 ( $n = 400$ ; online) replicates results from previous studies that users of luxury goods, compared to those who buy ordinary goods, are judged more negatively and illustrates that the effect persists even when controlling for the number of products already owned. Because a person spending money on high-end shoes may be more likely to own many pairs of shoes, we controlled for this issue across conditions. Participants rated a shopper – Sam or Sally – in a 2 (consumption: *luxury* vs. *ordinary*)  $\times$  3 (number of products owned: *few* vs. *many* vs. *control*) between-subjects design. Again, we found that buying one pair of high-end shoes for \$300, compared to buying three mid-end shoes for \$100 each, was seen as more wasteful and materialistic ( $M_{luxury} = 5.3$  vs.  $M_{ordinary} = 4.7$ ,  $p = .001$ ), regardless of the number of products already owned. We also test for mediation and, again, find that the extent to which the purchase is perceived as unnecessary mediates this effect (0.24; 95% CI from 0.05 to 0.44).

Study 4 ( $n = 186$ ; lab), explores conditions under which we see a reversal in the perception of luxury consumption. While luxury shoppers are perceived to be more materialistic and wasteful than ordinary goods shoppers ( $M_{luxury} = 4.5$  vs.  $M_{ordinary} = 3.8$ ,  $p = .001$ ), this effect diminishes when the investment aspect of the luxury purchase is emphasized. In addition, when the luxury shopper viewed her purchase as a onetime investment in a high-end product, she was perceived less negatively than the ordinary goods shopper purchasing multiple products for the same time horizon. In fact, when the investment aspect of the purchase was prominent, the luxury shopper was perceived to be less materialistic and wasteful compared to when the investment aspect was not made salient ( $M_{investment} = 3.5$  vs.  $M_{no-investment} = 4.2$ ,  $p = .004$ ).

Across four studies, our findings address the notion of sustainable luxury consumption and demonstrate that sustainable luxury, rather than a paradox, is more of a tautology as luxury products are more durable and long-lasting than ordinary goods. We propose that marketers of high-end products focus on positioning their products as investments to reduce the stigma associated with luxury consumption.

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# The Positive and Negative Effects of Brand Transgressions on Brand Relationships

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## **Paper #1: When Consumer Brand Sabotage Harms Other Consumers Relationship with the Brand**

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Bettina Nyffenegger, University of Bern, Switzerland

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Wayne D. Hoyer, University of Texas at Austin, USA

## **Paper #2: Brand Relationships in a “Post-Fact” World**

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## **Paper #3: “My Brand” Behaved Badly: Psychological Ownership and Consumer Responsibility for Helping Brands Recover from Transgressions**

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## **Paper #4: Metaphorically Transgressing the Brand Relationship**

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## **SESSION OVERVIEW**

The premise that consumers relate to brands as they do with other humans is a well-documented phenomenon in the consumer behavior field (MacInnis & Folkes, 2017). As with humans, brands sometimes can do bad and, therefore, hurt a consumer–brand relationship. Indeed, brand transgressions have been identified as brand actions that can have negative effects on brand relationships (Grégoire, Tripp, & Legoux, 2009). On some occasions, however, brand transgressions may even yield positive effects (Aaker et al., 2004). These mixed results call for further research on this topic. For example, why are brand transgressions sometimes negative and sometimes positive to a brand relationship? Further, under which circumstances are brand transgressions either positive or negative?

The purpose of this session is to shed new light on the effects of brand transgressions on brand relationships by bringing in new insights and perspectives from recent consumer research. In doing so, we hope to enhance our understanding of how consumers relate to brands and how those brand relationships are either positively or negatively affected by brand transgressions. The four papers discuss different aspects of consumers relating to brands in the face of a brand transgression and will, therefore, contribute to a diversified and vivid discussion. The articles are summarized as follows:

In Paper #1, Kähr, Nyffenegger, Krohmer, and Hoyer show that consumers who were not directly involved in a brand transgression can also feel betrayed by observing a consumer brand sabotage activity from a consumer who indeed was involved in a brand transgression. This research proposes that observing a consumer brand sabotage activity can serve as a substitute for consumers' personal experiences, decreasing their own relationship with the brand.

In Paper #2, Velloso and Fischer argue that consumers may interpret certain types of brand transgressions (those that defy authority but do not cause direct physical harm to individuals) as being either entirely normalized or even admirable. Surprisingly, this research demonstrates that consumers are not averse to maintaining

or forming relationships with brands that conduct this type of brand transgressions.

In Paper #3, Wiggins, Grimm, and Kuchmaner investigate the role that brand communities can play in helping brands recover from brand transgressions. The authors found that within brand communities, higher status and community cohesiveness increases psychological ownership of the brand. Furthermore, when the brand commits a brand transgression, this contributes to a sense of responsibility to help the brand recover and increases consumer likelihood to engage in constructive actions to help the brand recover from the brand transgression.

In Paper #4, Lopez, Reimann, and Castaño propose that brand transgressions interact with relationship metaphors to influence brand relationships. This study demonstrates that in the face (vs. absence) of a brand transgression, consumers who break a pencil (vs. put together a pencil) have a weaker (vs. stronger) brand relationship. Moreover, after a brand transgression that causes a brand relationship breakup, consumers subjected to a puzzle metaphor are more likely to reconcile with the brand than consumers subjected to a breaking metaphor or a neutral condition.

## **When Consumer Brand Sabotage Harms Other Consumers Relationship with the Brand**

### **EXTENDED ABSTRACT**

Recently, researchers conceptualized the phenomenon of consumer brand sabotage (CBS) as hostile aggression where consumers hold the dominant motive of harming a brand by impairing the brand-related associations of other consumers (Kähr et al. 2016). Despite its high damage potential, prior research has not yet examined whether and how CBS affects other consumers who observe such hostile activities. This study addresses this research gap and examines the consequences and processes by which CBS affects other consumers depending on their brand relationship. In contrast to existent literature which studied the role of the consumer-brand relationship among consumers directly involved in a service failure, we focus on the role of the consumer-brand relationship among consumers who are not directly involved in a transgression but observe a CBS activity.

*Hypothesis 1* As more and more consumers rely on other consumers' brand experiences to form their attitude and make purchase decisions (e.g., Sparks, So, and Bradley 2016), we expect that observing a CBS activity could serve as a substitute for consumers' own experiences, decreasing their brand attitude and purchase intention

Considering the psychological processes behind these effects, prior research found that consumers feel betrayed by a company if they assess its behavior as a violation of their relational norms (Grégoire, Tripp, and Legoux 2009), affecting their brand attitude (e.g., Aggarwal 2004).

*Hypothesis 2* Hence, if consumers observing the CBS activity perceive the brand's behavior (criticized by the



*brand saboteur) as a violation of their relational expectations, they may feel betrayed, decreasing their brand attitude*

Regarding consumers' purchase intention, social identity theory states that consumers express their belonging to a brand by purchasing its products (Escalas and Bettman 2003), thereby, communicating their social identities. When individuals can no longer distinguish their in-groups favorably from any outgroup (e.g., when their in-group (here: the brand) was put in a bad light), a state of social identity threat arises (Scheepers and Ellemers 2005), which motivates them to leave the in-group (Tajfel and Turner 1986).

*Hypothesis 3 In our context, consumers may experience a social identity threat after observing a CBS activity, lowering their purchase intention of that brand*

Concerning the consumer-brand relationship, prior research showed that it can have a buffering and an amplifying effect in the context of brand transgressions (e.g., Grégoire et al. 2009; Hess, Ganesan, and Klein 2003). In our context, we examine consumers' brand trust and consumer-brand identification (CBI) as key constructs of the consumer-brand relationship.

*Hypothesis 4 Due to the intimate connection of brand trust to relational expectations (Grégoire et al. 2009), we expect that consumers with high (vs. low) brand trust feel more strongly betrayed after observing a CBS activity, decreasing their brand attitude*

*Hypothesis 5 As brands that consumers identify themselves with help expressing their social identity (Escalas and Bettman 2003), we expect that consumers with high (vs. low) CBI perceive a stronger social identity threat after observing a CBS activity, decreasing their purchase intention*

To test the impact and processes by which CBS affects other consumers, we conducted an online experiment where we randomly assigned 186 consumers (48.9% female, Mage=30.6) to either a CBS ("FitchtheHomeless" about A&F by Greg Karber) or a filler video (control group). We measured all constructs with established scales from prior research using seven-point Likert scales. Based on a MANCOVA, we found a significant negative effect of CBS exposure compared to the control group on consumers' brand attitude and purchase intention ( $\Theta=.13$ ,  $F(2,172)=23.09$ ,  $p<.001$ ), supporting H1. Based on two mediation analyses using PROCESS model 4 (bootstrapping: 10,000 samples; Hayes 2013), we first found a significant indirect effect of CBS exposure (0=control group, 1=CBS) on consumers' brand attitude via their perceived betrayal ( $B=-.30$ , 95% CI  $[-.4938, -.1528]$ , supporting H2) and, second, on consumers' purchase intention ( $B=-.09$ , 95% CI  $[-.2002, -.0086]$ ) via their social identity threat (supporting H3).

To test how the impact of CBS on other consumers depends on their brand relationship (i.e., brand trust and CBI; H4 and H5), we conducted an additional scenario-based experiment with 494 consumers (57.3% female, Mage=26.7). Participants were randomly assigned to the CBS condition (fictitious Facebook post of a consumer publicly criticizing the poor working conditions in PUMA's factories and calling for boycott) or the control condition (no Facebook

post). The same constructs and measures were used as in the first experiment. This study replicated the findings from the first study. Additionally, we conducted two conditional mediation analyses with PROCESS model 7 (bootstrapping: 10,000 samples; Hayes 2013, 2015).

The first analysis revealed that the indirect effect of CBS exposure on brand attitude through perceived betrayal is moderated by brand trust (index of moderated mediation  $=-.04$ , 95% CI  $[-.0881, -.0021]$ ), supporting H4. The Johnson-Neyman technique identifying the range of brand trust where a CBS exposure significantly affects betrayal revealed that consumers with brand trust higher than 1.60 felt betrayed after observing the CBS activity (BJN =.44, SE =.22,  $p=.05$ ) but not for those lower than 1.60. The second analysis showed that CBI moderates the indirect effect of CBS exposure on consumers' purchase intention via perceived social identity threat (index of moderated mediation  $=-.15$ , 95% CI  $[-.2888, -.0390]$ ), supporting H5. The Johnson-Neyman technique revealed that there are no statistical significance transition points within the observed range of CBI. Consumers perceived a social identity threat already with a brand identification of 1.0 ( $B=.32$ , SE=.10,  $p<.01$ ), increasing with higher levels of CBI.

With our study, we show that CBS negatively influences other consumers' brand attitude and purchase intention and, thereby, shed light on the negative consequences of this under-researched phenomenon. By showing that also consumers who were not directly involved in a brand transgression can feel betrayed and threatened in their social identity only by observing the CBS activity, we also contribute to literature on negative consumer behavior (e.g., Klein, Smith, and John 2004). Finally, by disclosing that consumers with high levels of brand trust and brand identification are affected most by a CBS activity, we also contribute to the ongoing debate on the buffering versus love-becomes-hate effect of consumer-brand relationships in the context of brand transgressions (e.g., Grégoire et al. 2009).

## Brand Relationships in a "Post-Fact" World

### EXTENDED ABSTRACT

Much of the consumer-brand relationship literature has argued that brand misbehaviors lead to the weakening or dissolution of relations (Bechwati and Morrin 2003; Grégoire, Tripp, and Legoux 2009; Hemetsberger, Kittinger-Rosanelli, and Friedmann 2009; Johnson, Matear, and Thomson 2011). However, a growing body of research shows that other relationship paths are also possible due to brand-self connections (Lin and Sung 2014), specific brand personality traits (Aaker, Fournier, and Brasel 2004), investments made (Sung and Choi 2010), and particular kinds of relationship dynamics (e.g., master-slave, dealer-addict, and villain-victim) (Alvarez and Fournier 2016; Batra, Ahuvia, and Bagozzi 2012; Fournier 1998; Fournier and Alvarez 2013) the authors investigate the nature and consequences of brand love. Arguing that research on brand love needs to be built on an understanding of how consumers actually experience this phenomenon, they conduct two qualitative studies to uncover the different elements (features) of brand love. The present research aims to extend the literature that explores brand relationships after transgressions by providing a more thorough understanding of consumer-brand relationships in a "post-fact" world.

What is a "post-fact" world? This dystopic vision sees people make claims or take positions without effective concern for providing verifiable evidence. As the boundaries blur between fact and opinion, between real and fake, powerful rhetoric is more likely to settle an argument than objective proof and logic (Loseke 2018).

People immersed in hyper-reality construct their own truths based on their imaginations, ingenuities, and pragmatic needs (Venkatesh 1999). And brands invest in the manufacture of “alternative” facts, deceiving consumers and defying institutional authority.

While such a vision may be exaggerated, evidence points to an increasing belief in the importance of emotion to judge the soundness of a claim (Laybats and Tredinnick 2016). Under such conditions, people filter out what they wish to be false and embrace what they want to be true, even in the face of contradictory empirical evidence (Johnston 2008; Manjoo 2008). Moreover, consumers freely share their views on social media and influence each other’s impressions and behavioral intentions, regardless of whether they anchor their ideas in verifiable facts (Anderson et al. 2014; Lee 2012; Stavrositu and Kim 2015). And even a few dissenting voices on comment sections of news articles and blog posts can shift the perceived range of acceptable views (Lewandowsky, Ecker, and Cook 2017; Sikorski and Hänel 2016).

When competing versions of what is true and what is acceptable vie for attention in this new media landscape, how do consumers react to revelations that brands have failed to be truthful? While research has started to uncover the factors that encourage a post-truth world (Hopkin and Rosamond 2017; Keyes 2004; Lewandowsky et al. 2017; Manjoo 2008), there is still very little investigation on the implications of the present milieu for brands. Berthon and Pitt’s (2018) conceptual paper constitutes one notable effort in this direction. The authors posit that, if brands do not provide consumers with experiences that are authentic and honest, they will fail the “reality” test and face negative consequences.

Our paper picks up empirically where Berthon and Pitt’s conceptual papers leaves off, exploring the extent to which explicit deviation from truth-telling may affect a brand’s potential to preserve existing relationships or form new ones. It proceeds by investigating how consumers react when they discover that a brand has not been truthful. We conducted a case study of Volkswagen’s emissions scandal, which offered the appropriate context to observe consumers’ reactions to the production of “alternative” facts by a reputable brand. On September 18th, 2015, news outlets exposed the U.S. Environmental Protection Agency’s (EPA) and the California Air Resources Board’s (CARB) accusations that Volkswagen had been circumventing federal and state emissions tests. So-called “defeat devices” installed in 2009-2015 models advertised as “clean diesel” let these vehicles exceed lawful nitrogen oxides (NOx) emissions levels on the road while blocking them when undergoing laboratory testing.

Our inductive theory building relied on qualitative and automated content analyses of a longitudinal database of consumer archival and interview data. We analyzed consumer posts about “Dieselgate” in the online comments sections of major US news outlets, automotive magazines, blogs, and brand communities. We also interviewed customers who owned Volkswagen cars at the outbreak of the scandal and consumers that purchased a vehicle in the following months and or who considered purchasing Volkswagens.

Our findings demonstrate that the contemporary “post-fact” ethos influences the way consumers interpret certain types of brand transgressions. In Volkswagen’s case, in which the company defied regulators’ authority and did not cause direct physical harm to specific individuals, some consumers construed the brand’s untruthfulness as being either entirely normalized (“all car makers lie all the time, so what’s the big deal?”) or even somewhat admirable (“Volkswagen lies about conforming to emissions regulations just show how unwarranted the EPA regulations really are”).

We argue that Volkswagen’s success in becoming the highest volume auto seller in the world in less than two years after the

scandal broke (Roberts and Stoll 2017) suggests that, under current conditions, consumers – even those who are not longstanding brand loyalists – may not be averse to maintaining or forming relationships with brands that deviate from being honest about the claims they make. We speculate about how the character of brand relationships under “post-fact” cultural conditions may also be evolving.

### **“My Brand” Behaved Badly: Psychological Ownership and Consumer Responsibility for Helping Brands Recover from Transgressions**

#### **EXTENDED ABSTRACT**

Researchers have studied consumer responses to negative publicity (Ahluwalia et al., 2000), product failures (Aaker et al., 2004), brand transgressions (Grappi et al., 2013; Romani et al., 2013; Xie et al., 2015), and corporate social irresponsibility (Armstrong and Green, 2013). Across these literature streams, consumers are found to respond with negative emotions and punitive actions towards the brand.

These negative effects are attenuated when consumers have strong brand relationships (Johnson et al., 2011; Paulssen et al., 2016), high attitude certainty (Pullig et al., 2006), high brand commitment (Ahluwalia et al., 2000), and high identification with the organization (Einwiller et al., 2006; Lange and Washburn, 2012). Collectively, this research suggests that consumers who perceive a strong connection with the brand, such as members of a brand community, will be less likely to engage in punitive actions in the wake of a brand transgression.

We argue that brand community members are also likely to perceive psychological ownership of the brand (Chang et al., 2015), which creates a sense of responsibility to help the brand recover from the transgression (Pierce et al., 2003; Van Dyne and Pierce, 2004; Shu and Peck, 2015). This sense of personal responsibility is predicted to be higher for brand community members who have higher status in their brand community or who perceive their brand community to be more cohesive (Zhang et al., 2014). These brand community members will be more likely to engage in constructive actions designed to help the brand recover from the transgression.

Higher status (H1a) and greater brand community cohesion (H2a) will increase a member’s perceived responsibility to help the brand, and this effect will be mediated by the individual’s psychological ownership of the brand.

Higher status (H1b) and greater brand community cohesion (H2b) will increase a member’s likelihood to engage in constructive actions to help the brand, and this effect will be mediated by the individual’s psychological ownership of the brand and perceived responsibility to help the brand.

Higher status (H3) and greater brand community cohesion (H4) will decrease a member’s likelihood to engage in punitive actions against the brand, and this effect will be mediated by the individual’s psychological ownership of the brand.

Four field studies tested these hypotheses among members of five real brand communities accessed through Amazon MTurk – Xbox and PlayStation (Studies 1a and 1b), Apple (Study 2), and Jeep and Subaru (Study 3) – using three different transgressions – personal information being hacked due to the firm’s failure to update software (Studies 1a and 2), purposely omitting a known hardware defect from warranty coverage (Study 1b), and a variation on Volkswagen’s “dieselgate” scandal which involved software installed to “cheat” on emissions testing (Study 3). Recommendations set forth by Wessling, Huber, and Netzer (2017) and Goodman and Paolacci

(2017) were followed to minimize concerns about MTurker self-selection and misrepresentation.

Measures included *perceived community cohesiveness* ( $\alpha = 0.80 - 0.89$ ) and *perceived status in the community* ( $\alpha = 0.81 - 0.88$ ) adapted from Antia and Frazier (2001); *psychological ownership* ( $\alpha = 0.90 - 0.93$ ) adapted from Peck and Shu (2009); *responsibility to help* measured on a single item sliding scale ranging from 0-100; *punitive actions* ( $\alpha = 0.86 - 0.93$ ) adapted from Grappi, Romani, and Bagozzi (2013), and *constructive actions* using Johnson and Rapp's (2010) consumer helping behavior scale: expanding behaviors ( $\alpha = 0.941 - 0.957$ ); displaying brands ( $\alpha = 0.871 - 0.923$ ); increasing quantity ( $\alpha = 0.874$ ), and increasing price ( $\alpha = 0.751$ ).

The hypotheses were tested using Hayes' (2013) procedures and the SPSS macro PROCESS (Models 4 and 6; 5,000 bootstrap samples). Results for each model are summarized below:

*Status/Cohesion* → *Psychological Ownership* → *Responsibility to Help*

H1a and H2a are tested and supported across all four studies. Status has both a significant direct and indirect effect on responsibility to help, indicating partial mediation. Cohesion has a significant indirect effect but no direct effect on responsibility to help, indicating full mediation.

*Status/Cohesion* → *Psychological Ownership* → *Responsibility to Help* → *Constructive Actions*

H1b and H2b are tested and supported across Studies 2 and 3. Status had a significant indirect effect on all three included actions. Only increasing quantity and price also showed a significant direct effect. In Study 2, cohesion exhibited both direct and indirect effects for expanding behaviors, displaying brands and increasing quantity. However, in Study 3, only indirect effects were significant for increasing price and expanding behaviors, while both direct and indirect effects were significant for displaying brands.

*Status/Cohesion* → *Psychological Ownership* → *Punitive Actions*

H3 and H4 are tested across all four studies. In Studies 1a and 1b, there were no significant indirect effects of status or cohesion on punitive actions, and a significant positive direct effect of status. This pattern would lead us to reject H3 and H4. However, Studies 2 and 3 show different results. Status has both a significant positive direct effect and a significant negative indirect effect on punitive actions. The pattern indicates partial mediation and supports H3. Cohesion has no direct effect on punitive actions, but a significant negative indirect effect. Collectively, there is mixed support for H3 and H4.

This paper contributes to research on brand communities by examining the role of psychological ownership in mediating the impact of community status and cohesion on responses to brand transgressions. While previous research on brand transgressions argued that consumer-brand connections mitigated negative responses and punitive actions, we find that psychological ownership of the brand contributes to a sense of *responsibility for helping* a brand recover from a transgression and subsequent *constructive actions*. Our results further suggest that punitive actions and constructive actions are not mutually exclusive and may be appropriately viewed as independent responses to brand transgressions. This research suggests that brand communities can play a role in helping brands recover from transgressions within the broader market.

## Metaphorically Transgressing the Brand Relationship

### EXTENDED ABSTRACT

The observation that consumers relate to brands as they do to humans is a well-documented phenomenon (MacInnis & Folkes, 2017). One question of special interest is: What are the features that propitiate or hinder a consumer in forming a brand-relationship? (Fournier, 1998). In this study, we focus on brand-transgressions (Grégoire et al., 2009), which refers to a violation of the implicit or explicit rules guiding brand-relationships (Metts, 1994). We attempt to study the interactive effects of brand-transgressions and relationship-metaphors on brand-relationship strength.

Previous research argues that metaphors are prevalent in everyday life. Hence, metaphors can be thought of as stimuli that, either via environmental or embodied interactions, exercise a great impact on consumer behavior (Marin, Reimann, & Castaño, 2014). Therefore, metaphors structure what we perceive and even how we relate to other people (Lakoff & Johnson, 1997).

We propose that metaphors can also structure how strongly consumers relate to brands in the presence or absence of a brand-transgression. Indeed, recent research in the interpersonal-relationship literature has started to investigate the role of metaphors and relationship conflicts on relationship satisfaction (Lee & Schwarz, 2014) these frames have the power to change the evaluative impact of relational conflicts. We find that thinking about conflicts with one's partner hurts more with the unity (vs. journey). Nevertheless, no research has explored the role of metaphors and transgressions on brand-relationships. In this paper, we address two relationship-metaphors: "breaking-up" (i.e., ending a brand-relationship) and "matching perfectly" (i.e., establishing/maintaining a brand-relationship).

Most of the previous studies have focused on the "cuteness" of the effects, not on explaining the conditions under which people are more and less likely to rely on metaphors compared with literal interpretations in making sense of abstract social concepts like brand-relationships (Landau, Meier, & Keefer, 2010). We attempt to overcome this limitation by providing evidence that consumers only rely on metaphors when certain relationship-metaphors are activated in the presence or absence of a brand-transgression:

*Hypothesis 1a* In the presence of a brand-transgression, a metaphor that conveys a negative relationship meaning (breaking-up a pencil) will decrease the strength of a consumer's brand relationship (compared to not breaking-up a pencil).

*Hypothesis 1b* In the absence of a brand-transgression, a metaphor that conveys a positive relationship meaning (putting together a puzzle) will increase the strength of a consumer's brand relationship (compared to not putting together a puzzle).

*Hypothesis 2* In the presence of a brand-transgression that causes a brand-relationship breakup, a breaking-metaphor will decrease brand-relationship reconciliation (compared to a puzzle-metaphor).

### Experiment 1a

The goal of Experiment 1a was to study the effect of negative relationship-metaphors. The study employed the "We are breaking-up" metaphor and asked participants to break a pencil or to hold it.



Results revealed that when participants were presented with a brand-transgression, they reported a significantly weaker brand-relationship when they broke the pencil ( $M = 3.91$ ;  $SD = .12$ ) compared to when they just held it ( $M = 4.77$ ;  $SD = .21$ ),  $t = 15.98$ ,  $p < .001$ . However, when participants were not presented with a brand transgression, both means were not different,  $t = .49$ ,  $p = .63$ .

### Experiment 1b

The goal of Experiment 1b was to study the effect of positive relationship-metaphors. The study employed the “We are a perfect match” metaphor and asked participants to complete a puzzle or not. Results revealed that when participants were not presented with a brand transgression, they reported a significantly stronger brand-relationship if they put together a puzzle ( $M = 6.13$ ;  $SD = .23$ ) compared to if they did not put together a puzzle ( $M = 5.80$ ;  $SD = .27$ ),  $t = -4.01$ ,  $p < .001$ . However, when participants were presented a brand transgression, both means were not different,  $t = .147$ ,  $p = .88$ .

### Experiment 2

The goal of Experiment 2 was to compare the effect of both relationship-metaphors in the same study. We also aimed to generalize our previous results by employing different manipulations and experimental-stimuli. Replicating findings from experiments 1a and 1b, consumers who experienced a brand transgression reported a weaker brand-relationship when subjected to a breaking-metaphor ( $M = 4.01$ ;  $SD = 1.50$ ) compared to when subjected to a puzzle-metaphor ( $M = 4.82$ ;  $SD = 1.40$ ),  $t = 3.27$ ,  $p < .001$ , or to a control condition ( $M = 4.94$ ;  $SD = 1.42$ ),  $t = 3.68$ ,  $p < .001$ . However, consumers who did not experience a brand-transgression reported a stronger brand-relationship when subjected to a puzzle-metaphor ( $M = 5.94$ ;  $SD = .58$ ) compared to when subjected to a breaking-metaphor ( $M = 5.39$ ;  $SD = .95$ ),  $t = 3.92$ ,  $p < .001$ , or to a control condition ( $M = 5.43$ ;  $SD = .78$ ),  $t = 4.30$ ,  $p < .001$ .

### Experiment 3

Following recent suggestions for employing realistic experimental designs in the discipline (Morales, Amir, & Lee, 2017), the goal of Experiment 3 was to offer further support for our hypotheses by conducting a field-longitudinal study using a new brand and a cell phone App. Besides replicating results from previous studies, it was found that after a brand-relationship breakup, consumers subjected to a puzzle-metaphor are more likely to reconcile with the brand ( $M = 5.11$ ;  $SD = 1.03$ ) compared to consumers subjected to a breaking-metaphor ( $M = 4.24$ ;  $SD = .85$ ),  $t = 3.27$ ,  $p < .001$ , or a control condition ( $M = 4.22$ ;  $SD = .74$ ),  $t = 3.17$ ,  $p < .001$ . Furthermore, employing a trajectory analysis, it was found that the interactive effects of transgressions and metaphors remain over time, even when they are no longer present.

In sum, the current research is the first to highlight the relevant role brand-transgressions and metaphors play in brand-relationships by demonstrating how metaphors conveying a metaphorical relationship meaning and transgressions can affect a brand-relationship. Further, these findings contribute to conceptual metaphor theory by showing that consumers are more likely to rely on metaphors compared with literal interpretations when certain metaphors are activated under certain situations of presence or absence of transgressions. Moreover, we provide insight into the lasting effects that transgressions and metaphors have on consumers regarding their cognitions and behaviors about their interactions with brands.

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# When Cause-Related Marketing Hinders Rather Than Helps

Chairs: Michelle Daniels, Arizona State University, USA

In-Hye Kang, University of Maryland, USA

## **Paper #1: When the Face of Need Backfires: The Impact of Facial Emotional Expression on the Effectiveness of Cause-Related Advertisements**

In-Hye Kang, University of Maryland, USA

Marijke Leliveld, University of Groningen, The Netherlands

Rosellina Ferraro, University of Maryland, USA

## **Paper #2: I'm Just Trying to Help: How Volunteers' Social Media Posts Alter Support for Charitable Organizations**

Michelle Daniels, Arizona State University, USA

Kirk Kristofferson, Ivey Business School, Canada

Andrea Morales, Arizona State University, USA

## **Paper #3: Don't Tell Me Who I Am! When and How Assigning Consumers an Identity Backfires**

Noah Castelo, Columbia University, USA

Kirk Kristofferson, Ivey Business School, Canada

Kelley Main, University of Manitoba, Canada

Katherine White, University of British Columbia, Canada

## **Paper #4: Consumer Perceptions of Environmental 'Win-Wins'**

Tamar Makov, Yale University, USA

George E. Newman, Yale University, USA

### **SESSION OVERVIEW**

Consumers have more outlets for supporting charitable causes than ever before. Between the more than 1.5 million charitable organizations in the United States alone (NCCS 2016) and the increasing number of for-profit companies engaging in cause-related marketing initiatives, competition for consumer support is fierce. Thus, it is important to understand the effectiveness of cause-related marketing efforts. Recent work is beginning to document that some cause-related appeals might inhibit rather than increase donor support (e.g., Simpson, White, and Laran 2018). However, there are several unexplored ways in which organizations might be unknowingly reducing consumer support. This session highlights the newest research that examines when and why commonly-used cause-related appeals backfire.

First, **Kang, Leliveld, and Ferraro** examine how the facial expression of a victim in cause-related advertisements can decrease the effectiveness of such appeals. They find that advertisements featuring a victim with a sad facial expression leads consumers to perceive the organization's manipulative intent. This finding provides an important caveat to the literature encouraging organizations to use sympathy-evoking images of victims.

**Daniels, Kristofferson, and Morales** also focus on how facial expressions can affect contributions to charitable organizations; however, they focus on the facial expression of an organization's volunteer rather than the expression of victim. Volunteers frequently post images of themselves performing volunteer work, either of their own volition or at the request of the charity, and often these images include humorous facial expressions. The authors find that such humorous facial expressions are at odds with the serious nature of most causes supported by non-profit organizations, and lead to perceptions of volunteer insincerity, which spillover and reduce support for the referenced organization.

Next, **Castelo, Kristofferson, Main, and White** provide evidence that assuming a consumer's identity in a charitable request (e.g., Hi Animal Lover!) leads to reactance, and lowers the effec-

tiveness of the appeal, even if the assumed identity is correct. This effect is particularly pronounced for individuals who strongly hold the assigned identity. In other words, by assuming a donor's identity, charitable organizations are driving those who should be their largest contributors away. Further, this finding provides a novel setting where activating an identity leads to identity-inconsistent behavior.

**Makov and Newman** show that backfire effects extend to social initiatives put forth by for-profit companies. Specifically, they show that a company's sustainability initiatives can cause negative consumer reactions if they lead to increased profits. This effect is driven by a psychological divide between market and communal relationships and holds even when the organization's actions are truly in line with expressed environmental goals.

Taken together, the four papers (all in advanced stages) demonstrate that frequently-occurring cause-marketing appeals can backfire. In doing so, we not only offer new theoretical insights into cause-related marketing, but also provide practical implications to ensure that cause-related appeals provide the positive impact necessary to encourage consumer support. While this session will certainly appeal to researchers interested in prosocial behaviors, we also expect those interested in other areas such as emotions, identity, persuasion knowledge, and social influence to find the session valuable.

## **When the Face of Need Backfires: The Impact of Facial Emotional Expression on the Effectiveness of Cause-Related Advertisements**

### **EXTENDED ABSTRACT**

In cause-related advertisements that encourage consumer support for charitable causes either by donation or by CRM purchase (i.e., the purchase of a product is linked to support for charitable causes), organizations often display the image of a victim, whose facial expression may vary. Small and Verrochi (2009) showed that an image of a sad-faced (vs. happy-faced or neutral-faced) victim increased sympathy towards the victim, increasing donations. Thus, there appears to be a benefit of displaying a sad-faced image.

However, little research examines the potential negative effects of sad facial expression. We address this gap by demonstrating that a sad-faced (vs. happy-faced or neutral-faced) image evokes consumer inference of the organization's manipulative intent, defined as "consumer inferences that the advertiser is using inappropriate or manipulative tactics" (Campbell 1995). We build on several research streams to make this proposition. First, consumers have a chronic goal to maintain positive feelings and to improve negative feelings (e.g., sadness; Lazarus and Folkman 1984). When consumers encounter a sad-faced image, they may perceive that the organization is forcing them to experience a negative, aversive emotion to achieve its self-interested goal (increasing fundraising/purchase). Second, research in anthropology suggests that organizations' practice of displaying images of others' suffering (e.g., sadness) is viewed as trivializing that suffering as an attention-grabbing hook (Kleinman and Kleinman 1996). Hence consumers will infer more manipulative intent from the sad-faced image.

We propose that the inference of manipulative intent, along with sympathy (Small and Verrochi 2009), mediate the effect of facial expression on ad effectiveness, measured by ad evaluation, organization evaluation, and helping intention (CRM purchase and donation).

Reflecting different characteristics of the effectiveness measures and mediators, we draw different predictions for ad/organization evaluations than for helping intentions. One relevant difference is that helping behavior (vs. ad/organization evaluations) is more directly related to the motivation to enhance the welfare of victims (Bagozzi and Moore 1994). However, all three effectiveness measures are related to how consumers perceive the organization. For example, consumers' inferences that an organization is manipulative reduces their ad/organization evaluation, and their willingness to support the organization by purchasing a product (Campbell 1995). Because inference of manipulative intent is the consumer's response towards the organization, while sympathy is the consumer's response to the victim, we expect that inference of manipulative intent will impact ad/organization evaluations and helping intentions, while sympathy will only affect helping intentions. Importantly, the effects of sympathy and manipulative intent on helping intentions operate in opposing directions with sympathy increasing helping intentions and manipulative intent reducing helping intentions.

We hypothesize that a sad-faced (vs. happy-faced or neutral-faced) image will lower ad/organization evaluations (H1) due to mediation by manipulative intent (H2). Inference of manipulative intent and sympathy will mediate the effect of facial expression on helping intentions, but in opposing directions, which may produce no effect of facial expression on helping (H3). We expect the proposed effects to be the same for advertisements by for-profit and nonprofit organizations because consumers perceive both organizations are persuasion agents, who can be manipulative to achieve their goals (Cotte et al. 2005; Seu and Orgard 2014).

Three studies tested H1-H3 using cause-related advertisements by for-profit and nonprofit organizations, using images of different children. In these studies, participants viewed a one-page advertisement with the image of a child with specific facial expression. Study 1 used a CRM advertisement by for-profit organization, which stated that proceeds from the purchase of a granola bar would be donated to hungry kids. The image of a child with either a happy, neutral, or sad expression was displayed. Study 2 generalized the findings to a non-profit CRM context using a 2(facial expression: neutral, sad) x 2(organization type: for-profit, nonprofit) between-subjects design. Study 3 further generalized the findings by including a condition where the non-profit organization solicited a donation.

In all studies, ad/organization evaluations were significantly lower in the sad (vs. neutral and happy) conditions (H1). There was no difference between neutral and happy conditions. For ad/organization evaluations, only the inference of manipulative intent significantly mediated (H2). For helping intentions, the effect of facial expression was not significant. This was because the indirect effects of inference of manipulative intent and distress were both significant but in opposite directions (H3). Moreover, in studies 2-3, the interaction between facial expression and organization/ad type was not significant, suggesting that the facial expression effects hold in advertising by for-profit and nonprofit organizations. We ruled out several alternative explanations (warmth and competence of the organization, outcome efficacy, and attractiveness of a child).

In studies 4-5, we provide more support for the manipulativeness mechanism by examining two theoretically relevant moderators. Skepticism towards CRM reflects consumers' tendency towards disbelief of CRM claims. More skeptical consumers are more likely to perceive a potentially suspicious tactic (e.g., sad-faced image) as manipulative (Kirmani and Zhu 2007). Thus, the negative effect of sad facial expression should be larger for consumers with higher skepticism towards CRM. As expected, study 4 revealed a significant interaction between facial expression (sad vs. happy) and

skepticism towards CRM on ad/organization evaluation and helping intentions. Cause centrality captures whether the advertisement is cause-focused or product-focused. Cause-focused ads feature the cause (e.g., victim's image) at the focal point of the advertisement and the promoted product at the secondary point, while product-focused ads feature the product at the focal point and the cause at the secondary point (Chang 2012). When the organization positions the cause element as the focal point, consumers will infer that the organization intentionally focused consumers on the sad-faced image, and infer high manipulative intent. Thus, the negative effect of sad facial expression should be stronger in the cause-focused (vs. product-focused) ad. As expected, study 5 revealed a significant interaction between facial expression and cause-centrality on ad/organization evaluations.

Overall, we provide a comprehensive framework of the effect of facial expression by considering the effects of two mediators and by identifying two moderators. By doing so, we uncover a nuanced effect that sad facial expression produces negative effects on ad/organization evaluations but weaker effects on helping intention.

### **I'm Just Trying to Help: How Volunteers' Social Media Posts Can Impact Support for Non-Profits**

#### **EXTENDED ABSTRACT**

Nonprofits lean heavily on social media to raise awareness and funds for their causes (M+R 2017). One common approach is to encourage supporters to share their experiences with the cause to help raise awareness amongst their social networks. Often supporters respond by posting an image of themselves engaging in volunteer work on behalf of the organization on their personal social media accounts. These secondhand appeals promote the charitable organization but do not have the oversight and planning of organization-sponsored promotional appeals. Thus, research investigating the impact and effectiveness of these secondhand appeals is needed.

Previous work in the prosocial domain has examined how sad facial expressions of identifiable victims in promotional appeals can increase support for charities by eliciting greater feelings of sympathy (e.g., Small and Verrochi 2009). However, no research has yet examined how the facial expressions of a volunteer might impact consumer responses. We focus instead serious and smiling volunteer expressions compared to humorous facial expressions, which are used quite frequently on social media to increase the favorability of response (Porter and Golan 2006; Ipsos 2013). Specifically, we argue that because humor does not align with the seriousness of issues addressed by charities, consumers will view volunteer's humorous images as insincere, leading to reduced support for the organization.

Study 1 examines how participants respond to volunteer social media posts featuring either a humorous, serious, or smiling facial expression. Mturk workers (n=224) participated in a 3-cell (Expression: serious, smiling, humorous) between-subjects design. Participants were told that they were going to view a social media post from someone who recently volunteered with the organization HandsOn—a (fictitious) charity whose mission is to help clean up and repair local community property. Participants then saw an Instagram post of the volunteer. In the post, the volunteer either had a serious expression, smiled, or stuck her tongue out for the respective conditions.

After viewing the secondhand appeal, participants responded to questions regarding both the volunteer and the charitable organization. Participants first rated to what extent the volunteer was self-ish and insincere ( $\alpha=.86$ ). Next, participants were asked to rate how



likely they were to donate and volunteer for HandsOn, as well as how much they would like to learn more about HandsOn ( $\alpha=.86$ ).

Participants believed the volunteer was significantly more insincere in the humorous condition compared the smiling condition ( $p=.001$ ) and serious condition ( $p=.001$ ). The smiling and serious conditions did not differ from one another ( $p=.45$ ). Similarly, participants were less likely to support HandsOn in the humorous expression condition compared to the smiling expression condition ( $p=.04$ ) and serious expression condition ( $p=.005$ ). Again, the smiling and serious conditions showed no differences ( $p=.46$ ). Thus, a humorous secondhand appeal from an individual who spent time volunteering with the charity led observers to *reduce* their intentions of supporting the organization. As predicted, the volunteer's insincerity mediated the pathway between facial expression and support of the organization.

Study 2 examines whether this negative spillover consequence holds in the both non-profit and for-profit contexts. We predict that the negative effects of a humorous facial expression will only hold in a non-profit context, as insincerity and selfishness are more at odds with the warmth associated with non-profits than the competence associated with for-profits (Aaker et al. 2010).

Mturk participants ( $n=401$ ) completed a 2 (Expression: smiling, silly) x (Company: for-profit, non-profit) between-subjects design. Participants read about a company called Jessie's Kitchen. In the non-profit (for-profit) condition, Jessie's Kitchen offered cooking classes for a \$30 donation (fee). The food made in each class was donated to local families in need (enjoyed by the class). Participants responded to the same volunteer insincerity ( $\alpha=.84$ ) measures as study 1. The behavioral intention measures from study 1 were adapted for Jessie's Kitchen and to fit either the for-profit or non-profit context. Additionally, because both non-profit and for-profit organizations are interested in increasing customer interaction, we included the participant's likelihood of "liking" the picture on Instagram in our intentions index ( $\alpha=.86$ ).

As predicted, participants in the non-profit conditions were significantly less likely to want to support Jessie's Kitchen in the humorous expression condition compared to the smiling expression condition ( $p=.03$ ). However, in the for-profit condition there was no difference between support intentions across expression ( $p=.73$ ). Similarly, participants in the non-profit conditions directionally thought the volunteer was more insincere in the humorous condition compared the smiling condition ( $p=.11$ ). In the for-profit conditions, perceptions of insincerity did not differ across expression ( $p=.25$ ).

In our final study, we examine a second boundary condition—the amount of information participants have about the volunteer's commitment to the cause. Undergraduate participants ( $n=290$ ) participated in a 2 (Expression: silly, smiling) x 2 (Additional info: yes, no) between-subjects study. The procedure was nearly identical to that of the non-profit conditions from study 2 with two notable changes. First, in the additional information conditions, participants were given more information behind the individual's reasons for volunteering. Second, instead of the previous intentions measures, participants were told that Jessie's Kitchen was attempting to raise funds by selling products featuring their logo. Participants viewed an image of a mug with Jessie's Kitchen's logo, and rated how much they would be willing to pay for it.

Participants in the no additional information conditions felt the volunteer was significantly more insincere in the humorous condition compared the smiling condition ( $p=.03$ ). In the additional information conditions, perceptions of insincerity did not differ across expression ( $p=.44$ ). Participants in the no additional information conditions were willing to pay less for the mug in the humorous

expression condition compared to the smiling expression condition ( $p=.06$ ). There was no difference in the additional information conditions ( $p=.62$ ). As expected, volunteer insincerity mediated the relationship between facial expression and WTP when no additional information was present, but not when additional information was available.

Across three studies, we take the first step in understanding how volunteer's social media posts might affect support for charitable organizations. We find initial support for our hypothesis that humorous expressions can lead to negative consequences for both the volunteer and the organization.

## Don't Tell Me Who I Am! When and How Assigning Consumers an Identity Backfires

### EXTENDED ABSTRACT

Past research suggests that while individuals often have chronically accessible aspects to their identity (Oyserman 2009), different identities can be activated by elements of the decision context (e.g., Forehand & Deshpandé 2001; White & Dahl 2007). Each identity that an individual holds is associated with different behavioral demands and expectations (Grover and Hui 1994). The salience of a particular identity can influence individuals' perceptions, attitudes, and behaviors (Forehand, Deshpandé, & Reed II 2002). Indeed, research supports the notion that a salient identity dominates working memory at a given point in time (Bhattacharya & Sen 2003) and is more likely to affect behavior than an identity that is not salient (Burke 1980).

Given the importance of identity in predicting behavior, we were interested in situations in which a charitable organization assigns an identity to a consumer. We refer to this as identity assignment. For example, imagine you donate to the ASPCA and receive a letter describing you as an animal lover. You may or may not actually hold this identity, but this identity is being inferred by the charity. Organizations who make such assumptions may be attempting to induce identity-consistent behavior in an effort to increase support for their cause, although we suggest that sometimes this strategy will backfire.

Theoretically, this phenomenon is tied to self-verification theory which relies on three important assumptions (Swann 2011). First, over time, patterns of behavior emerge that become part of a person's stable self-view. Second, these self-views provide to the individual a sense of coherence in their identity. Third, these feelings of consistency and coherence cause people to work towards maintaining these self-views. What is novel about the current research, however, is that in the case of identity assignment, we predict that as opposed to responding in an identity consistent manner, consumers will do the opposite. This prediction would be in contrast to self-verification theory as it would demonstrate a situation in which a positively viewed identity leads to a negative downstream consequence. Further, identity-based motivation theories (Oyserman 2009) and social identity theory (Tajfel and Turner 1979) would predict that when one's identity becomes activated, that person should act consistently with their identity. We demonstrate a situation in which this is not the case. We reveal a backfire effect wherein people become less likely to behave in line with the activated identity. We demonstrate this occurs due to reactance, which is defined as the tendency to be less likely to agree to request because one's own feelings of autonomy and freedom to choose are threatened in some way (Brehm 1972).

Study 1 examined whether identity assignment can backfire and reduce identity-consistent choices. Participants ( $n=271$ ) were randomly assigned to one of two conditions: Identity Assignment

vs. Control. Participants were asked to evaluate an appeal from an animal protection charity: The Humane Society. The letter outlined its mission and provided basic facts. Furthermore, participants in the identity assignment condition were presented with an additional line of text: "We know you are an animal lover, and that you are passionate about caring for animals and their welfare." After completion, participants completed five items indicating their behavioral intentions to support the charity (e.g., volunteer, sign a petition). Finally, participants completed measures to assess reactance to identity assignment (e.g., "I do not like that I am being told how I feel about animals"). Participants in the identity assignment condition expressed significantly higher reactance responses to the appeal than participants in the control condition ( $p = .023$ ), and were less likely to support the charity in the future ( $p = .017$ ). Mediation analysis showed that increased reactance mediated the relationship between identity assignment condition and subsequent decreased support.

Study 2 investigated whether this backfire was, counterintuitively, most pronounced among those with stronger identities, and ruled out a general positive attribution as an alternative explanation. Participants ( $n=256$ ) were assigned to conditions in a 3 (Assigned Identity, General Internal Attribution, Control)  $\times$  continuous (Identity Strength) design. Participants in the control and identity assignment evaluated the same letters from Study 1. The appeal in the general attribution condition was: "We know that your values and the kind of person you are makes you passionate about caring for animals and their welfare". Participants next completed the behavioral support items from Study 1. The 3  $\times$  continuous interaction emerged ( $p = .047$ ), and was driven by the identity assignment  $\times$  control interaction ( $p = .012$ ). For those with high (+1.63SD) [low: -.76 SD] identity strength, the assigned identity leads to lower (higher) cause support than the control condition. No effect emerged in the general internal attribution condition.

Study 3 delved deeper into the psychological reactance proposed to drive this backfire effect. We reasoned that this identity inconsistent behavior results from the perception that the organization is taking unfair advantage of the consumer's identity in the solicitation request. Participants ( $n=256$ ) were assigned to conditions in a 3 (Identity Assign, Identity Assign+appeal, Control)  $\times$  continuous (Identity Strength) design. The cover story and manipulations were consistent with previous studies, but participants in the identity assign + appeal condition received an additional appeal that donations were needed or animals might suffer. We hypothesized this condition would amplify experienced reactance. To assess reactance, participants indicated agreement with the following item: The Humane Society is taking advantage of my attitudes about animals to get me to donate". Participants then provided perceptions of the Humane Society using a four-item index. Results revealed the predicted interaction ( $p = .015$ ), showing that those with strong identities (+.28 SD) perceived the organization was taking advantage of them for gain, which in turn lowered overall perceptions of the organization ( $b = -.05$ , CI95:  $-.108, -.001$ , Process Model 7).

We investigate the novel phenomenon of identity-assignment, and show that when an organization assigns to a consumer an identity based on past support behavior, those who hold this identity engage in identity-inconsistent behaviors. We show this backfire effect is due to the perception that the organization is attempting to take advantage of their beliefs for gain.

## Consumer Perceptions of Environmental 'Win-Wins'

### EXTENDED ABSTRACT

Many organizations across a wide range of industries have sought to align their financial goals with environmental ones by identifying strategies that maximize profits while minimizing environmental impacts. Although such 'win-win' strategies are generally thought to reflect positively on companies employing them, in a series of 3 studies we find that people tend to respond negatively to the notion of profiting from environmental initiatives. In fact, observers may evaluate environmental win-wins less favorably than profit-seeking strategies without environmental benefits.

We suggest that this negative response results from a fundamental psychological divide between social relationships that are perceived as communally-oriented versus those that are perceived as market-oriented (hereafter, 'communal' and 'market'). Previous research has demonstrated that communal versus market relationships invoke fundamentally different norms for behavior (e.g., Clark and Mills 1979; Newman and Cain 2014). Specifically, when a communal relationship is established, profits can "taint" the positive value associated with pro-social behavior by violating the norm that one should give without receiving something in return. In market contexts, however, this norm is not present and thus it may be perfectly acceptable to profit from one's actions (Holmes, Miller, and Lerner 2002).

Indeed, past research has demonstrated that blurring the lines between communal and market relationships lowers evaluations of individuals and organizations who behave pro-socially and may even reduce individuals' likelihood of helping others (e.g., Newman and Cain 2014, Vohs, Mead, and Goode 2006). Yet given the differences between pro-social behavior such as charitable giving, and environmental initiatives of for-profit organizations (e.g. no identifiable victim, time discrepancies), it remains unclear if such win-wins are evaluated under the same norms as pro-social behavior.

We examine the distinction between communal and market norms, and how they affect perceptions of companies profiting from environmental win-wins in a series of 3 studies.

Study 1, examined whether an environmental win-win is evaluated less favorably than a 'business as usual' approach. 375 MTurk Participants were presented with a fictitious newspaper article that discussed real advertisements used by the outdoor apparel company, Patagonia. In the environmental conditions, participants read about Patagonia's pro-environmental 'Don't buy this jacket' campaign, in which the company argued that to help the environment, individuals should consume less. In the control conditions, participants read about a more standard 'Try on adventure' campaign, which highlighted the performance capabilities of Patagonia products. The newspaper article either highlighted that the ad campaign resulted in increased profits (which it did; Stock 2013), or an increase in brand recognition (reputational benefit). Thus, the factors of ad type (environmental vs. control) and benefit (monetary vs. reputational) were fully crossed in a 2X2 between-subjects design. Participants then rated the company on several dimensions (moral, ethics, like, approve, trust, manipulative(R), selfish (R), buy, competent).

We found that Patagonia received significantly lower evaluations when the environmental advertisement resulted in profits ( $M=5.41$ ) than when the control advertisement resulted in profits ( $M=6.32$ ),  $p < .001$ ). In contrast to the profit conditions, when the benefit was reputational, participants had equivalent ratings of the company in both the environmental ( $M=5.96$ ) and control ad conditions ( $M=6.18$ ,  $p = .28$ ).

In Experiment 2 we directly test the hypothesis regarding communal versus market norms. 244 Mturk participants were primed to a specific norm (communal/market exchange) with a short writing exercise. Then, participants read about a sustainability initiative in which trash collectors would institute a new pricing model that encourages waste reduction ('pay-as-you-throw'). Half of the participants read the initiative had environmental benefits (environmental benefit only), while for the other half read that the initiative was profitable for the company and also environmental (win-win). Thus, the factors of priming task (communal vs. market) and benefit type (environmental benefit only vs. win-win) were fully crossed in a 2X2 between-subjects design. Participants then rated the company's morality.

Participants primed with communal norms, gave the company significantly lower evaluations in the win-win condition ( $M=5.22$ ) compared to the environmental benefit only condition ( $M=6.89$ ,  $p<.001$ ). However, participants primed with market norms, gave the company equivalent evaluations in the win-win ( $M=6.55$ ) and the environmental benefit only ( $M=6.37$ ) conditions ( $p=.61$ ). Further comparison of the two win-win conditions indicated that profits led to significantly lower evaluations of the company when participants were primed with communal norms vs. market norms, ( $p<.001$ ,  $d=.67$ ).

Experiment 3 tested whether differences in mere temporal order would engender a similar negative win-win effect. Initial categorization of an event may strongly affect the processing of subsequent information such that people tend to resist re-categorizing the event even when they encounter conflicting information (Markman 1987, 1989; Moreau, Markman, and Lehmann 2001). Therefore, we hypothesized that even when people are exposed to identical information about an organization, they may have very different evaluations depending on which benefits are encountered first.

123 participants read two pages containing identical information about the company Patagonia. Half of the participants first read that the company was a very good environmental actor, and on a subsequent page read that the company was also very profitable. The other half of participants first read the information in the reverse order. Participants then rated the company on the same dimensions as in Experiment 1.

Results indicated a significant effect of information order on company evaluations ( $p=.011$   $\eta^2=.05$ ). As predicted, Patagonia was evaluated significantly more positively when participants first read about how they were profitable before reading about their environmental efforts ( $M=7.15$ ) compared to reading about their environmental efforts first ( $M=6.45$ ).

Together these studies suggest that the risk of eliciting negative public response following the adoption of green business practices, is not limited to "greenwashing" or other forms of disinformation previously examined (Delmas and Cuerel Burbano 2011; Walker and Wan 2012). Hence, even if an organization's actions are truly in line with the environmental goals professed and no 'greenwashing' is involved, it is still at risk of drawing a negative reaction if these activities are not carefully communicated. We show that this negative backlash can be avoided by reframing the efforts as market-oriented, or by simply altering the order in which individuals encounter information regarding the initiative.

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# The Rise of the Robots in Consumer Research

Chair: Noah Castelo, Columbia Business School, USA

## **Paper #1: Service Robots Rising: How Humanoid Robots Influence Service Experiences and Consumption**

Martin Mende, Florida State University, USA  
Maura Scott, Florida State University, USA  
Jenny van Doorn, University of Groningen, The Netherlands  
Ilana Shanks, Florida State University, USA  
Dhruv Grewal, Babson College, USA

## **Paper #2: The Impact of Artificial Agents on Persuasion: A Construal Level Account**

Tae Woo Kim, Indiana University, USA  
Adam Duhachek, Indiana University, USA

## **Paper #3: Ecce Machina Humana: Examining Competence and Warmth in Consumer Robots**

Seo Young Kim, Columbia University, USA  
Bernd Schmitt, Columbia University, USA

## **Paper #4: Human or Robot? The Uncanny Valley in Consumer Robots**

Noah Castelo, Columbia University, USA  
Bernd Schmitt, Columbia University, USA  
Miklos Sarvary, Columbia University, USA

### **SESSION OVERVIEW**

Robots that interact directly with consumers are becoming increasingly prevalent in many sectors of the economy. Such robots are already being used in retail stores, restaurants, hotels, hospitals, and are being sold directly to consumers for use in the home (Dass 2017; Gibbs 2016; Nguyen 2016; Simon 2015). Indeed, the market for consumer robots is growing seven times faster than the market for manufacturing robots (Business Insider 2015); it reached \$5.4 billion in sales by the end of 2017 and is expected to reach \$14.9 billion by 2023 (Business Wire 2017).

This potentially revolutionary trend raises many fundamental questions for consumer research. How will consumers react to the use of robots in jobs that are normally performed by humans? How should robots be designed and deployed in order to maximize consumers' comfort and trust? How might interacting with robots change downstream consumer behaviors? This special session – the first to our knowledge to focus on consumer robots at ACR – will address these questions and more.

In the first paper, Mende et al. demonstrate that interacting with a human versus a robot in a service setting decreases consumers' comfort, which in turn has downstream consequences for how much food consumers choose to eat.

Kim and Duhachek then explore how interacting with a human versus a robot affects the process of persuasion. They use construal level theory to explain their findings that robots and humans are more effective at different forms of persuasion.

Kim and Schmitt shift the focus of the session to perceptions of a robot's mind. Specifically, they find that the two fundamental trait dimensions of social judgments also apply to robots, and that the perceived competence and warmth have differing effects on consumer attitudes to robots.

The final paper in the session moves from comparing humans and robots to exploring how different kinds of robots affect consumers' experiences. Castelo et al. study how the human-likeness of a robot impacts consumer's reactions to such robots, finding that even

perfectly human-like robots elicit much more negative reactions than do humans, and introducing a new notion of species-ism.

Overall, this session explores a timely and important topic: how the increasingly common use of robots in consumer-facing settings will change consumers' experiences and behaviors. We expect this session to appeal to a broad audience, since the papers cover a broad swathe of theoretical and substantive topics including eating behavior, persuasion, intergroup attitudes, mind perception, and innovation. We hope that this session will also spur others to further study the rise of consumer robots from a consumer research perspective, since the implications of this trend are still largely unknown.

None of the papers here included have been presented at ACR before, and they are all at an advanced stage of completion.

## **Service Robots Rising: How Humanoid Robots Influence Service Experiences and Consumption**

### **EXTENDED ABSTRACT**

Although technology already continuously influences consumers' service experiences (e.g., Giebelhausen et al. 2014; Huang and Rust 2013), the emergence of humanoid robots (i.e., robots with a human-like morphology such as a face, arms, and legs) is likely to be among the most dramatic evolutions in the service realm. For instance, the humanoid robot "Pepper" works as a robot waiter at Pizza Hut in Asia and takes orders and interacts with customers (Curtis 2016), sells coffee machines at 1,000 Nescafe stores in Japan, and worked in a restaurant at the Oakland Airport (Heater 2017). These humanoid robots critically differ from traditional self-serving technologies because they are able to meaningfully engage humans on a social level and may build a relationship with consumers (van Doorn et al. 2017).

### **Impact of Humanoid Service Robots (HSRs) on Service Experiences**

It is currently not clear whether these humanoid service robots (HSR) (relative to human employees) trigger positive or negative consequences for consumers and companies. Although creating robots that appear as human-like as possible is the "holy grail" in robotics (Rubin 2003), consumers may respond negatively to highly human-like robots, due to feelings of discomfort (e.g., eeriness) that such robots can evoke—a phenomenon conceptualized in social robotics as the "uncanny valley" (Mori, MacDorman, and Kageki 2012). Empirical support for the uncanny valley remains mixed and inconclusive (Kätysyri et al. 2015; Piwek, McKay, and Pollick 2014), and it has yet to be tested in consumption and marketing settings. Therefore, the goal of this paper is to investigate whether HSRs trigger discomfort and what the consequences might be for customers' service experiences and their consumption. In particular, we expect that the discomfort elicited by an interaction with a HSR drives a systematic coping response of turning to food (Heatherston and Baumeister 1991).

### **Studies**

Studies 1A, 1B and 1C examine the underlying process related to interacting with a HSR and its downstream effect on consumption behavior, specifically, food consumption. Study 1A (N=215) features a one-way, between-subjects design, with two service provider levels (HSR vs. human). Participants were invited to a cheese tasting test

and sat at individual computer stations, each with a box containing 20 uniformly cut cubes of Gouda cheese. Respondents watched a video with either a HSR or a human behind a table with a cutting board and cheese cubes who told them that they prepared the cheese for them. Participants could eat as much cheese as they wanted while watching a video and answering questions.

The analysis of variance (ANOVA) for the manipulation check index (“The kitchen staff member is like a person [R]/machine-like”) revealed that the manipulation performed as intended ( $M_{\text{HSR}} = 5.74$ ,  $M_{\text{Human}} = 2.26$ ;  $F(1, 208) = 577.49$ ,  $p < .001$ ). An analysis of covariance (ANCOVA) on discomfort with the service provider (“This kitchen staff member is creepy/eerie/unnatural,” 1 = “not at all,” 7 = “very much so”;  $\alpha = .76$ ) and attitude towards the service employee (“dislike/like,” “bad/good,” “negative/positive,” “unfavorable/favorable”;  $\alpha = .94$ ) revealed that consumers felt greater discomfort when told that the cheese was prepared by the HSR rather than the human service provider ( $M_{\text{HSR}} = 3.69$ ,  $M_{\text{Human}} = 2.33$ ;  $F(1, 196) = 67.67$ ,  $p < .001$ ) and were less favorable toward the HSR ( $M_{\text{HSR}} = 5.03$ ,  $M_{\text{Human}} = 5.45$ ;  $F(1, 196) = 7.34$ ,  $p < .01$ ). Furthermore, participants ate more when the cheese was prepared by an HSR rather than a human service provider ( $M_{\text{HSR}} = 7.35$ ,  $M_{\text{Human}} = 5.99$ ;  $F(1, 196) = 4.03$ ,  $p < .05$ ). A serial mediation analysis (Hayes 2015; Process Model 6) confirmed our theorizing that when food is prepared by an HSR (vs. human), consumers feel relatively more uncomfortable, which leads to a less favorable attitude, which triggers increased food consumption ( $a \times b = -.19$ ; 95% confidence interval [CI]:  $-.50, -.04$ ).

Studies 1B and 1C confirm this pattern of results, using a somewhat different study setup. In Study 1B, we filmed a second set of videos with an actual robot or human service provider in an actual restaurant with an all-you-can-eat format. To generalize these findings, Study 1C features another HSR, which was designed to appear identical to its human counterpart.

In studies 2, 3A and 3B we explore important boundary conditions and find that the adverse responses that HSRs elicit are elevated when perceived threat to human identity is high and mitigated when consumer-perceived social belongingness is high. In study 4, we examine whether the common managerial practice of anthropomorphizing a HSR (e.g., by giving it a name) might mitigate consumers’ reactions to HSRs.

## The Impact of Artificial Agents on Persuasion: A Construal Level Account

### EXTENDED ABSTRACT

Whereas more individuals are relying on information provided by non-human agents, such as artificial intelligence and robots, little research has examined how persuasion attempts made by non-human agents may differ from persuasion attempts made by human agents. Drawing on construal level theory, we posit that individuals will perceive artificial agents (AA hereafter) at a low-level construal, which directs individuals’ focus towards “how” these agents implement actions to serve humans. Further, we posit that interactions with such agents drive individuals to adopt a low-level construal mindset more generally. We show these construal-based differences impact compliance with persuasive messages made by AA such that these messages are more effective when the message represents low- (vs. high-) level construal features. We find these effects are moderated by the extent to which an AA can independently learn from its environment (i.e., machine learning), as learning defies people’s lay theories about AA.

In Study 1, one hundred participants from M-Turk (female = 45%,  $M_{\text{age}} = 35.57$ ) were instructed to imagine that the actions

provided in the Behavioral Identification Form (BIF; (Vallacher & Wegner, 1989) were conducted by either a human or an AA, depending upon condition. Then, participants chose the descriptions that they thought were more appropriate for the agent that they were assigned to. We summed the number of high-construal choices made by each participant to create an index of construal level. The index was submitted to a 2 (agent: human, AA) ANOVA. As predicted, the construal level score was significantly lower when participants imagined that the action was conducted by an AA ( $M = 4.04$ ,  $SD = 5.51$ , 95% CI = [2.44, 5.64]) than when the action was conducted by a human ( $M = 11.28$ ,  $SD = 5.88$ ), 95% CI = [9.68, 12.88]),  $F(1, 98) = 40.36$ ,  $p < .001$ ,  $\eta_p^2 = .29$ .

In Study 2, three hundred twenty four participants from M-Turk (female = 54%,  $M_{\text{age}} = 37.30$ ) were randomly assigned to one of the conditions in a 2 (agent: human, AA) x 2 (message: high-construal, low-construal) between-subjects design. Participants filled out a questionnaire that purported to measure their risk of skin cancer (e.g., age, gender, residential area, hours of daily sunlight exposure, skin cancer history in the family etc.) and were told that personalized medical advice will be created based on their answers. In particular, participants in the human (AA) condition were told that they will receive medical advice from a human doctor (IBM’s artificial intelligence Watson) after assessing their answers. The medical advice message either highlighted high- or low-level construal prescriptive statements regarding sunscreen use. The intention to use the sunscreen (e.g., “I intend to use sunscreen”; 1 = very unlikely and 7 = very was measured and served as our dependent variable).

We submitted the intention to use sunscreen to a 2 (agent: human, AA) x 2 (message: high-construal, low-construal) ANOVA. The result only revealed an interaction between agent and message,  $F(1, 320) = 5.92$ ,  $p = .016$ ,  $\eta_p^2 = .02$ . In particular, when the message was coming from an AA, the low-construal message ( $M = 4.98$ ,  $SD = 1.48$ , 95% CI = [4.65, 5.31]) was more effective than the high-construal message ( $M = 4.30$ ,  $SD = 1.72$ , 95% CI = [3.93, 4.68]) in persuading individuals to use sunscreen,  $F(1, 320) = 6.96$ ,  $p = .009$ ,  $\eta_p^2 = .04$ . When the message was coming from a human, there was no significant difference between the low-construal message ( $M = 4.40$ ,  $SD = 1.62$ , 95% CI = [4.05, 4.76]) and the high-construal message ( $M = 4.60$ ,  $SD = 1.58$ , 95% CI = [4.26, 4.93]) in persuading individuals to use sunscreen,  $F(1, 320) = .61$ ,  $p = .437$ ,  $\eta_p^2 < .01$ . These results show that AA are not only perceived as a low-construal agent (i.e., Study 1) but also extends to the persuasion context such that AA’s persuasion is more effective when low- (vs. high) construal message is used.

In Study 3, One hundred and ninety-two undergraduate business students (female = 48%,  $M_{\text{age}} = 20.21$ ) were randomly assigned to one of the conditions in a 2 (AA’s capability: fixed, learning) x 2 (message construal: high-construal, low-construal) between-subjects design. First, participants were instructed to read a description about Alexa, which depicted Alexa as an AA having fixed or experiential learning capability. Then, Alexa instructed the participants to list products they purchased recently on their computers. Then, participants randomly received on their computer either a high- or low-construal message that advertised a gym, which they believed as an individualized message from Alexa. Then, participants indicated the extent to which they intended to visit the gym (1 = not at all likely, 7 = very likely), which was our dependent variable.

Then, the intention to visit the gym was submitted to a 2 (AA’s capability: fixed, learning) x 2 (message: high-construal, low-construal) ANOVA and we only found an interaction between AA’s capability and message,  $F(1, 188) = 5.93$ ,  $p = .016$ ,  $\eta_p^2 = .03$ . In particular, in the fixed capability condition, low-construal message ( $M =$

3.89,  $SD = 1.83$ , 95% CI = [3.38, 4.40]) was marginally more effective than the high-construal message ( $M = 3.27$ ,  $SD = 1.73$ , 95% CI = [2.77, 3.77]),  $F(1, 188) = 3.01$ ,  $p = .084$ ,  $\eta^2 = .03$ . In the learning capability condition, it was shown that the high-construal message ( $M = 4.00$ ,  $SD = 1.91$ , 95% CI = [3.48, 4.51]) was marginally more effective than the low-construal message ( $M = 3.38$ ,  $SD = 1.63$ , 95% CI = [2.89, 3.88]),  $F(1, 188) = 2.93$ ,  $p = .089$ ,  $\eta^2 = .03$ . Therefore, Study 3 showed that beliefs on AA's learning beliefs are capable of overriding the fundamental linkage between low-construal and perceptions of AA, thereby impacting persuasive effectiveness.

Taken together, three studies have shown that AA are not only perceived as a low-construal agent but also AA's persuasion is more effective when the message highlighted low- (high-) construal features. However, such low-construal perception by default was attenuated when the AA was perceived as capable of learning from the environment.

## Ecce Machina Humana: Examining Competence and Warmth in Consumer Robots

### EXTENDED ABSTRACT

Robots are entering the consumer marketplace. Unlike industrial robots, which are employed in factories, these "consumer robots" are capable of being personal assistants and companions in our homes; sales assistants in retail stores; concierges and check-in staff in hotels; caretakers and nurses in medical facilities and nursing homes; and teachers, for example, for mentally disabled and autistic children.

How will consumers evaluate these human machines? Because consumer robots, compared to industrial robots, are designed to behave and even look like humans, we propose that consumers evaluate robots using the same dimensions that they use to evaluate humans. We specifically focus on the trait dimensions of competence and warmth, which are considered the two fundamental dimensions of social judgment (Fiske et al. 2007; Judd et al. 2005). The competence dimension is an intellectual trait dimension including utilitarian traits such as competent, intelligent, efficient and capable. The warmth trait dimension includes desirable social qualities such as being warm, kind, sociable and friendly (Abele et al. 2008; Judd et al. 2005). We propose that both trait dimensions are relevant for judging consumer robots and that both affect attitudes toward consumer robots, albeit in different ways than judgments about humans affect attitudes toward human beings.

Regarding relevance, competence certainly seems to be a relevant dimension to judge both humans and robots because, as machines, robots are designed to perform well in various tasks from an instrumental and utilitarian perspective. On the other hand, warmth seems to be a uniquely human trait dimension; it seems odd to judge a machine on warmth because it does not experience emotions and generally seems to be of a different nature than humans. However, through the process of anthropomorphizing—that is, attributing human traits to nonhuman entities—consumers may still do so, and anthropomorphizing other entities has been shown to occur naturally and automatically in response to a wide variety of stimuli (Epley, Waytz, and Cacioppo 2007; Gazzola, Rizzolatti, Wicker, and Keysers 2007; Hume 1957), including even intangible, non-human entities such as products and brands (Aggarwal and McGill 2007; Aggarwal and McGill 2012; Aaker 1997; Fournier 1998). People seem to anthropomorphize to reduce perceived threat and provide a sense of comfort by introducing an element of the familiar in the context of a less known situation (Guthrie 1993). This seems to fit perfectly with the situation that consumers are facing with robots;

thus, it seems reasonable to assume that for human-like consumer robot, in addition to competence, warmth will be a relevant judgment dimension.

Regarding attitudes, when judging other human beings in a social context, *ceteris paribus* attitudes tend to be more positive the more competent and warm a person is (Wojciszke, Abele, and Barylak 2009). We expect that attitudes toward robots will also be more positive the more competent a robot is because robots are expected to be functionally capable and even surpass humans in competence. However, in terms of the warmth judgments of robots we predict that the effect observed for humans will not hold for consumer robots due to the so-called "uncanny valley" phenomenon: as robots become more human-like affinity increases but when robots' resemble humans too closely, likeability decreases due to a feeling of eeriness or uncanniness (Mori 1970; Wang, Lilienfeld, and Rochat 2015). Thus, we propose that attitudes toward consumer robots will initially increase with warmth; however, robots that behave and appear too warm will be perceived as uncanny and this will decrease positive attitudes.

A pretest and two experiments were conducted to investigate the effects of competence and warmth on consumer attitude toward robots and human beings. The results from a pretest ( $N = 108$  MTurkers) confirmed the relevance of both competence and warmth judgments in consumer attitude toward consumer robots. The results demonstrated that, in forming general impressions, for humans and consumer robots both competence and warmth were perceived as relevant, yet for mechanical robots, only competence was perceived as relevant (see Table 1)

Study 1 ( $N = 484$ ), using a  $2 \times 2 \times 3$  between-subjects design, focused on attitudes for humans and robots, resulting from describing the robots as competent or warm to three different degrees (low, medium, high). A marginally significant three-way interaction ( $F(11, 472) = 2.50$ ,  $p = .08$ ) was revealed. For humans, attitudes increased as competence levels and warmth levels increased. Turning to the more important results for consumer robots (see Figure 1), attitudes increased for competence ( $M = 3.36$  vs.  $M = 4.83$  vs.  $M = 5.18$ ; all  $ps < .05$ ), but for warmth consumer attitudes increased only up to a certain point ( $M = 3.52$  vs.  $M = 5.72$ ;  $p < .001$ ) and then decreased when warmth was really high ( $M = 4.84$ ;  $p < .01$ ). In addition, there was a significant mediation effect of uncanniness in the relationship between warmth and consumer attitude, unveiling uncanniness as the potential mechanism behind the effect.

In Study 2 ( $N = 205$ ) uncanniness was manipulated through human-like appearances of robots, in line with "uncanny valley" phenomenon. Specifically, using a  $2 \times 3$  between-subjects design, participants received either a competence or warmth description for a more human-like robot (an android with a very human-like face and body), or less human-like robot (a toy-looking robot only alluding to human features), or a human. The two-way interaction was marginally significant ( $F(2, 199) = 2.59$ ,  $p = .07$ ). Consistent with the findings of Study 1, the results showed that for more human-like robots (that is, those that induce uncanny feelings), consumer attitudes were significantly less positive when warmth (vs. competence) traits were communicated ( $M = 4.47$  vs.  $M = 5.38$ ;  $p < .05$ ). On the other hand, for less human-like robots and for humans, for whom uncanniness plays no role, the difference between competence and warmth was mitigated (none of the tests comparisons was significant).

Taken together, the current research confirmed the relevance of the two fundamental social judgment dimensions—competence and warmth—for judging consumer robots. Most importantly, two studies demonstrated that competence has an increasing, positive effect on attitudes toward consumer robots, as it does for humans. However, while warmth also has an increasing, positive effect on attitudes



for human beings, attitudes toward consumer robots decreases when warmth is too high, likely due to a feeling of uncanniness resulting from robots usurping this uniquely human trait.

### Human or Robot?

#### The Uncanny Valley in Consumer Robots

##### EXTENDED ABSTRACT

As a robot's human-likeness increases, it may become more threatening to human jobs, safety, and distinctiveness, thereby increasing discomfort in humans. Past a certain threshold of human-likeness, however, robots might be seen as having some degree of human nature, after which further increases in human-likeness may increase comfort. Even perfectly human-like robots, however, are unlikely to be granted full human nature, which is a form of speciesism. We explore these ideas in 4 studies.

In study 1, 200 participants rated images of 25 robots and 2 humans on their human-likeness; an additional 362 participants reported how comfortable they would feel interacting with the robot. We told participants that the humans were either humans or highly human-like robots.

An initial examination of the data revealed a roughly U-shaped relationship between HL and comfort; in order to rigorously test for such a relationship, we used a 2-lines test (Simonsohn 2017). The results of this test are depicted in the Figure below and show that increasing human-likeness leads to lower comfort until the point 8.25; after this point, further increases in human-likeness improve comfort. The 2 black points in the upper-right are humans portrayed as humans and are not included in the regressions.

In Study 2, 200 participants watched one of three videos depicting a robot or a human. The videos featured either Nao (rated as moderately human-like in Study 1), Nadine (a highly human-like robot), or the human being whom Nadine was designed to resemble. Participants who saw the human video were either told that the human was a highly advanced robot, or that she was a human. After watching the video, participants completed a 3-item measure of their reaction to the robots (how much do you feel *uneasy/unnerved/creeped out*,  $\alpha = .95$ ; Gray and Wegner 2012). We excluded 16 participants who did not believe that the human was a robot.

The human portrayed as a human elicited the most positive reactions ( $M = 2.32$ ). Evaluations of the moderately human-like robot were roughly equal ( $M = 2.93$ ,  $p = .209$ ). In contrast, the robot with high human-likeness elicited significantly more negative reactions ( $M = 5.58$ ,  $p < .001$ ), as did the perfectly human-like robot (the human portrayed as a robot:  $M = 3.57$ ,  $p = .037$  compared to the human-as-human). The perfectly human-like robot was evaluated more positively than the highly human-like robot,  $p = .002$ .

Existing research offers many explanations of why human-likeness initially decreases comfort, such as increased threats to safety and human-distinctiveness (Wang, Lilienfeld, and Rochat 2015). However, these explanations cannot account for our finding that higher human-likeness eventually improves comfort. We suggest that highly human-like robots can elicit questions about whether they have some degree of human nature, such as consciousness, free will, and souls, and that subsequent increases in human-likeness increase perceptions of human nature and therefore improve comfort with such robots. Study 3 tests this theory.

155 participants saw an image of either a highly but imperfectly human-like robot, or a human portrayed either as a human or a perfectly human-like robot and were told that a chain of stores was considering employing them. We excluded 8 participants in the human-as-robot condition who did not believe that it was a robot.

Participants expected to feel most comfortable shopping in a store staffed by the human ( $M = 8.44$ ), less comfortable in a store staffed by a perfectly human-like robot ( $M = 5.56$ ,  $t(93) = 4.95$ ,  $p < .001$ ), and least comfortable in a store staffed by an android ( $M = 4.35$ ,  $t(100) = 1.98$ ,  $p = .050$  compared to the perfectly human-like robot). The human also seemed to have the most human nature ( $M = 8.40$ ), while the perfectly human-like robot had less human nature ( $M = 1.86$ ,  $t(93) = 13.10$ ,  $p < .001$ ) and the android had the least ( $M = 1.09$ ,  $t(100) = 1.65$ ,  $p = .102$  compared to the perfectly human-like robot). The robot's perceived human nature was positively associated with comfort shopping in a store staffed by a robot ( $\beta = .81$ ,  $p < .001$ ), controlling for perceived threats to jobs, safety, human distinctiveness, and the perceived unhealthiness of the robots. Thus, perceived human nature is a stronger predictor of comfort shopping in a store staffed by a humanoid robot than any of these other potential predictors.

We conducted Study 4 in both the US and Japan, two cultures in which the belief that robots have a soul is expected to differ naturally. Religions that are common in Japan such as Confucianism and Shinto teach that spirits live in all (animate and inanimate) object. In contrast, Christianity strictly distinguishes objects that do or do not have a soul. Japanese consumers may therefore be more likely to grant human nature to robots. Participants saw a picture of one of two robots (with moderate or high human-likeness) or a human. As in the previous studies, participants who saw the human were told that she was either a human or a robot. Participants completed the same 3-item measure of reaction to the robot from Study 2 and the measure of human nature in robots from Study 3.

Japanese participants saw the robots as significantly less uncanny ( $M = 4.03$ ) than the Americans ( $M = 5.20$ ,  $p < .001$ ), and the effect of robot human-likeness on reactions was three times larger among Americans ( $F = 11$ ) than among Japanese ( $F = 34$ ,  $p < .001$ , see Figure below). Japanese participants perceived robots as having more human nature ( $M = 1.12$ ) than Americans ( $M = .24$ ,  $p < .001$ ), and perceived human nature mediated the effect of country on perceived uncanniness ( $\beta = .15$ , 95% CI = .03-.32).

Taken together, these studies demonstrate that consumers prefer to interact with robots that have low versus high human-likeness, and that even perfectly human-like robots produce more negative reactions than humans. Businesses that sell and employ consumer robots – and consumers who buy and interact with them – may therefore be better off not to make robots with high human-likeness.

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# The Speed of Life: The Effects of Real and Implied Speed on Consumer Behavior

Chair: Yael Shani-Feinstein, Ben-Gurion University, Israel

## **Paper #1: Slow and Steady Versus Fast and Furious: The Effect of Speed on Decision Making**

Ellie J. Kyung, Dartmouth College, USA  
Yael Shani-Feinstein, Ben-Gurion University, Israel  
Jacob Goldenberg, IDC Herzelia, Israel

## **Paper #2: The Inimical Lure of Intense Means**

Jordan Etkin, Duke University, USA  
Szu-chi Huang, Stanford University, USA

## **Paper #3: The Impact of Implicit Rate of Change on Arousal and Subjective Ratings**

James A. Mourey, DePaul University, USA  
Ryan S. Elder, Brigham Young University, USA

## **Paper #4: Time Flies...But Only When the Speed is “Just Right”: How Animation Speed Affects Perceived Waiting Time**

Yu Ding, Columbia University, USA  
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### **SESSION OVERVIEW**

Moving through space and time, we experience life at a pace—whether fast or slow. We listen to songs with fast or slow tempo, we make progress towards a goal or towards a destination at a fast or slow rate. The effects of speed can be real (e.g. making decisions on a mobile device while commuting) or perceived (e.g. visually simulated or through framing.) While much research has focused on the effects of time or distance on decision-making, the effects of rate and speed have been largely overlooked. This session brings together research that answers the question of how real and perceived rate can affect consumer behavior in a range of contexts and discusses underlying psychological mechanisms.

In the first paper, Kyung, Shani-Feinstein and Goldenberg examine how people’s judgments are influenced when they feel they are on the move at a fast versus slow speed. Through eight studies involving actual movement (studies on moving trains) and sensory stimulation (studies with videos/simulated visual movement), they demonstrate that the sensation of movement at high (v. low) speed leads to processing at high (v. low) levels, with implications for preference, choice, and risk tolerance.

In the second paper, Etkin and Huang focus on the rate of goal progress. Across ten studies, they show how people are attracted to more intense means that enable a fast rate of progress towards the goal, but in turn, this preference can undermine successful goal attainment, as the intense means over longer goal durations are more difficult to sustain.

In the third paper, Mourey and Elder examine how implicitly implied rate, even non-consciously perceived, can influence perceptions and behavior. Through five studies, they demonstrate that increasing or decreasing size, color saturation, or panning of sound in a way that is consciously unnoticed, leads to an unconsciously perceived rate of change that increases arousal, and influences subsequent subjective evaluations of products presented in advertisements.

In the fourth paper, Ding and Kyung examine how the speed of moving animations influence perceived waiting time and task engagement. Through seven studies, they show that relative to fast animation speeds, moderate animation speeds during waiting time result in faster subjective time perception, greater engagement, and greater task motivation, even when people’s estimates of objective time passing in seconds are relatively accurate.

Together, these four papers examine how rate can affect consumer decision making, whether the rate is actually experienced (paper #1), unconsciously and consciously implied (papers #2 and #3) or simulated (papers #1 and #4). The effects are examined in the domains of product choice, preference, and evaluation in addition to self-regulation and motivation, and draw from a rich breadth of literature. This session will be of interest to researchers in time perception, psychological distance, self-regulation, and decisions through technology-mediated interfaces.

## **Slow and Steady Versus Fast and Furious: The Effect of Speed on Decision Making**

### **EXTENDED ABSTRACT**

Quick as lightening. Slow as a turtle. Faster than a speeding bullet. Creeping like a snail. Our literature and language are filled with analogies about the velocity at which we move. Indeed, we are constantly in motion—in cars, trains, buses, escalators—at different speeds, and mobile technology increasingly allows us to engage in activities while on the move.

How does this pace, the velocity at which we feel we move, influence our decision making? Put differently, what is the effect on thinking when we feel we are actually moving fast versus moving slow? We examine this question through a series of eight studies, where participants experience different levels of speed through (i) actual movement on trains at different speeds, (ii) visually moving starfields simulating movement through a spaceship, and (iii) videos depicting scenery changes out of moving vehicle windows.

Previous literature in visual perception suggests that increasing speed reduces the number of objects that are individually tracked in our visual field (Alvarez and Franconeri 2007) and that as the speed of an object sufficiently increases, it is no longer seen as an object moving across the visual field, but as a single, visually integrated “motion streak” (Geisler 1999). Similarly, a light that is turned on and off at a rapid rate is no longer seen as having distinct light and dark phases, but perceived as a continuous “Gestalt flicker” (Van De Grind, Grüsser, and Lunkenheimer 1973). Thus, we hypothesize that when people feel they are moving at a faster (v. slower) speed, they tend to adopt a bigger picture, abstract, more gist-like view absent details (Reyna 2008; Reyna and Brainerd 1995; Trope and Liberman 2010) because they are accustomed to being unable to process details at higher speeds. Conversely, moving at slower speeds allows people to adopt a more detailed, verbatim-like view of situations.

We posit that people are accustomed to adopting a higher-level perspective at faster speeds because processing details is physically infeasible, and that this change in perspective influences judgments in predictable ways. For example, previous research has demonstrated that adopting a higher-level (v. lower level) perspective increases preference for options with desirable versus feasible features (Dhar and Kim 2007; Goodman and Malkoc 2012; Liberman and Trope 1998; Zhao, Hoeffler, and Zauberger 2007) construal level theory has broadened the notion of temporal distance to psychological distance and examined the wide ranging implications of this construct on evaluation and behavior. This commentary seeks to take a step back to admire the “forest” that has been created and suggest additional extensions and implications along the different stages of consumer decision making: goal pursuit, evaluation by way of consideration-set formation and receptivity, and finally choice influenced by

context, comparability of options, and post-choice happiness and regret. In the field of social psychology, dual processing theories have emerged as some of the most influential models in understanding and explaining the shift in people's evaluation of objects and social situations. Many dual processing theories distinguish differences in processing along an intuitive, affective versus a deliberative, analytical dimension and hence the type of information that is emphasized (e.g., Kahneman & Frederick, 2002; Petty & Cacioppo, 1986 or increases focus on outcomes relative to odds for probability-based (Todorov, Goren, and Trope 2007).

Through eight studies, we demonstrate that the perceived speed at which people feel they move—whether through actual movement or sensory simulation—affects decision making in systematic ways. Affect, other dimensions of psychological distance, and approach aversion (Hsee et al. 2014) are ruled out as alternative explanations.

Study 1 ( $n = 159$ ) provides initial evidence that speed influences processing by demonstrating that people prefer higher-level, abstract representations when moving faster (v. slower). Speed was primed using a moving starfield on a black background with text superimposed on an opaque background. Using the Vallacher and Wegner (1989) Behavioral Identification Form, those primed with the fast (v. slow) starfield preferred actions described at a higher-level ( $M_{fast} = 14.06$  v.  $M_{slow} = 12.51$ ,  $p < .05$ ).

The next three studies demonstrate the effect of speed on product preferences and choice. In study 2 ( $n = 172$ ) using the same manipulation, participants in the fast (v. slow) condition preferred a desk with more desirable (v. more feasible) attributes ( $M_{fast} = 4.81$  v.  $M_{slow} = 3.58$ ,  $p < .01$ ). Affect and perceived time are ruled out as alternative explanations.

Study 3a ( $n = 95$ ) was conducted with participants on an actual moving train, who were asked to make a choice between one of two breakfast menus: one with many entrées (a more desirable option) or one with fewer entrées (a more feasible option, Goodman and Malkoc 2012). Results from a logistic regression demonstrated a significant effect of velocity ( $\beta = .011$ ,  $p < .05$ ), such that higher speed travelers preferred the larger choice set. Study 3b ( $n = 146$ ) replicated these same effects in the lab, priming speed through videos simulating train ride experiences (preference for longer, more desirable menu choices  $M_{fast} = 79\%$  v.  $M_{slow} = 60\%$ ,  $p = .01$ ), and showed that the underlying mechanism depends on the desirability versus feasibility of options.

The next two studies extended the effects of speed into the domains of consumer intertemporal preferences and risk. Study 4 ( $n = 60$ ) demonstrated that even when controlling for objective time (e.g. participants were told they could receive one chocolate now v. two chocolates in 15-20 min), participants moving on trains at faster velocity were more likely to wait for the larger reward ( $\beta = .014$ ,  $p = .05$ ). Using an Eckel and Grossman (2002) paradigm, study 5 ( $n = 111$ ) showed that participants primed with fast (v. slow) speed through a train scene video, were more likely to select the riskiest, most desirable (Liu 2008) gamble with the highest expected utility ( $M_{fast} = 36\%$  v.  $M_{slow} = 18\%$ ,  $p = .01$ ).

Studies 7 and 8 demonstrate that these effects are moderated by focusing on time (preference for desirable v. more feasible attributes, using the starfield paradigm) and distance (using the Vallacher and Wegner (1989) Behavioral Identification Form on a moving train), and whether speed is something that is experienced versus used for inference making.

Together, these studies demonstrate the effects of speed (using three different paradigms) on a variety of decision making contexts with implications for theory and practice, underscoring the need for further research on its effects given the plethora of technological ad-

vances that make decision-making on the move an everyday occurrence.

## The Inimical Lure of Intense Means

### EXTENDED ABSTRACT

One of the first challenges people face after adopting a goal is deciding how to pursue it. If a person wants to lose weight, s/he must decide whether to burn more calories by joining an intensive bootcamp class or by taking long walks. Choosing effective means plays a crucial role in consumers' ability to successfully achieve their goals.

Importantly, the means people choose also determine their rate of goal progress, i.e., how quickly consumers advance towards their goal. Within a given unit of time, means can accomplish more or less goal progress. For example, burning 500 calories per day through intense exercise would help people lose more weight daily than would burning 100 calories per day through a milder activity. Means that accomplish more in a given amount of time thus enable a faster rate of progress (Carver, Lawrence, and Scheier 1996; Carver and Scheier 1998; Huang and Zhang 2011).

Compared to means that achieve a slower rate of progress (i.e., "mild means"), using means that allow a faster rate (i.e., "intense means") is intuitively appealing. Intense means can enable consumers to accomplish more in a given period (e.g., lose more weight in a month) or achieve a specific desired outcome faster (e.g., lose 10 pounds in less time). When choosing their means, we thus suggest that people will prefer intense means over mild ones.

Importantly, we further propose that this preference can have negative consequences, undermining successful goal attainment. Because intense means accomplish more per unit of time, they are more difficult to sustain. Burning 500 calories per day through an intense workout, for instance, is much more challenging to sustain than burning just 100 calories per day by walking more. We find that people do not adequately factor sustainability into their decision and therefore prefer intense means regardless of the duration of goal pursuit. While using intense means can indeed improve outcomes for short-term goals (e.g., exercising for a week), it backfires and hurts performance for longer-term goals (e.g., exercising for a month), reducing the likelihood of success. This strong, yet detrimental, preference for intense means persists even among consumers who self-select into using intense means, when given information about the low base rate likelihood of success, and after previously failing with intense means themselves.

Ten studies demonstrate the proposed preference for intense means (studies 1, 2a-e) and its detrimental effects (studies 3-5). In study 1, we launched four advertisements on Facebook for a weight-loss program, varying the intensity of the means (intense vs. mild; burning 500 vs. 100 calories per day) and the duration of the program (short vs. long; one week vs. one month). The ads received a total of 35,414 hits, with the intense means ad receiving significantly more in both the short (week-long) duration conditions (Wald's  $\chi^2(1, N = 18,000) = 41.58$ ,  $p < .001$ ) and the long (month-long) duration conditions (Wald's  $\chi^2(1, N = 17,414) = 16.38$ ,  $p < .001$ ). Regardless of how long they would be pursuing the goal, consumers preferred intense means.

Studies 2a replicated this preference for intense means in the lab. Participants were randomly assigned to solve a series of subtraction problems for a total of five minutes (short duration) or 15 minutes (long duration), with bonus pay upon successful completion. Participants could choose to solve either two problems per minute (mild means) or six problems per minute (intense means). In both



the short (89.9%) and long (92.8%) duration conditions, the majority preferred the intense means. Further, participants went on to use their chosen means; whereas the intense means marginally improved performance in the short duration condition ( $F(1, 191) = 2.92, p = .089$ ), it led to worse performance in the long duration condition ( $F(1, 191) = 4.05, p = .046$ ). Study 2b gave participants a choice between using the intense means for a short duration versus the mild means for a long duration, which both required participants to complete a total of 30 subtraction problems. The majority (73.5%) again preferred the intense means/short duration combination. Study 2c replicated this effect after first providing real information about intense means' low base rate likelihood of success; Study 2d replicated this preference even when participants had personally failed at using the intense means; Study 2e replicated this preference even when participants knew they could not leave the lab early by making faster progress.

Study 3 then directly examined the consequences of using intense means (without choice). Participants were randomly assigned to one of the four conditions tested above, solving either two problems per minute (mild) or six problems per minute (intense) for a total of five minutes (short duration) or 15 minutes (long duration), with bonus pay upon successful completion. We found that in the 5-minute task, participants earned more from using the intense (vs. mild) means ( $F(1, 167) = 3.74, p = .055$ ), but in the 15-minute task, participants earned *less* from using the intense (vs. mild) means ( $F(1, 167) = 6.06, p = .015$ ). Whereas intense means can improve outcomes for goals of short duration, for longer duration goals, they reduce performance. Moreover, comparing the 5-minute/intense means with the 15-minute/mild means condition, which both required participants to complete a total of 30 subtraction problems, revealed a higher average bonus payment in the long/mild (vs. short/intense) means condition ( $t(167) = 2.22, p = .028$ ).

Studies 4 and 5 further replicated these effects with different behaviors (transcribing passages of text and doing pushups in a field-based workout program).

The findings provide an answer to the question of why people often fail to achieve long-term goals: they choose the wrong (intense) means. To improve consumer welfare, people should be encouraged to adopt means they can in fact sustain.

### The Impact of Implicit Rate of Change on Arousal and Subjective Ratings

#### EXTENDED ABSTRACT

As demands on consumers' attention increase, the likelihood that a consumer consciously attends to any one individual advertisement decreases. While prior research has looked at priming effects and other forms of implicit influence, very little research has explored the effects of an implicit experience of "change" (Simons and Rensink 2005; Rensink 2004) and even fewer projects have considered consequences within a consumer context (Shapiro and Nielsen 2013).

The purpose of our research is to explore implicit experiences of change across different sensory modalities to identify *when* and *how* these experiences affect consumer behavior. We propose two contributions: first, implicit rate of change yields heightened arousal without conscious awareness of the source of this feeling; and second, this arousal is misattributed to dynamically-constructed choices.

Implicit perception refers to the process in which individuals engage in perception without consciously being aware they are doing so (Simons et al., 2006). Examples include "change blindness," in which visual changes take place in one's context without the individual consciously attending to or noticing the change. Perhaps

the most famous example of change blindness is the gorilla video in which participants fail to notice a person in a gorilla costume interrupting a game of catch (Simons and Chabris 1999).

Although individuals may not report consciously noticing a change, some research has shown that participants are capable of reporting a *feeling* of change even if unaware of the source of those feelings (Rensink 2004). That individuals may *feel* change without awareness of its source leads to our proposal that this "feeling of change" might affect perceived arousal with possible downstream consequences via misattribution (Loersch and Payne 2011).

These implicit perceptions of change and subsequent conscious feelings of arousal may also tie into the vast literature on constructed preference—the idea that consumers create their preferences on the spot is based on often irrelevant, misattributed contextual factors (Reber, Schwarz, and Winkielman 2004; Schwarz 2004; Schwarz and Clore 1996). Indeed, individuals experiencing implicit perceptions of change may misattribute the subsequent arousal to unrelated tasks, such as rating tasks or choices. Furthermore, following dynamic constructivist theory, we propose that this misattributed influence should hold only for subjective ratings (for which no set answers exist), and not for objective ratings (for which there are definitive answers; Lichtenstein and Slovic 2006).

We propose that an individual experiencing an implicit perception of change will experience arousal due to this change. Without a source to attribute the arousal, individuals may then to attribute that arousal to a subjective rating or choice. The individual will not report consciously noticing the stimulus that changed but may report a conscious feeling of arousal. The effect of the changing stimulus on bolstered subjective ratings will be mediated by this measured state of arousal.

Five studies show support for this proposed effect. Using both changing visual and aural cues, results suggest that individuals misattribute arousal from implicit perceptions of change to subsequent subjective ratings.

The purpose of Study 1 was to demonstrate initial support for the hypothesized effect. Participants were randomly assigned to one of three conditions—a control condition or one of two implicit change conditions (increasing or decreasing)—in which the size of a Starbucks cup changed in size 10% (or did not change) with each subsequent screen of an online survey. Following the task, participants completed a series of subjective (e.g., "How much do you like Starbucks?") and objective questions (e.g., "At what temperature is Starbucks' hot chocolate served?") pertaining to Starbucks. As predicted, participants in the change conditions had significantly stronger ratings for the same subjective questions compared to participants in the control condition. No difference emerged for objective questions. No participant reported noticing the changing cup size.

The purpose of study 2 was to demonstrate the same effect using a different sense modality in a different consumer context. Participants were randomly assigned to one of three conditions—no panning, pan left, pan right—in which sound moved (or did not) during a commercial for a popular medicine. Participants in the change conditions reported that the ad was more effective and that they would be more likely to use the medicine than participants in the control condition. No participant reported noticing the changing sound.

In Study 3, participants were randomly assigned to view a Nike print advertisement that either changed in color saturation (increase or decrease) or did not. Results replicated the prior findings: participants in the varying color saturation conditions had significantly higher preference ratings for a series of random consumer products than participants in the control condition. No participant reported noticing the changing saturation.



In study 4, participants were randomly assigned to view a Sea-World television commercial that increased, decreased, or did not change in color saturation. As predicted, participants in the changing saturation conditions reported stronger ratings for subjective questions (but not objective questions) relative to control participants. No participant reported noticing the changing saturation.

Study 5 replicated the first study with a measure of arousal to support mediation. As predicted, participants in the changing Starbucks cup conditions reported greater state-level arousal, which, in turn, mediated the stronger ratings for subjective (but not objective) questions. Again, no participant reported noticing any change.

In a series of five studies, we demonstrated that subtle experiences of change—size, color saturation, audio movement—leads to an unconsciously perceived rate of change that systematically affect subjective ratings in a variety of consumer contexts. Stimuli included common marketing media (e.g., print ads, television commercials), demonstrating the robustness of the effects. In doing so, we linked two disparate literatures—the implicit perception literature and the constructed preference literature—to reveal important, predictable consequences for modern consumers faced with greater demands on their conscious attention. Beyond the practical implications for marketers faced with increasing challenges in capturing consumer attention, additional consideration should be given to helping consumers be more aware of the role that implicit perception plays in their decision-making processes, particularly when determining dynamically constructed preferences.

### Time Flies...But Only When the Speed is “Just Right”: How Animation Speed Affects Perceived Waiting Time

#### EXTENDED ABSTRACT

Waiting online is torture. Consumers are impatient: Web users abandon pages after even a mere two seconds of waiting time for information retrieval (Nah 2004). Yet given the limitations of technology, waiting is sometimes a necessary evil when consumers interact with technology interfaces. A critical question for managers is how to reduce the perception of waiting time that critically impacts how consumers evaluate their experience (Gorn et al. 2004, Sackett et al. 2010).

One way to try and reduce perceived waiting time is to introduce animation to decrease perceived waiting time. Research in interface design suggests that processing bars with accelerating speeds, relative to those with constant or decelerating speed, result in the shortest perceived waiting time (Harrison, Yeo, and Hudson 2010; Matthews 2011). Similarly, research in time perception suggests that time is perceived as passing more quickly if more versus fewer visual changes occur during a particular duration (Ahn and Soman 2009; Hansen and Trope 2012; Allman et al. 2014). Both streams of research suggest that increasingly faster animation speeds should result in shorter perceived waiting time. However, we suggest that faster is not always better, and that animation speed can make time fly—but only when the speed is “just right.”

Drawing from work in sensation seeking theory and visual perception, we suggest that the optimal speed that minimizes perceived waiting time that is not necessarily the fastest one. Increasing arousal level can increase consumers’ time perception (Schwarz, Winkler, and Sedlmeier 2013; Zukerman 2014), thus animation that moves too quickly could increase arousal level to the point of increasing time perception. Relatedly, when visual stimuli increases speed until a point where it becomes too fast to process, it is seen as a “motion streak” rather than an individualized set of movements (Geisler 1999), thus limiting the benefits of constantly increasing animation

speed. Seven experiments demonstrate that relative to fast animation speeds, moderate animation speeds during waiting time result in faster subjective time perception, greater engagement, and greater task motivation, even when people’s estimates of objective time passing in seconds are relatively accurate.

In Experiment 1a ( $n=615$ ), US mTurk participants were directed to wait on a webpage (for 17 seconds, unbeknownst to participants) in the middle of the survey with either a picture of a static wheel, a slow-circling wheel (500ms per movement) or fast-circling wheel (100ms per movement). Immediately afterwards, they were asked to rate their subjective waiting time on a slider from 0 (very short) to 100 (very long) and their level of engagement. The fast-circling wheel resulted in shorter perceived wait times (35.4) relative to the static wheel (43.5,  $p = .001$ ), but the slow-circling wheel resulted in an even shorter perceived wait times (30.6) relative to the fast-circling wheel ( $p = .04$ ). Experiments 1b-1e replicated these effects for multiple time durations (7s, 13s, 15s, 17s), different animation pictures (wheel rotating and snail moving), different scales to measure time perception (7-point and 100-point), and different participants (Mturk adults and university students). Furthermore, three replications found that animation speed had no effect on objective waiting time estimated in seconds, but significantly affected perceptions of subjective waiting time.

Experiment 2 ( $n=423$ ) tested whether the effects of animation speed extend beyond time perception to task motivation. U.S. mTurk participants were asked to solve 10 arithmetic problems (e.g.  $17*5=?$ ) and under each problem participants saw a static snail picture, a slow-moving snail (400ms per movement) or a fast-moving snail (100ms per movement), and the page advanced automatically after 40 seconds. If participants perceived that time was moving faster when seeing the slow versus fast moving snail, then they should be motivated to move more quickly to solve more problems in the slow-moving snail condition. While participants in the static (3.45) and fast-moving (3.51) conditions solved the same number of problems ( $p = .78$ ), those in the slow-moving condition (4.06) solved more problems than those in both the static ( $p = .008$ ) and fast-moving ( $p = .013$ ) conditions. The total number of problems answered followed a similar pattern of results. These results suggest that the slow-moving animation increased people’s speed in working through the math problem, consistent with perceiving that time was moving faster in the slow-moving animation condition. Thus animation speed can benefit task speed without sacrificing accuracy, suggesting a novel intervention to the traditional speed-accuracy trade-off which can increase performance (Wickelgren 1977; Förster, Higgins, and Bianco 2003).

In Experiment 3, we explicitly test the hypothesis that there is an optimal animation speed that is “just right” by testing seven different speeds (static, 50ms, 100ms, 300ms, 500ms, 700ms, 900ms), following the same procedure as Experiment 1a. As shown below, there is a significant quadratic effect of animation speed on subjective time perception ( $b = 0.61$ , Robust SE = 0.29,  $t = 2.10$ ,  $p = .036$ ), although animation speed had no linear nor quadratic effect on objective time estimates ( $ps > .2$ ). Thus as animation speeds slowly increase, subjective time perception decreases, but past changes of 300ms per movement, increasing speeds no longer benefit subjective time perception.

Together, these studies demonstrate that animation speeds can materially influence people’s subjective time estimates, even while their objective time estimates remain constant. Relative to static or fast-moving animation speeds, more moderate animation speeds (300-500 ms per movement) result in the lowest perceptions of subjective waiting time, resulting in higher levels of engagement (Ex-

periment 1a) and motivation (Experiment 2). Experiment 3 provide direct evidence for the u-shaped relationship between animation speed and subjective waiting time. Future research can investigate factors that influence optimal speed and the types of customer experiences that are improved by reducing perceived waiting time in online and mobile contexts.

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# On the Psychology of Consumer Resource Allocation in Prosocial and Commercial Contexts

Chairs: Ping Dong, Northwestern University, USA  
Claire I. Tsai, University of Toronto, Canada

## **Paper #1: Ineffective Altruism: Giving Less When Donations Do More**

Joshua Lewis, University of Pennsylvania, USA  
Deborah Small, University of Pennsylvania, USA

## **Paper #2: How Framing Donor Match as Collaboration Impacts Donation: The Importance of In-Context Field Experiments In Fundraising**

Indranil Goswami, SUNY, Buffalo, USA  
Oleg Urminsky, University of Chicago, USA

## **Paper #3: The Psychology of the Sharing Economy: How the Salience of the Sharing Economy Concept Promotes Consumer Altruistic Behaviors**

Ping Dong, Northwestern University, USA  
Claire I. Tsai, University of Toronto, Canada

## **Paper #4: Mining Consumer Minds: How Airbnb Hosts' Motivations Affect Their Retention and Pricing Decision**

Jaeyeon Chung, Columbia University, USA  
Gita Johar, Columbia University, USA  
Yanyan Li, Columbia University, USA  
Oded Netzer, Columbia University, USA  
Matthew Pearson, Former User Experience Researcher at Airbnb, USA

## SESSION OVERVIEW

### Objective of the Session

Consumers constantly face decisions on allocating their limited resources including time and financial assets between themselves and others. This session brings together four papers that uncover new antecedents for consumers' voluntary resource allocation decisions in prosocial contexts (papers 1-3) and demonstrate the positive effect of social motivation on the efficiency of resource allocation in a commercial context (paper 4).

### How the Papers Fit Together

Extending prior research showing that donors want to see a specific, tangible impact from their donations, **paper 1** (Lewis & Small) investigates how information framing might influence the efficiency of resource allocation. For instance, when the information is framed in terms of the "cost per unit of impact" (e.g., \$2 per meal), consumers perversely donate less when the marginal dollar buys more impact. Framing this information in terms of the "units of impact per dollar amount" (e.g., 5 meals per \$10) reduces the inefficiency in the allocation of financial resources.

Relatedly, **paper 2** (Goswami & Urminsky) tests the effect of framing match-incentives to donate as social collaboration vs. as separate behavior on donations. Challenging the implications of the standard impure altruism model, they find that framing a matching donation as the match donor adding to one's donation (as opposed to the match donor donating a matching amount on their own) surprisingly reduces funds raised.

**Paper 3** (Dong & Tsai) identifies another social antecedent for consumers' resource allocation decisions. That is, the activation of the sharing economy *concept* triggers an interdependent self-view and thus increases consumers' subsequent willingness to transfer

their resources to others (e.g., volunteering time and donating money to real charity organizations; spending more on prosocial consumption).

While the first three papers examine resource allocation in various prosocial contexts, **paper 4** (Chung et al.) expands the investigation to a commercial context and shows that social motivations increase the efficiency of allocating real-estate resources on Airbnb.com. Specifically, the authors identify three main motivations ("to-earn-cash", "to-meet-people", "to-share-beauty") that drive consumers' hosting behavior by analyzing textual responses from Airbnb hosts. Moreover, the latter two (social) motivations are shown to lead to greater retention likelihood, compared to the first (financial) motivation.

Overall, while the first two papers show how marketing communications (cognitive frame in paper 1 and social frame in paper 2) may be utilized to increase the efficiency of resource allocation, the last two papers explore a new territory in consumer psychology research, namely the psychological motivations afforded by the salience of the sharing economy.

### Why the Topic is Important

Taken together, the present findings advance and challenge several key assumptions about resource allocation and altruism such as the standard impure altruism model. They spark a lively discussion on the ubiquitous yet unexplored cognitive (papers 1 & 2) and social antecedents (papers 3 & 4) of consumer resource allocation. The primary audience for this session will be basic and applied researchers interested in resource allocation, altruism, financial decision making, and pro-social behaviors. (488 words)

### Ineffective Altruism: Giving Less When Donations Do More

#### EXTENDED ABSTRACT

When people decide how much of their resources to allocate to charity, they have the potential to make a substantial impact. Yet, donors do not always maximize this potential. Effective altruism necessitates allocating more resources to charities when the marginal dollar donated has the biggest impact (Singer 2015). Organizations like GiveWell facilitate effective altruism by providing donors with information about the cost-effectiveness of their donations, including estimates of cost per mosquito net, cost per life saved, and much more. Although providing cost-effectiveness information should help donors allocate resources efficiently, our research finds that it can sometimes backfire, depending on how the information is framed. When the information is framed in terms of the "cost per unit of impact" (e.g. \$2 per meal), they perversely donate less when the marginal dollar buys more impact. Framing this information in terms of the "units of impact per dollar amount" (e.g. 5 meals per \$10) mitigates this inefficiency.

Past research finds that donors want to see a specific, tangible impact from their donations (Cryder, Loewenstein, and Scheines 2013). We build on that notion and argue that donors calibrate their donation amount to achieve a unit of tangible impact. This behavior is analogous to cabbies who calibrate the number of hours they drive in order to achieve their daily income target (Camerer et al. 1997).



For example, when allocating donations to mosquito nets, donors give more when it is more expensive to provide one net – just as New York cabbies drive more on days when it is less profitable to drive. For example, when the cost of providing a mosquito net via Against Malaria is \$2.00, a person will be inclined to donate \$2.00. If instead the cost of a mosquito net is \$1.00, then the same person will be inclined to donate \$1.00. Thus, when the marginal dollar has more impact (when the net is cheaper), a person will donate less. Framing information in terms of cost per net facilitates this behavior by highlighting the cost of a net. In contrast, framing information in terms of nets per dollar amount, e.g. 5 nets per \$10, mitigates the effect by obscuring the cost of a net.

We demonstrate this result in Study 1, in which 587 online participants made real donations to a foodbank. Participant made two donation decisions, each with a \$0.30 endowment. Participants could keep whatever of their endowment they chose not to donate. We manipulated the cost effectiveness of the donation within subjects, so that one decision was assigned to the cheap condition (\$0.05 per meal), the other to the expensive condition (\$0.10 per meal). We (truthfully) explained to participants that the cost of a meal varied because we subsidized each decision by a different amount. Between subjects, we randomly assigned each participant to either a cost per meal condition (e.g. “Facing Hunger Foodbank can provide a meal for every 10 cents donated”) or a meals per dollar condition (e.g. “Facing Hunger Foodbank can provide 10 meals per dollar donated.”). To ensure that participants understood that they did not have to donate in increments of \$0.05 or \$0.10, we told them “Facing Hunger Foodbank can use any donation amount. Every cent helps.” Our results revealed greater donations when meals were more expensive, but only when information was framed in terms of cost per meal ( $p = .019$ ; pre-registered analysis).

We replicated this result in Study 2, in which 969 participants made 4 real donation decisions, each with some chance of being implemented. For each decision, they were given an endowment and could donate any amount of it to a specific type of aid (\$0.30 for meals, \$0.90 for rehydration therapy, \$1.20 for deworming medication, and \$1.80 for measles vaccines). We randomly assigned each of these donation decisions to one condition in a 2 (cost effectiveness: cheap versus expensive) by 2 (framing: cost per unit versus units per dollar) design. As in Study 1, we used subsidies to make the cost of a unit of impact “cheap” (equal to  $\frac{1}{3}$  of the participants’ endowments) or “expensive” ( $\frac{1}{2}$  of participants’ endowments). In the cost per unit condition, we framed the information in terms of cost per unit of impact (e.g. “On average, every 10 cents you donate covers the cost of one meal.”). In the units per dollar condition, we framed the information in terms of the units of impact per dollar (e.g. “On average, every dollar you donate covers the cost of 10 meals”). As an additional step to ensure that the donation information could not be construed as a suggested donation, we had participants choose their donation by moving a slider on a scale where the only points labelled were the end points: 0 and the full budget. The slider was always initially set at the full budget, as a decoy suggested donation. Nonetheless, our results revealed greater donations when a unit of impact was more expensive, but only when information was framed in terms of cost per unit of impact,  $p = .003$ ; pre-registered analysis).

In sum, when donors know the cost required to fund a unit of impact, they donate inefficiently—giving less when aid is more cost-effective. This effect is mitigated when equivalent cost information is framed in terms of the units of impact per dollar amount. The results shed light on the importance of framing cost information to encourage more efficient resource allocation.

## How Framing Donor Match as Collaboration Impacts Donation: The Importance of In-Context Field Experiments In Fundraising

### EXTENDED ABSTRACT

A matching solicitation can be thought of as a conditional leadership gift that uses a commitment to match others’ contributions at a given rate (commonly, 1:1 or a standard match), sometimes limited to the maximum amount the leader is willing to give. Often considered as the “staple of fund-raising” (Leonhardt 2008), matching solicitations have attracted the interest of fundraising practitioners and academics alike. Specifically, there is interest in designing matching solicitations that might yield better performance than a standard match (Karlan and List 2007).

In this research, we explore two different matching interventions to motivate prior donors. First, we frame who will get the credit for matched donation funds that accrue to the organization. Specifically, potential prior donors were informed that a supporter had offered a matching grant such that for every dollar donated, the organization will receive two dollars on *behalf of the donor*. We call this the giving-credit intervention. This was compared to a standard matching solicitation where the organization will receive two dollars – a dollar from the potential donor and a dollar from the supporter.

Second, we set a cutoff below which donated funds are not matched. Specifically, potential prior donors were informed that for every dollar they *add* to their last contribution, the organization will receive two dollars – a dollar from the potential donor and a dollar from the supporter. We call this the incremental-matching intervention. This was compared to a combined giving-credit *plus* incremental-matching intervention where the donor was acknowledged for the total money that accrued to the organization on account of a donation and incremental-matching.

For each of the two comparisons, the standard theoretical models of impure altruism (Andreoni, 1990) that assume additively separable but heterogeneous utilities from private consumption, from pure altruism, and from warm glow predict at least a weakly positive improvement in fundraising performance from the credit-framing intervention. This is due to an increase in warm glow feelings from a given donation amount, *via*.

In addition, we collected predictions from people with experience and expertise in fundraising. The beliefs of the experts should reflect the model implications if the model describes reality and the experts are well-calibrated. Expert beliefs could diverge from the model predictions, either because the experts have imperfectly learned the implications of a relatively accurate model, or because they have learned about donor’s actual behaviors that diverge from the model implications. We recruited fundraising managers of non-profit organizations (N=105) via an online panel, for a brief survey. On average, participants had 10.2 years in fundraising related work experience, and 66% reported having experience working in fundraising campaigns that specifically used matching contributions. Each participant read about all the solicitations and then evaluated them pair-wise in terms of participation rate and average donation amount (non-zero donation amounts).

Experts were unequivocal about the benefits of giving-credit intervention in a matching solicitation. Seventy percent of the experts thought the framing would yield higher participation while only 14% thought participation would be lower ( $p < .001$ ) compared to standard matching. Likewise, experts thought that adding giving-credit to the incremental match would generate higher participation than an incremental mechanism alone (53%), rather than lower participation (19%;  $p < .001$ ). Expert’s opinion was similarly positive for the effect

of the giving-credit intervention on average contribution amounts. Therefore, there was a broad consensus between the expert opinions and the model predictions.

Next, we tried to assess the ground truth by running a field test. We partnered with a small non-profit in Chicago to conduct a natural field experiment (Harrison and List 2004) where the decision makers did not know that they were part of a study. The company sent 1480 mailers to prior donors who were primarily small-amount contributors (median last contribution: \$45).

The overall contribution rate was 5.6%. However, there was no evidence that the giving-credit match improved donation rates. Instead, surprisingly, the results strongly pointed in the opposite direction. Contrary to both the predictions of the impure altruism model and the expert practitioners, when the solicitation was framed to give donors credit for the matching funds, the participation rate was significantly *lower* than the regular framing, under the standard match (4.1% vs. 8.1%;  $\chi^2(1)=4.06, p=.043$ ). Likewise, incremental matching with the giving-credit intervention directionally reduced, rather than increased, participation compared to the incremental matching offer with the regular framing (3.9% vs. 6.6%,  $\chi^2(1)=2.08, p=.148$ ). Overall, comparing both the matching conditions with giving-credit framing to the combined matching conditions with regular framing, the former significantly reduced participation (4.0% vs. 7.4%;  $\chi^2(1)=6.21, p=.013$ ). The detrimental effect of the giving-credit did not vary depending on the matching method (standard vs. incremental;  $\beta=0.149, z=0.281, p=.778$ ).

In a similar fashion, giving-credit significantly reduced average contributions relative to regular framing, for the standard 1:1 match offer ( $t(36)=2.43, p=.020$ ). Giving-credit did not yield significantly higher donations than regular framing under incremental matching and the effect of framing did not significantly differ by matching method ( $\beta=0.642, t=1.52, p=.134$ ).

As a consequence of these two effects, giving-credit raised significantly less money than regular framing under standard matching ( $t(610)=2.13, p=.033$ ) and directionally less under incremental matching ( $t(553)=1.41, p=.160$ ). Overall, combining both the matching conditions, giving-credit significantly reduced the money raised per mailing compared to the regular framing ( $t(1165)=2.56, p=.010$ ). Money raised did not significantly differ between standard and incremental matching ( $t(1165)=0.831, p=.41$ ).

Our results indicate the limitations of both theoretical models and well as expert judgments in evaluating the effectiveness of novel matching interventions in particular, and fundraising in general. The predictions from these sources of guidance strongly suggested that the giving-credit intervention will be at least as good as the standard match. The ground truth was the opposite. In our future studies, we will attempt to understand the psychological mechanism behind the observed behavior, and the implications for the theoretical model of altruistic behavior.

### The Psychology of the Sharing Economy: How the Sharing Economy Concept Promotes Consumer Altruistic Behaviors

#### EXTENDED ABSTRACT

The sharing economy has transformed many consumers' lifestyle over the last few years. The total revenue for the sharing economy sector is estimated to grow from US\$13 billion in 2013 to US\$335 billion by 2025 (Kindergan 2015). How might the salient characteristics of the new lifestyle facilitated by the sharing economy, that is, the emphasis on peer-to-peer sharing of idle resources, influence consumer psychology? Although there have been

discussions about the impact of the sharing economy on business and policy, there has not been systematic research on how changes in lifestyle enabled by the sharing economy might influence consumer decision making. In the present research, we find that the salience of the sharing economy *concept* can make consumers behave altruistically in subsequently unrelated contexts.

We trace this effect to a more accessible interdependent self-view activated by the concept of the sharing economy. Previous research has shown that one can think of the self independently or as members of a group (Gardner, Gabriel, and Lee 1999). The relative accessibility of one or the other self-view can be influenced not only by relatively stable factors such as one's cultural background, but can also be manipulated so that even those with generally interdependent (vs. independent) self-view can be induced to take the opposite perspective (Gardner et al. 1999; Oyserman and Lee 2008). We posit that the salience of the sharing economy concept may impact consumers' judgment, in particular, by cueing a more salient interdependent self-view. This is because the sharing economy model builds on the peer-to-peer sharing of idle resources. In order to enjoy the benefits afforded by the sharing economy business model, consumers need to work together and jointly participate in the transaction. This form of transaction might remind people that they have to rely on a peer consumer in order to achieve their goals and that they are part of a greater social group, thus increasing the value they place on interpersonal connectedness and group cohesion, which are precisely what interdependent self-views entail.

Moreover, prior research suggests a positive relationship between an interdependent self-view and altruistic behavior (Oyserman, Sakamoto, and Lauffer 1998; Swaminathan et al. 2007), as an interdependent self-view emphasizes on behaviors that maintain or enhance relationship with others. Drawing on these findings, we hypothesize that the salience of the sharing economy concept may increase consumers' subsequent altruistic tendency, driven by the heightened accessibility of an interdependent self view. In the current research, we focus on two types of altruistic behaviors, namely pro-social and pro-environmental behaviors (Griskevicius, Tybur, and Van den Bergh 2010).

In Study 1a, we intended to test the basic hypothesis in a field setting. Participants were approached on campus and were invited to participate in a short survey for a student club. They were instructed that the club was hoping to find potential corporate sponsors and wanted to get their opinions. Under this guise, participants in the salience of sharing economy concept condition were asked to evaluate logos of three sharing economy brands. Those in the control condition were asked to view logos of three typical brands (comparable in industries) in the market place. Afterwards, all participants were asked to indicate their willingness to help the student club (e.g., amount of money intended to donate, amount of time willing to volunteer). The results revealed that participants exposed to logos of sharing economy (vs. control) brands expressed a greater tendency to donate money and volunteer their time. Study 1b replicated these findings through collaborating with another real charity organization.

In Study 2, we replicated this effect in an online setting with a different manipulation of the salience of sharing economy and a different measure of altruistic behavior (i.e., pro-environmental behavior). It followed a 3(sharing economy vs. control 1 vs. control 2) between-subjects design. First, participants were asked to recall a past experience participating in either sharing economy or commercial exchange (control 1) as a user. We also included a third baseline condition (control 2) in which the recall task was omitted. Afterwards, participants were asked to indicate their choice between a green and non-green option for three different product categories. The results

showed that the salience of sharing economy concept increases consumers' subsequent preference for green products, and this pattern of results persisted across three different product categories.

In Study 3, we followed a one-factor, four level (exposure to logos of: sharing economy brands vs. typical brands/control vs. pro-social brands vs. high-tech brands) between-subjects design. First, participants were asked to evaluate three brand logos depending on their condition. Then participants were asked to complete two sets of questions capturing their preference for green products, a procedure adopted from Haws, Winterich, and Naylor (2014). The results revealed that the effect is unique to sharing economy brands and cannot be generalized to any high-tech brands or prosocial (charity) brands. Moreover, the effect arises from the heightened accessibility of interdependent thoughts.

Finally, in Study 4, we adopted a 2(self-view: interdependent vs. independent)  $\times$  2(salience: sharing economy vs. control) between-subjects design. We first primed participants with either a salient interdependent or independent self-view using a word jumble task (Spassova and Lee 2013). We then activated the salience of the sharing economy using the same brand logo evaluation task. Lastly, participants were asked to indicate whether they would be willing to help out a graduate student using a real behavioral measure adopted from Zhong and Liljenquist (2006). Consistent with our previous studies, when primed with salient interdependent self-views, participants in the sharing economy (vs. control) condition expressed a greater willingness to help out the graduate student. However, this effect disappeared among participants who were primed with salient independent self-views.

Taken together, our findings contribute to the limited literature on the study of the psychological consequences of incidental exposure to sharing economy—a fast-growing business model that is transforming consumer lifestyle and behaviors—in the marketing literature. These results also extend the current literature on altruism by identifying a novel antecedent that could enhance consumers' subsequent altruistic behaviors.

### **Mining Consumer Minds: How Airbnb Hosts' Motivations Affect Their Retention and Pricing Decision**

#### **EXTENDED ABSTRACT**

Consumers are no longer mere buyers of products from a firm. Consumers who are motivated to share their possessions can now profitably do so by using platforms and marketplaces that facilitate sharing. Many consumers nowadays participate in the sharing economy as micro-entrepreneurs for multiple reasons – to seek extra income, to resist and reject conspicuous consumption, to meet others, and to foster a collaborative community (Ozanne and Ballantine 2010). This so-called sharing economy is expanding globally, with some estimating it at a value of 15 billion in 2013 to 335 billion dollars in 2025 (PWC 2015).

Despite all the growth, however, the sharing economy is not exempt from challenges. As the number of sharing economy platforms increases, a central question surrounding the sharing economy concerns how to motivate customers to participate in the sharing economy. Firms struggle to find ways to identify and motivate individual consumers to become micro-entrepreneurs, and to keep them engaged on the platform. Given the small service fee that firms receive from each transaction, scaling up operations is critical, and firms rely heavily on acquisition and retention of these micro-entrepreneurs. A critical question in this context therefore concerns how to best motivate customers to share their possessions, so as to maximize their

likelihood of engaging with the sharing platform and staying on it in the long-term.

This research aims to highlight the role of consumers as micro-entrepreneurs and examine the motivations' role in determining firm-level outcomes. To do so, we provide a practical way for firms to extract latent consumer motivations from textual data and showcase the downstream consequences of these motivations on customer engagement and retention, as well as pricing decisions. The insights are revealed by employing multi-method including text-mining, regression analysis, latent-attribution model as well as lab experiments.

We first uncover motivations from 25,290 lay hosts who responded to the survey question, "why did you start hosting?". The open-ended survey question is analyzed using two text-mining analyses – the supervised multi-label classification and the Poisson Factorization. Employing both text-mining methodologies revealed that Airbnb hosts are mainly driven by three motivations that may operate singly or jointly: 1) the motivation to earn cash, 2) the motivation to share the beauty of their property, and 3) the motivation to meet people. While the monetary motivation is commonly thought of as the main driver to participate in the sharing economy, we find that nearly 42% of hosts are driven by non-monetary motivations.

Based on the identified motivations at an individual-level, we examine the downstream consequences of these motivations by analyzing 593,503 reservation details. In contrast to the common intuition that the motivation to earn cash leads to greater host engagement, we find that the motivation to share the beauty of their home or to meet others leads to greater engagement. This was revealed in hosts' tendency to use more words and more photos to advertise their homes, and they opened more nights to receive booking. Moreover, a buy-till-you-die latent attrition model analysis (BG/BB model; Schmittlein, Morrison and Colombo, 1987) revealed that having these two motivations ('share beauty', 'meet people') leads to less churning likelihood (i.e., coefficients: -.163, -.142 respectively), while the cash motivation leads to greater churning likelihood (i.e., coefficient: .259).

Building on the retention findings, we then project the financial profit of motivation group. When we refer to the engagement and retention results, these makes us predict that the two motivation groups ('share beauty', 'meet people') would generate higher CLV than the cash-motivation group. However, our analysis suggests that it is only the host who are motivated to share beauty that generate high revenue (\$14,750 in a 36-month period after joining Airbnb), while the motivation to meet people led to much lower CLV (\$12,880). Cash motivation led to CLV a size of \$13,770, which was in between these two groups.

These puzzling CLV finding (meeting people < cash < sharing beauty) is the result of the different pricing strategy employed by each host. Note that hosts can flexibly choose how much to charge per night. We found that the average price is the highest among hosts motivated to share beauty ( $M_{\text{sharing beauty}} = \$198.39$ ) and the lowest among those motivated to meet people ( $M_{\text{meet people}} = \$128.34$ ). The price of those who were motivated to earn cash lay in the middle ( $M_{\text{cash}} = \$183.78$ ). While these findings are intriguing, the observed pricing pattern may also be explained by other factors such as the accommodation size, amenities, and location, such that hosts who live in luxurious properties are likely to not only report that they want to share the beauty of their homes, but also charge higher price because of their "objectively" superior property. We therefore control for this property traits using 60 other variables (e.g., kitchen, laundry, doorman, max capacity) and still find the consistent pattern of results. To further check the robustness of our findings, we conducted 2 controlled lab experiments where we show the exact same

home pictures and amenity description to all participants. Then we manipulate and elicit one of the three motivations (Experiment 1) or measure individual differences in motivations (Experiment 2). Then we ask all participants how much they would charge per night. The same pricing result emerges in both experiments. We believe that the motivation to meet people drives the price down because lower price attracts more guests, and the motivation to share beauty drives the price up due to the subjective valuation (endowment) of their homes.

Our research makes several contributions, first by being one of the first papers to explore the downstream consequences of different motivations extracted from textual data for customer behaviors such as engagement, retention and pricing decisions. Second, we contribute to the sharing economy literature by using rich secondary datasets from Airbnb and by focusing on host behavior (as supposed to guest behavior), thereby revealing consumers' new role as micro entrepreneurs. Third, from a methodological point of view, we use state-of-the-art machine learning and natural language processing (NLP) approaches to extract motivations from textual responses.

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# (Over)Predicting and (Over)Inferring Others' Preferences

Chairs: Ioannis Evangelidis, Bocconi University, Italy  
Minah Jung, New York University, USA

## Paper #1: Self-Other Biases In the Perception of Values and Preferences

Minah H. Jung, New York University, USA  
Alice Moon, University of Pennsylvania, USA  
Leif D. Nelson, University of California, Berkeley, USA

## Paper #2: The Prevalence Fallacy: Confusing Commonplace Choices for Preferred Choices

Emily Reit, Stanford University, USA  
Clayton R. Critcher, University of California, Berkeley, USA

## Paper #3: I Know Why You Voted for Trump: (Over)inferring Motives Based on Choice

Kate Barasz, IESE Business School, Spain  
Tami Kim, University of Virginia, USA  
Ioannis Evangelidis, Bocconi University, Italy

## Paper #4: People Overpredict the Benefit of Using Expensive Items and Appearing Rich in Friend-Making

Xilin Li, University of Chicago, USA  
Christopher K. Hsee, University of Chicago, USA

### SESSION OVERVIEW

People often make inferences about others' attitudes and preferences. Previous research has explored how people make such inferences based on our beliefs about others and salient social cues. The goal of this session is to highlight recent advances in our understanding of people's beliefs about others and under which conditions their social judgments and predictions err. Four papers feature a set of empirical regularities that consistently show that people often hold inaccurate beliefs about others' values, preferences, motives, and attitudes.

Jung, Moon, and Nelson report that people are often biased about others' preferences of both positive and negative goods. In particular, they find that people think that others have more intense consumption experiences regardless of the valence of those experiences. In turn, people's biases about others' preferences can produce paradoxical beliefs about others' valuation: People believe both that others who enjoy a good the same amount would pay more for it, but also that others who would pay the same amount for a good would enjoy it more.

Reit and Critcher provide evidence that when predicting whether others will choose A over B, people can be led astray by a prevalence heuristic—their intuitive sense of the commonness of A compared to B. The prevalence heuristic can give rise to a forecasting bias whereby people overestimate others' interest in choosing commonplace but bland items over rarer but exciting ones. The authors further outline when and why we are more likely to rely upon the prevalence heuristic and provide evidence that use of the heuristic can extend to costly decisions such as pricing.

Barasz, Kim, and Evangelidis study how people make inferences about why others make the choices they do. They propose that such inferences are often formed as a function of what is chosen. Specifically, when observers encounter someone else's choice, they use the chosen option's attribute values to infer the importance of that attribute in the decision-maker's choice. Consequently, when a chosen option has an attribute whose value is extreme, observers infer—sometimes incorrectly—that this attribute disproportionately motivated the decision-maker's choice.

Li and Hsee demonstrate that people predict that others are more willing to befriend them if they use expensive items and appear rich, but in reality others are more willing to befriend those who do not. This self-other discrepancy occurs because people misconstrue others' purpose of friend-making. In particular, people overestimate the extent to which choosers care about the utilitarian aspect in friend making (i.e., how useful the friend is if one is in need) relative to the hedonic aspect (i.e., how comfortable one would feel around the friend).

Together, these papers offer new insights into people's beliefs about others. Given the theoretical contributions and practical applications of the four papers, we expect this session to appeal to a broad audience in the fields of consumer behavior, judgment and decision-making, and social cognitive psychology.

## Self-Other Biases in the Perception of Values and Preferences

### EXTENDED ABSTRACT

People frequently consider others' preferences and values in making decisions. When deciding to purchase a good, people think about whether others would buy it and, if so, how much others would pay for it. When recommending a product, they consider whether others would enjoy it as much as they would. How do people perceive others' values and preferences? Frederick (2012) showed that people tend to think that others pay more for goods than they do. Although he considered a number of psychological accounts for the effect, none of them satisfyingly explained this overestimation bias. Extending this work, we examined that this overestimation more broadly generalized to others' preferences: people also think that others enjoy goods more than they do. Across field and lab experiments, we sought to identify the determinants of these biases in people's perception of others' values and preferences.

To establish people's overestimation bias in others' preference, in Study 1, we conducted a field study at a movie theater in California. Moviegoers ( $N=238$  groups) paid what they wanted and were told that 20% of their payments would go to a charity. Each group indicated: (a) how much they or another customer would enjoy the movie on a 7-point scale (1: not at all, 7: very much), (b) how much they would pay, and (c) how much they thought others would pay. Moviegoers thought that others would pay more ( $M = \$7.02$ ,  $SD = 2.54$ ) than they paid ( $M = \$6.03$ ,  $SD = 3.00$ ), and also that others would enjoy a movie more ( $M = 6.48$ ,  $SD = .87$ ) than they would ( $M = 6.07$ ,  $SD = 1.15$ ).

The results in Study 1 could have been driven by a selection of moviegoers who chose to watch a movie at this theater. Previous research has shown that a number of social forces influence payments under the voluntary payment contexts (e.g., Gneezy et al. 2010, 2012; Jung et al. 2014, 2016, 2017). In Study 2 ( $N = 374$ ), we test whether the observed overestimation bias persists in a lab setting in a non-voluntary payment pricing context. We replicated the overestimation of both payment and enjoyment for a wide range of goods that varied on three relevant dimensions: utilitarian or hedonic, relatively cheap or expensive, and relatively certain or uncertain market price.

Products are typically considered neutral (e.g., a tube of toothpaste) or positive (e.g., a trip to Paris). Consumers may overestimate others' enjoyment because they believe that others are more posi-

tive about their consumption experiences of the typical goods. Alternatively, the bias might also persist in the negative domain, which would mean that people tend to think that others dislike negative experiences more than they would. In Study 3 (N=441) examined whether this effect extended to the negative domain (e.g., “shaving head completely”). People believed that others would pay more to avoid negative experiences and that others would also dislike those experiences more than they would. These results suggest that people think that others have more *intense* consumption of a variety of goods, whether good or bad.

An alternative explanation for the overestimation bias could be that when estimating others' preferences, people might be thinking of someone whose preference is not so average. Instead, they might be thinking of someone whose preference for a target object or experience is exceptional. When assessing their own social lives, people think that their social life is worse than others because they compare themselves to a biased sample of those who have exceptionally rich social lives such as the most social friend they know (Davidai and Deri 2017). Similarly, when estimating others' preferences for a bottle of wine, people might be thinking of someone who enjoys drinking wine more than the average person. Such a biased pool of others might be more accessible because it is easier to observe others buying and liking than others not buying and not liking (Tversky and Kahneman 1973). Therefore, people might be thinking that the average other buys products more and also likes products more than they do. Such an explanation would provide a simple explanation for why people overestimate others' WTP for goods as well as their utilities from those goods.

Study 4 (N=1320) examined whether the biases come from the inaccurate perceptions of an average person. Participants (N=1320) estimated an identically-paying other's enjoyment or an identically-enjoying other's payment for a number of products. The logic is that people may think that others value and enjoy a good more than they do, but what cannot be true is that the perceived other simultaneously value a good more and less than they do. In other words, people cannot assume the perceived other as both enjoying a product less and more for the price they pay. However, this exact paradox emerges. Participants estimated that an identically-paying other would enjoy these goods more than they would, simultaneously believing that an identically-enjoying other would pay more for these goods. Therefore, depending on how one asks, people believe that other people derive more utilities for every dollar spent, while simultaneously thinking that other people derive less utilities from every dollar spent. The paradoxical results suggest that people do not simply think of an inaccurate average person in estimating the utilities and values of others, they also distort the scale of evaluation. In Studies 5a, 5b, 6a, and 6b we show that the similar paradoxes do not appear in people's quantity/numeric estimation about others in non-value/preference domains (e.g., height and weight, kindness and donation). Finally, Study 7 shows that the biases and the paradox extends to estimation of others' willingness-to-wait, suggesting that the phenomenon is broader in the domain of value and preferences.

This research shows that people are biased about others' preferences of both positive and negative goods, suggesting that people think that others have more intense consumption experiences whether it is good or bad. Furthermore, their biases ultimately lead to paradoxical interpretations that are entirely inconsistent with how we theorize about value and utility.

## The Prevalence Fallacy: Confusing Commonplace Choices for Preferred Choices

### EXTENDED ABSTRACT

People are often tasked with predicting others' choices. A dinner host must decide how many servings of vanilla ice cream vs. tiramisu to have on hand. A bed and breakfast owner must decide how much orange juice vs. mango juice to stock. A shoe salesman must decide how many of the new shoes in black or blue to carry.

We argue that when forecasting choice, people naturally call to mind a social heuristic. A hallmark of a heuristic is it involves attribute substitution—reliance on an imperfectly valid but readily accessible cue when making difficult, potentially intractable judgments (Kahneman, 2003; Kahneman & Frederick, 2002). We propose that in predicting whether others are likely to choose A or B (e.g., vanilla ice cream or tiramisu), people can be led astray by the attribute *prevalence*—their intuitive sense of the commonness of A compared to B.

When people buy or use an item, then this does lead an item to become more prevalent. The greater prevalence of vanilla ice cream over tiramisu does indeed reflect that the plain frozen treat has been *chosen to be eaten* more often than the Italian delicacy. But this does not imply that people are likely to choose vanilla ice cream *over* tiramisu when given the choice between the two. After all, vanilla ice cream is not merely a more common dessert choice, it is (for a variety of reasons) more commonly offered as an option to begin with.

We present six studies that, in combination, test whether and when people commit this prevalence fallacy. Study 1 documents the forecasting bias: Across eleven choice pairs, participants overestimated other participants' interest in choosing commonplace but bland items (e.g., pizza) over rarer but more exciting ones (e.g., Thai food). Study 2 replicates these findings in an incentive-compatible context in which we went to great lengths to assure participants the experimenter was blind to their actual choices. This study also directly tied participants' perceived prevalence of each item to their forecasts of choice.

Our next studies examined when and why prevalence is relied upon. Study 3 found people leaned on perceived prevalence over and above many other cues when forecasting others' choice (e.g., projection, the price of each option, how others were thought to like each option.) But upon more careful consideration, participants avoided the prevalence fallacy and relied on more normatively defensible input. Study 4 outsourced stimulus selection of the choice pairs to pretest participants; this allowed us to establish the generality of the prevalence fallacy without the unintentional distortion of experimenter bias. Study 5 sought evidence that people lean on prevalence (“what has been chosen”) because it is deceptively similar to the forecast of interest (“what will be chosen”). By this logic, prevalence may be used as a cue to estimating choice in particular, but less so (or maybe not at all) when considering other symptoms of preferences (e.g., what people like, what they would be most pleased to receive, etc.) To this end, Study 5 demonstrated that perceived prevalence is spontaneously used as a guide when forecasting others' choices, but not when forecasting what others would be pleased to receive.

Lastly, Study 6 illustrated a literally costly consequence of the heuristic. A two-part marketplace simulation study found amateur sellers' reliance on prevalence prompted them to systematically misprice goods. For example, participants considered selling Budweiser (i.e., relatively common item) and Japanese imported beer (i.e., relatively rare item) to online customers. For each item, participants could either raise, lower, or leave untouched a price that pretesting had identified as profit-maximizing. Consistent with the

prevalence fallacy, participants were more likely to suboptimally *raise* the price of the Budweiser (48.38%) than Japanese imported beer (20.13%), and more likely to suboptimally *lower* the price of the Japanese imported beer (48.32%) than the Budweiser (14.57%). Additional analyses tied these strategic pricing errors—which were observed across eleven sales pairs—to the prevalence fallacy (i.e., a tendency to overestimate the relative choice popularity of commonplace items). In short, strategic pricing errors can be tied directly to the prevalence fallacy.

Empirically, the focus of this paper is to provide evidence for a novel social heuristic. But we also have a broader methodological goal: to offer a thoughtful discussion of how to best provide evidence that a heuristic exists. To that end, we identify and outline two distinct empirical approaches to testing for the existence of a heuristic, what we call the *systematic bias* approach and the *cue-correlation* approach. When using the *systematic bias* approach, researchers identify contexts in which a heuristic should distort judgments in a particular direction and determine whether that occurs. For example, the prevalence heuristic should lead people to overestimate the extent to which others will choose commonplace but bland options (e.g., vanilla ice cream) over rare but enticing options (e.g., tiramisu). One shortcoming of this approach is the mere observation of systematic bias means the evidence is equally consistent with any other heuristic that might make the same prediction. The *cue-correlation* approach addresses this shortcoming by providing more direct evidence of the heuristic in use. Specifically, this approach ties variation in the heuristic attribute (e.g., prevalence) to variation in the judgment (e.g., forecasts of choice), thereby providing firmer support for reliance on a heuristic (Critcher & Rosenzweig, 2014; Kahneman & Tversky, 1973). The outlining of the two distinct heuristic-testing approaches should make the paper meaningful not merely in explaining the prevalence fallacy, but in offering a template that future heuristics and biases researchers may use.

## I Know Why You Voted for Trump: (Over)inferring Motives Based on Choice

### EXTENDED ABSTRACT

People often speculate about why others make the choices they do. This paper investigates how such inferences are formed as a function of what is chosen. Specifically, when observers encounter someone else's choice (e.g., of political candidate), they use the chosen option's attribute values (e.g., a candidate's specific stance on a policy issue) to infer the importance of that attribute (e.g., the policy issue) in the decision-maker's choice. Consequently, when a chosen option has an attribute whose value is extreme (e.g., an extreme policy stance), observers infer—sometimes incorrectly—that this attribute disproportionately motivated the decision-maker's choice. Seven studies demonstrate how observers use an attribute's value to infer its weight—the value-weight heuristic—and identify the role of perceived diagnosticity: more extreme attribute values give observers the subjective sense that they know more about a decision-maker's preferences, and in turn, increase the attribute's perceived importance. The paper explores how this heuristic can produce erroneous inferences and influence broader beliefs about decision-makers.

Studies 1 and 2 examined inferences—how observers use attribute value to predict attribute weight (i.e., the value-weight heuristic). Participants encountered an option that someone else had chosen; in one condition (“control”), the chosen option had only non-extreme value attributes (S1: city with average weather; S2: politician with moderate policy stance), while in a second condition

(“extreme”), the chosen option had a single extreme attribute value (S1: city with better-than-average weather; S2: politician with extreme policy stance). In both studies, observers in the extreme conditions inferred that the attribute (i.e., weather, policy issue) had been relatively more important than participants in the control conditions (S1:  $p < .001$ ,  $d = 1.08$ ; S2:  $p < .001$ ,  $d = .93$ ). We also replicated S2 and tested perceived diagnosticity (e.g., the subjective feeling of knowing someone else's preferences) as a mediator (e.g., I could confidently guess why the person made this choice or I have a good sense for what the person liked most about this choice). We found a significant indirect effect: extremity increased perceived diagnosticity, and in turn, the perceived importance of the attribute.

Studies 3-7 examined over-inferences—how observers overuse available information and make systematic mispredictions. In S3, participants observed a decision-maker's choice of city; we varied the diagnosticity of available information across four conditions. In one condition (“trade-off”)—the most diagnostic—a decision-maker had supposedly chosen City B, with better-than-average weather, over City A, with better-than-average job prospects (the cities were equivalent on other dimensions), such that actual diagnostic information was conveyed: an observed relative preference for weather over jobs. Using this as a benchmark, we compared two other conditions where less (or non-) diagnostic information was conveyed: one condition (“dominating”) in which the same City B was objectively better than the forgone City A (i.e., no trade-off had been made), and one condition (“extreme only”) in which only the chosen City B was displayed (i.e., no information provided about forgone City A). We also tested a baseline condition (“non-extreme only”), in which City B was average on all dimensions was chosen. Replicating S1 and S2, participants in the three extreme conditions (i.e., trade-off, dominating, and extreme only) inferred that weather was more important than participants in the non-extreme condition (all  $p$ 's  $< .001$ , all  $d$ 's  $\geq .94$ ). However, demonstrating the robustness of the heuristic—and observers' relative insensitivity to varying levels of available information—estimates in the three extreme conditions did not differ significantly (all  $p$ 's  $> .40$ ). In other words, people seemed to act as if they had actual, diagnostic information—even when they did not. We replicated these findings using an incentive compatible design; even with actual money on the line, participants in the extreme conditions were more likely to make an inference (versus not)—and infer that the attribute with the extreme value had been most important.

Studies 4 and 5 directly tested prediction errors by assigning participants to either be a decision-maker or an observer. As decision-makers, participants chose an option with an extreme attribute value—a city with extreme weather (S4) or a light bulb with extreme eco-friendliness (S5). As observers, participants simply encountered the other person's choice. In both studies, observers inferred that the attribute with the extreme value must be most important to the decision-maker—even though decision-makers reported otherwise; this resulted in a significant prediction error (S4:  $p = .001$ ,  $d = .51$ ; S5:  $p < .001$ , Cramer's  $V = .34$ ). It also led observers to (mistakenly) believe that decision-makers would continue prioritizing the extreme attribute in future city choices (S4:  $p = .002$ , Cramer's  $V = .23$ ) and purchase decisions (S5:  $p = .001$ , Cramer's  $V = .25$ ).

Study 6 attempted to debias observers. Using the same light bulb paradigm as S5, participants took both a decision-maker and observer role. However, we counterbalanced the order of the study: half of participants first chose for themselves and then observed someone else's choice (“decision-maker first”), while the other half first observed someone else's choice and then chose for themselves (“observer first”). We speculated that once participants had reflected on their own decisions (“decision-maker first”)—and realized that



the choice of an extreme attribute value could be incidental (rather than central) to a decision—they would be less likely to make the error for other people. Indeed, this is what we found: although the prediction error was not fully eliminated, it was significantly reduced (interaction:  $p=.003$ ).

Why does this matter? We suggest that these inferences affect broader interpersonal inference-making. For this, we surveyed self-reported Clinton and Trump voters five days post-Election. In line with our other results, Clinton voters perceived immigration policy—which a pretest revealed was a “high value” attribute of Trump’s campaign—to have been more important in Trump voters’ decisions than Trump voters reported that it had been ( $p<.001$ ,  $d=.73$ ), which was correlated with broader unfavorable impressions of Trump voters. These results provide consequential, real-world evidence for the value-weight heuristic in action.

Our work contributes to research on prediction errors and social inferences by demonstrating a novel heuristic: that observers use attribute information to infer motives for choice—the value-weight heuristic—even when such a heuristic may err.

### People Overpredict the Benefit of Using Expensive Items and Appearing Rich in Friend-Making

#### EXTENDED ABSTRACT

People are social animals and want to be popular. A common method people adopt to make themselves popular is to use expensive items and give others the impression that they are rich. While appearing rich has its benefits, we expect a self-other discrepancy about perceived wealth in friend-making: people (candidates in friend-making) overpredict the extent to which others (choosers in friend-making) would befriend them if they use expensive items (defined here as items considerably more expensive than what most others in the situation use) and appear financially superior. We posit that this self-other discrepancy occurs because candidates overestimate the extent to which choosers care about the utilitarian aspect in friend making (i.e., how useful the friend is if one is in need) relative to the hedonic aspect (i.e., how comfortable one would feel around the friend).

We have four completed studies. Study 1 demonstrated the proposed self-other discrepancy. We assigned 164 employees from a company to a candidate condition and a chooser condition. We asked those in the candidate condition to predict whether someone they met at a party was more willing to befriend them if they drove a non-expensive car or an expensive car, and asked those in the chooser condition whether they were more willing to befriend someone they met at a party if the person drove a non-expensive car or an expensive car. We observed the proposed self-other discrepancy: Most candidates (62.4%,  $\chi^2(1)=5.19$ ,  $p=.023$ , compared with 50%) expected others to be more willing to befriend them if they drove the expensive car, but most choosers (62.0%,  $\chi^2(1)=4.57$ ,  $p=.033$ , compared with 50%) were more willing to befriend those who drove the non-expensive car.

Study 2—a lab study—replicated the self-other discrepancy involving real choices rather than hypothetical predictions. We assigned 208 students who were interested in an advertised “friend-making study” (which was a pretext) to either a candidate condition or a chooser condition, and had them go through a “screening process” (which was the real experiment). We told participants in the candidate condition that for friend-making purposes, we needed to take a photo of them, and they could choose to have their photo taken either at a desk with expensive items on it (and hence appear rich) or at a desk with non-expensive items on it (and hence not ap-

pear rich). We told participants in the chooser condition that if they were selected to the “friend-making study,” they would be paired with one of two potential friends, showed the photo profiles of the two persons, who were similar, except that one was seated at the expensive-item desk and the other at the non-expensive-item desk, and let the participants choose one as their friend. We again observed the self-other discrepancy: Most candidates (79.6%,  $\chi^2(1)=36.13$ ,  $p<.001$ , compared with 50%) chose to have their photos taken at the expensive-item desk, but most choosers (59.0%,  $\chi^2(1)=3.44$ ,  $p=.064$ , compared with 50%) chose to be paired with the person sitting at the non-expensive-item desk.

Study 3—a field study—focused only on choosers, and demonstrated that their preference for befriending those using non-expensive items is not due to social desirability or experimental demand, and is observable even in naturally-occurring settings. We conducted the study at an informal social gathering. Two similar-looking female volunteers, one wearing an expensive outfit and appearing rich, and the other wearing a non-expensive outfit and not appearing rich, approached people at the event, and asked if they would join a party she and her friends would host. Replicating the chooser result of the other studies, more people approached by the non-rich volunteer signed up for the party than did people approached by the rich volunteer (24.0% versus 7.8%,  $\chi^2(1, N=152)=7.51$ ,  $p=.007$ ).

Study 4 further replicated the self-other discrepancy by using a chiefly private-consumption item (apartment), and explored the discrepancy’s underlying mechanism by manipulating the purpose of friend-making. We assigned 584 US MTurkers to six conditions, which constituted a 2 (role: candidate vs. chooser)  $\times$  3 (purpose: unspecified vs. utilitarian vs. hedonic) between-participants design. In the unspecified-purpose condition, we did not mention any purpose of making friends; in the utilitarian-purpose condition, we said the purpose was to find friends who were potentially useful; in the hedonic-purpose condition, we said the purpose was to find friends who would be comfortable to be around. We then asked participants in the candidate condition to predict whether someone they met at the party was more willing to befriend them if they rented an expensive apartment or a non-expensive apartment, and asked participants in the chooser condition whether they were more willing to befriend someone they met at the party if the person rented an expensive apartment or a non-expensive apartment. In the unspecified-purpose condition, we replicated the self-other discrepancy: most candidates (64.6%,  $\chi^2(1)=8.17$ ,  $p=.004$ , compared with 50%) expected the chooser to be more willing to befriend them if they rented the expensive apartment, but most choosers had the opposite preference (67.0%,  $\chi^2(1)=11.56$ ,  $p=.001$ , compared with 50%). The discrepancy mitigated in the two specified-purpose conditions. In the utilitarian-purpose condition, most candidates (87.8%,  $\chi^2(1)=55.88$ ,  $p<.001$ , compared with 50%) expected the chooser to be more willing to befriend them if they rented the expensive apartment, and most choosers (78.4%,  $\chi^2(1)=31.19$ ,  $p<.001$ , compared with 50%) indeed had such a preference. In the hedonic-purpose condition, most candidates (76.3%,  $\chi^2(1)=26.81$ ,  $p<.001$ , compared with 50%) expected the chooser to be more willing to befriend them if they rented the non-expensive apartment, and most choosers (76.0%,  $\chi^2(1)=26.04$ ,  $p<.001$ , compared with 50%) also had such a preference.

In sum, the present research reveals a self-other discrepancy in which people overestimate the friend-making benefit of appearing rich, and explores its underlying mechanism. Theoretically, this research enriches the extant literature on self-other discrepancy and perspective taking research. Practically, it helps people form more realistic beliefs about the influence of perceived wealth on social attractiveness and sheds light on how to increase social popularity.



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# Big Data Approaches to Consumer Behavior

Chair: Christopher Olivola, Carnegie Mellon University, USA

## Paper #1: Testing Theories of Goal Progress Within Online Learning

Joy Lu, University of Pennsylvania, USA  
Eric T. Bradlow, University of Pennsylvania, USA  
J. Wesley Hutchinson, University of Pennsylvania, USA

## Paper #2: Semantic Processes in Memory-Based Consumer Decision Making

Sudeep Bhatia, University of Pennsylvania, USA

## Paper #3: Predicting Consumer Brand Recall and Choice Using Large-Scale Text Corpora

Zhihao Zhang, University of California, Berkeley, USA  
Aniruddha Nrusimha, University of California, Berkeley, USA  
Ming Hsu, University of California, Berkeley, USA

## Paper #4: Data-Driven Computational Brand Perception

Sudeep Bhatia, University of Pennsylvania, USA  
Christopher Olivola, Carnegie Mellon University, USA

### SESSION OVERVIEW

The past decade has witnessed the explosion of ‘Big Data’, and with it, many novel opportunities to study and model human cognition and behavior. Large-scale datasets of human activity “mined” from the Internet, in particular, have proven to be extremely useful for studying various aspects of human cognition. The papers in this session demonstrate that this approach can also be useful for studying consumer behavior. Specifically, they showcase various ways in which Big Data, combined with novel computational methods, can be used to derive insights about various aspects of consumer cognition and behavior.

The first paper in this session, by Lu, Bradlow, and Hutchinson, develops and tests a model of goal progress that captures consumption decisions related to online content, with parameters that can be mapped to specific theories from consumer psychology. They apply this model to large dataset of Coursera.com learners, and find that their consumption patterns are consistent with theories of goal gradient and resource slack. Moreover, they show that the model allows them to predict changes in consumption behavior when content release shifts from weekly installments (drip-release) to on-demand (all-at-once).

The next three papers utilize large scale text corpora drawn from the Internet, combined with machine learning and natural language processing techniques, to model and predict various aspects of consumer cognition and decision making.

First, Bhatia demonstrates that this approach can be used to predict the items that come to consumers’ minds when they need to construct choice sets from memory. Moreover, he shows the approach can be applied to a number of specific consumption domains (e.g., food shopping, gift-giving, etc.), and that it successfully predicts the responses of participants across six preregistered experiments.

Next, Zhang, Nrusimha, and Hsu demonstrate that this approach can be used to predict the likelihood that consumers will recall specific brands (e.g., Coke) within a product category (e.g., soft drink). They verify the accuracy of this approach by comparing its predictions to the responses of a large sample of participants.

Finally, Bhatia and Olivola demonstrate that this approach can be used to predict how entire product categories and individual brands are perceived along various trait dimensions by consumers. Specifically, they show that, across a wide range of product categories

(e.g., beauty products, cars, etc.), across specific brands within each category (e.g., for cars: Mazda, Hyundai, etc.), and across evaluative trait dimensions (e.g., competence, excitement, etc.), their model of brand trait perceptions is consistently well correlated with the judgments of participants in studies of brand perceptions.

In sum, the papers presented in this session showcase highly novel approaches to studying various aspects of consumer cognition and behavior. In particular, marketing researchers and practitioners can use the growing availability of ‘Big Data’, in combination with recently developed computational methods, to greatly advance consumer research. This session will appeal to marketing researchers interested in learning about cutting-edge approaches to studying consumer behavior.

## Testing Theories of Goal Progress Within Online Learning

### EXTENDED ABSTRACT

Online education has experienced rapid growth and change within the last decade. Firms like Coursera and edX offer both free and monetized content, and partner with universities to offer specializations and degrees. The setting of online education has unique features such as scheduled content and learning assessments that make it an appropriate testing ground for theories of how consumers progress towards goals.

We examine the behavior of 508 individuals engaged in two courses offered by Wharton Online through Coursera in 2015: Introduction to Marketing (“Marketing”) and Introduction to Operations Management (“Operations”), each consisting of four weeks of lecture videos and quizzes. We selected for individuals who had paid for both course certificates when the two courses were offered during the same four weeks. We build a model that captures decisions about whether to consume Marketing or Operations, whether the content is a lecture or a quiz, and when to take breaks of different lengths. On average, we observe 75.4 (SD = 45.2) of these decisions per person. The parameters of our model can be mapped to specific theories from consumer psychology, which provides an underlying behavioral interpretation for the patterns we find in the data.

The key feature of our model is the “Goal Progress” construct that we embed into the utility specifications of choosing Marketing and Operations, with each individual’s goal assumed to be to visit all available lectures and quizzes within a given course. For example, let  $G_M[j]$  represent “progress” or the percentage of available content in Marketing visited by choice  $j$ . The Goal Progress construct for Marketing is given by the expression  $\beta_{1M}G_M[j] + \beta_{2M}G_M[j]^2$ . Note that  $G_M[j]$  varies as individuals progress towards their goal by visiting more content, as well as when more content is released each week, which resets the goal by increasing the total amount of available content.

Because the Goal Progress construct has both linear and quadratic components, utility can flexibly vary with progress in different ways. Individuals may experience fatigue or satiation and exhibit decreasing utility (Inman 2001; Nelson and Meyvis 2008). In contrast, goal gradient theory (Kivetz, Urminsky, and Zheng 2006) predicts an acceleration of effort as individuals approach completion of their goal. The stuck-in-the-middle effect expands upon this by suggesting that individuals may also be motivated to move away from the starting line, resulting in a dip in utility near the middle (Bonezzi, Brendl,

and De Angelis 2011). Finally, individuals may exhibit a peak early on with a decline towards the end because they overestimated their future slack for time resources (Zauberman and Lynch 2005).

To estimate the parameters of our model (e.g.,  $\beta_{IM}$  and  $\beta_{2M}$ ), we use a hierarchical Bayes procedure, which allows us to account for unobserved heterogeneity across individuals (Gelman et al. 2014). We obtain a set of parameters for each individual that comes from a multivariate normal distribution for the population. Thus, for both Marketing and Operations, we can use the estimated parameters from the Goal Progress construct to classify each individual as a specific type of learner for each course. In Marketing, the linear and quadratic coefficients have population means of  $\beta_{IM} = 0.67$  (CI = [0.57, 0.78]) and  $\beta_{2M} = -0.36$  (CI = [-0.60, -0.09]), respectively, which corresponds to a small goal gradient effect. In contrast, for Operations, the linear and quadratic coefficients have population means of  $\beta_{IO} = 0.49$  (CI = [0.33, 0.72]) and  $\beta_{2O} = -4.09$  (CI = [-4.48, -3.69]), respectively, which corresponds to a strong resource slack effect. Compared to Marketing, the Operations content was more technical and built up across weeks, which may have resulted in attrition as learners found the material increasing in difficulty.

Since media firms are increasingly making content available “on-demand” (i.e., available all at once instead of in weekly installments), we use the parameter estimates of our model to conduct a counterfactual simulation where all course content was available starting on the first day. Our model predicts a sharp shift in activity towards the first weeks of the course, since individuals now have one overarching goal to complete all of the content, rather than waiting for the goal to be reset each week. To empirically verify our predictions, we took advantage of a policy change where the Coursera platform transitioned the courses from weekly to on-demand release in 2016. Using a new dataset from after this policy change, consisting of 1,907 individuals who matched the criteria of our original sample, we find that our predictions are consistent with observed changes in learner behavior.

## Semantic Processes in Memory-Based Consumer Decision Making

### EXTENDED ABSTRACT

Many common decisions do not involve fixed, exogenous sets of choice items. Rather, consumers must construct the choice sets by themselves, typically through the use of memory processes (see Alba and Hutchinson 1987; Lynch and Srull 1982). The key role of memory in generating choice sets in consumer decision-making raises a number of important questions at the intersection of memory and consumer research. From a theoretical perspective: What are the mechanisms that determine the items that are retrieved by consumers when exogenous choice sets are not provided? How do these mechanisms relate to core memory processes known to play a role in non-preferential choice tasks, and do these memory processes facilitate or hinder efficient memory retrieval for consumer decision-making? Practically, can the mechanisms at play in memory-based decision-making be tested? The set of retrieved choice items in everyday consumer decisions is completely unconstrained—any choice item can come to mind, and the items that do come to mind often lack a clear category structure. So how can the relationship between the various retrieved items, and between these items and other relevant variables (such as choice context), be quantified?

I attempt to address these questions using existing insights on human memory combined with novel techniques from machine learning and data science. The task of retrieving feasible sets of choice items from memory has similarities to well-studied cognitive

tasks, such as free-recall and free-association. Thus it is likely that both the mechanisms that guide retrieval in these tasks, as well as the effects generated by these mechanisms, carry over to the domain of consumer decision-making. For example, as with free-recall and free-association, the generation of memory-based choice sets may involve associative activation processes. This would cause memory-based choice sets to display semantic clustering, with retrieved items increasing the retrieval probability of other semantically related items (Bousfield and Sedgewick 1944; Gruenewald and Lockhead 1980; Romney et al. 1993). For this reason, we would also expect retrieved items to depend on contextual cues, such as choice context, with items semantically related to these cues being more likely to be retrieved (Hare et al. 2009; Moss et al. 1995; Nelson et al. 2004).

Moreover, it may also be possible to apply novel methodological tools used to study memory processes in free-recall and free-association tasks to the domain of consumer choice. For example, recent work has shown that new techniques from machine learning and data science, such as semantic space models, are able to quantify the semantic similarity between items, and between items and contextual cues (Hills et al. 2012; Howard and Kahana 2002; see also Bhatia 2017). These models possess representations for a very large set of objects and concepts, implying that they can also be used to measure the semantic relationships at play when consumers must generate choice sets from memory.

I tested the applicability of semantic space models for studying semantic clustering effects and context effects in memory-based consumer choice in six preregistered experiments. In Experiments 1A-1C participants were shown a description of a consumer choice setting and asked to list any 20 items that came to their mind as they considered making their decisions. Specifically, the settings were: food choice (Experiment 1A), vacation choice (Experiment 1B), and purchasing a gift for someone else (Experiment 1C). After these items were listed, participants were taken to a second screen on which they rated each of their 20 items in terms of desirability, on a scale from -3 to +3.

I use word2vec, a well-known semantic space model, to quantify the semantic distance between each pair of listed choice items for each participant (Mikolov et al. 2013). I subsequently analyzed semantic clustering using the path analysis method proposed by Romney et al. (1993). This method involves measuring the total semantic distance (in word2vec space) between each pair of adjacently listed items in a participant’s list, and comparing this distance to a random path on the same list. Using this method I found that listed paths were significantly shorter than random paths effects in all three settings, demonstrating strong semantic clustering. Listed paths were also shorter than the hypothetical paths that would have been generated had items been listed in order of desirability. This indicates that semantic clustering leads to some degree of suboptimality in memory retrieval, with undesirable items being retrieved significantly earlier than had decision makers been able to retrieve items strictly in order of desirability.

In Experiments 2A-2C, I examined the influence of consumer choice context on the retrieval of items. These experiments considered the same choice domains as Experiments 1A-1C but varied the contextual cues given to participants: Breakfast vs. dinner for Experiment 2A, wine tasting vs. camping trip for Experiment 2B, and baby shower vs. Valentine’s day gift for Experiment 2C. Each participant was only shown one context and asked to list any 20 items that came to mind. I again used word2vec to quantify semantic distance between pairs of listed items, and found robust semantic clustering effects (replicating Experiments 1A-1C). I also used this method to calculate semantic similarity to the consumer choice context, and

found that participants were much more likely to list items that were semantically related to the context in consideration. The effect of consumer context was most pronounced for items listed earlier.

Overall, these experiments demonstrate that semantic processes play a key role in the formation of memory-based consumer choice sets, by generating both semantic clustering and context dependence. The experiments also show how decisions involving everyday consumer purchases can be studied with the use of semantic space models. These models make it possible to obtain representations for a very large set of words and concepts. These representations, in turn, provide measures of semantic similarity for nearly any pair of choice items, and between choice items and a wide range of choice contexts, allowing quantitative analyses of item retrieval in unconstrained memory-based consumer decision settings.

### Predicting Consumer Brand Recall and Choice Using Large-Scale Text Corpora

#### EXTENDED ABSTRACT

Consumer memory processes have long been recognized as playing an important role in mediating the effect of marketing actions on consumer behavior (Hoyer and Brown 1990; Lynch 1991; Nedungadi 1990; Posavac, Sanbonmatsu, and Fazio 1997). Brand managers often strive to foster brand awareness, increase brand accessibility, and create favorable brand images. Consumer memory has become an integral component of consumer-based brand equity (Christodoulides and de Chernatony 2010), as well as related metrics such as brand salience, brand awareness, and top-of-mind widely used by marketers (Farris 2010).

Despite its importance and significant advances in the theoretical and empirical understanding of the relationship between consumer memory and choice behavior, measures of consumer memory have remained dependent on survey-based self-report methods. This reliance on verbal self-reports places inherent limitations on the ability of researchers and practitioners to scale across product categories and markets, or to integrate with the large amounts of purchase data that are routinely available within firms.

This paper proposes to take a step toward addressing these challenges by leveraging advances in machine learning (ML) and natural language processing (NLP) to draw inferences about core aspects of consumer memory from large text corpora. Specifically, we show that it is possible to develop predictive models of consumer brand recall using a type of models from NLP. A well-established theoretical framework for semantic memory is that concepts (e.g. categories, brands, products) are organized as nodes in an associative network, where the links between any two nodes represent their associations (Collins and Quillian 1969). When one concept (e.g. a category) is processed, the activation will be spread to other concepts (e.g. brands within this category) to the extent that they are closely related to the previous concept (Collins and Loftus 1975). The stronger the association, the higher the probability of the successful retrieval of the latter concepts (Anderson 1983). Recent advances in NLP have made it possible to uncover such semantic relations and associations between words from large text corpora quantitatively, using so called word embeddings models (Mikolov, Sutskever, Chen, Corrado, and Dean 2013). Such models represent words and phrases ('tokens') as vectors in high dimensional spaces in a way that the spatial distances between the vectors reflect the semantic relatedness between the tokens. This "word to vector" (or *word2vec*) approach has been shown to improve the performance of machine learning models in applications such as translation and conversation beyond simple co-occurrence statistics. Successful applications of word embeddings

also include using the uncovered associations to understand more complicated phenomena, such as stereotypes (Caliskan, Bryson, and Narayanan 2017) and cognitive biases (Bhatia 2017). For example, male words are found to be more associated than female words with mathematics than with arts (Caliskan et al. 2017).

To demonstrate our approach, we examined the extent to which word embeddings trained on large text corpora can be used to make predictions about average brand recall success (e.g., "Coke") for specific product categories (e.g., "Soft drink"). In three batches of aided recall experiments on Amazon Mechanical Turk (N = 120/batch), we asked participants to type down all brands that came to mind when prompted with a category cue. We included a diverse range of product categories, including both consumer packaged goods (batteries, beer, bottled water, breakfast cereals, chewing gum, fast food, Greek yogurt, orange juice, potato chips, and soft drink), as well as durables (headphones, luxury cars, and laptop computers), and services (auto insurance, gas stations, and hotels). The choice of categories was primarily based on extant literature on brand memory and focused on categories for which memory factors play a crucial role in purchase decisions (Dickson and Sawyer 1986; Lynch 1991). We also avoided categories where most brand names are polysemous, such as airlines and banks (e.g., United, Delta, Chase, Fidelity).

We define the total rate of recall for a certain brand in a given category to be the percentage of participants whose list of brands when prompted with the category included that brand. We used the standard *Google News word2vec* Vectors (3 million English word tokens) trained on the Google News corpus (3 billion running words) (Mikolov et al. 2013). The association between any two such vectors is defined as the cosine distance between them, following practices in existing studies (Bhatia 2017; Mikolov et al. 2013).

We show that mean recall rates are significantly associated with similarity as assessed using cosine distance between brand and category, consistent with the hypothesis that word embeddings capture association strengths. Furthermore, two consistent trends emerged across categories. First, the brands with the highest rate of recall almost always have very high similarities with the categories they belong to in word embeddings. Second, the brands that have low cosine similarities tend to have low recall rate. Interestingly, word embeddings cosine similarity seems to track brand recall in a nonlinear manner, resembling a power function. Few brand names are highly recalled without high cosine similarity to the categories, almost all of them being brands which produce products spanning multiple categories (for example, "Samsung" has relatively low similarity to "television" despite a high recall rate).

By showing a relationship between category-brand associations predicted by word embeddings and empirical recall data, we demonstrate the great potential of applying this novel tool to better understand and quantify brand memory. Using large-scale real-world text corpora, word embeddings provide a high-quality abstraction of the informational environment that the general population is exposed to, from which quantitative inference could be drawn. The availability of off-the-shelf word embeddings models like *word2vec* also makes it a highly accessible and flexible tool for marketers. Further work is needed to improve its performance for multi-category brands, better address individual differences in brand recall, and to link brand memory predictions to purchase behavior.

### Data-Driven Computational Brand Perception

#### EXTENDED ABSTRACT

A key determinant of a brand's value (and equity) is, of course, how it is *perceived* by consumers --i.e., how it is represented in their



minds. There are numerous pathways through which brand perceptions (and mental representations) influence brand value (Keller 2003, Schmitt 2012). At the most basic, and obvious, level, brands are valued to the extent that they are seen as having desirable characteristics, such as being associated with trustworthy, reliable, and competent firms and products (Keller 2003). These positive associations, in turn, contribute to a brand's intangible qualities, increasing purchase likelihood and customer loyalty (Keller and Lehman 2006). Moreover, companies themselves have corporate brands that reflect how they are perceived by consumers (e.g., Aaker et al. 2010, Bhattacharjee et al. 2017, see also Keller and Lehman 2006). Therefore, an important goal for both firms and marketing researchers, is to be able to measure how individual brands, and product categories, are perceived by consumers (e.g., Aaker 1997).

Although brand perception has long been, and continues to be, a core topic in marketing, the methods for studying it have largely remained the same: to gauge how brands are evaluated on specific dimensions of interest (e.g., masculinity, sophistication, etc.), researchers typically collect responses from human participants (e.g., numerical ratings), then average these to estimate aggregate brand perceptions. This general approach can be costly (both in terms of money and time spent), slow (if one needs to estimate perceptions for a very large set of brands and/or evaluation dimensions), and often relies on relatively small samples of human judges (who are rarely representative of the broader population) to draw inferences about market-level brand perceptions.

We introduce a novel approach to predicting and mapping brand trait perceptions using 'Big Data' mined from the Internet combined with machine learning techniques. Recent developments in computational linguistics have made it possible to uncover human-like associations between a very large range of objects and concepts, including popular brands and various traits. We show such techniques allow us to predict how entire product categories and individual brands are perceived by consumers along various trait dimensions by consumers.

We used a prominent prebuilt set of vector representations in order to predict brand-trait associations. The representations we used were generated by the Word2Vec model, trained using the continuous bag-of-words and skip-gram techniques on a corpus of Google News articles with over 100 billion words tokens. These representations have a vocabulary of 300 million words and phrases, with each word or phrase being defined on 300 dimensions. We computed the association between each brand and trait in our dataset, as assessed by the cosine similarity between their corresponding vector representations.

We find that, across a wide range of product categories (e.g., beauty products, cars, etc.), specific brands within each category (e.g., for cars: Mazda, Hyundai, etc.), and evaluative trait dimensions (e.g., competence, excitement, etc.), our model of brand trait perceptions is consistently well correlated with the judgments of participants in previous studies of brand perceptions.

In sum, we propose a totally different approach to estimating the way brands are represented in the minds of consumers. In particular, marketing researchers and practitioners can use the contents of the Internet, in combination with computational methods, to measure and map the representations of brands in the collective consumer mind. This computational, big-data approach presents many advantages, such as allowing researchers to rapidly collect data on a huge range of products across a large set of evaluation dimensions.

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# Better Together? How Sharing Consumption with Others Impacts Consumers' Choices and Perceptions

Chairs: Nicole Kim, University of Maryland, USA  
Rebecca Ratner, University of Maryland, USA

## **Paper #1: Felt Status, Social Contagion, and Consumer Word-of-Mouth in Preferential Treatment Contexts**

Brent McFerran, Simon Fraser University, Canada  
Jennifer Argo, University of Alberta, Canada

## **Paper #2: The Preference for Simultaneity: When Different Events Happen to Different People at the Same Time**

Franklin Shaddy, University of Chicago, USA  
Yanping Tu, University of Florida, USA  
Ayelet Fishbach, University of Chicago, USA

## **Paper #3: "Brought to You Live": On the Consumption Experience of Live Social Media Streams**

Nofar Duani, New York University, USA  
Alixandra Barasch, New York University, USA  
Adrian Ward, University of Texas at Austin, USA

## **Paper #4: Signaling Fun: Anticipated Sharing Leads to Hedonic Choice**

Nicole Kim, University of Maryland, USA  
Rebecca Ratner, University of Maryland, USA

### **SESSION OVERVIEW**

How do consumers share their consumption experiences with others? A key finding in prior work on shared consumption is that consuming the same content with another person provides social benefits such as feelings of connectedness, subsequently amplifying enjoyment of the shared experience (Raghunathan and Corfman 2006; Ramanathan and McGill 2007). Similarly, desire for social connectedness leads consumers to make choices congruent with the accompanying individual's preferences (Dzhogleva and Lambertson 2014; Lowe and Haws 2014). While both forms of shared consumption are important, shared consumption can also occur in various other forms. In this special session, we present four papers that broaden the scope of shared consumption and expand its implications.

The first paper, by *McFerran and Argo*, demonstrates that when two people engage in an experience together, one person might have enabled access to the experience for the other person. VIPs attending an event as part of preferential treatment can grant access to the same experience to a guest. In such a situation, a VIP (vs. guest) has strong (vs. weak) personal associations with the experience. Five studies show that guests can be more helpful to a firm than the VIPs themselves, as they feel more status during the experience and are more likely to spread WOM.

The second and third papers investigate how simultaneity of experience impacts consumer perceptions. *Shaddy, Tu, and Fishbach* show that the sense of sharing an experience with another person can be fostered when similar events happen close in time, even if the events themselves are somewhat different. Across five studies, consumers prefer these two events to occur to them and another person on the same day, rather than on different days, particularly when the events are small in magnitude, positive in valence, and they like the other person. This effect is driven by consumers' desire for social connection. The third paper, by *Duani, Barasch, and Ward*, investigates consumer preference for different formats of content on social media, such as live streamed versus prerecorded. Five studies show that consumers prefer and enjoy live streamed (vs. prerecorded) con-

tent more, because they think that many others would also be watching the same content, increasing perceived social connectedness.

Finally, *Kim and Ratner* investigate the public (vs. private) nature of shared consumption. Across five studies, they demonstrate that anticipating another person will view what one has consumed, either because the other person is physically present for the consumption experience or the person will learn about the experience via social media, increases consumers' choice of hedonic (vs. utilitarian) options. This effect is driven by consumers' desires to send positive signals, such as that they are having a good time and are fun people.

This session enhances our understanding of how consumers share consumption with others by demonstrating novel approaches of defining shared consumption. Furthermore, this session also provides interesting marketing implications, such as whether firms should prioritize guests of VIPs and how social media impacts what people choose to consume and how they feel about their shared experiences.

### **"Felt Status, Social Contagion, and Consumer Word-of-Mouth in Preferential Treatment Contexts"**

#### **EXTENDED ABSTRACT**

In the US there are approximately 1.8 billion loyalty program memberships (i.e., approximately 12 for every household in the country; Kumar 2008), which are often designed to provide preferential treatment and status to loyal customers (Drèze and Nunes 2009; Sheth and Parvatiyar 1995). These loyalty programs cost American companies in total over \$1.2 billion annually (Wagner, Hennig-Thurau, and Rudolph 2009).

While previous research has examined the implications of consumers receiving versus not receiving preferential treatment (i.e. VIPs vs. non-VIPs), to date research has not examined the impact of such rewards on a third group of consumers: those consumers who receive status benefits because of their personal association with a "true" VIP. Guests of VIPs are important to consider because when companies design preferential treatment programs they often intentionally offer benefits to status holders that extend to members of the VIP's social network. To illustrate, typical VIP passes to clubs, concerts, and sporting events, as well as various customer appreciation events, routinely entitle the bearer to bring a guest, whom receives many (or all) of the same perks (e.g., dedicated check-in lanes, lounge access, room upgrades, priority boarding) as the VIP receives. What value do guests derive from these offerings, and is there sufficient value added for firms? To our knowledge, we provide the first inquiry into these questions.

Our research has two central purposes. First, we provide the first investigation into the implications of guests receiving the preferential treatment earned by a VIP. We argue that status is contagious from person to person and that as such not only do VIPs feel an increase in status when receiving preferential treatment, but so do their guests – an effect we refer to as "status by association" (SBA). Support for why status may rub off on those around them comes from research on emotional contagion (Hatfield et al. 1994; Neumann and Strack 2000; Ramanathan and McGill 2007), spontaneous trait transference (Argo and Main 2008; Winter and Uleman 1984;) and contagion effects (Argo et al. 2006; 2008). In fact, drawing from

work on satiation, we predict and find that feelings of status stemming from receiving preferential treatment is often lower for VIPs as compared to their guests. Second, we demonstrate that there are positive implications of guests receiving preferential treatment for the firm. In particular, we find that when guests feel status because of receiving preferential treatment they have a heightened desire to tell others about the experience by engaging in positive word-of-mouth (WOM).

In Study 1, we demonstrated the tendency for status by association to occur. This study used a one-factor between-subjects design. Participants read a scenario indicating that they are planning on attending a nightclub (a context that frequently has benefits of status (e.g., VIP sections, free beverages, special entrances)). In the scenario, participants read that upon arrival they notice that there is a long line at the nightclub. In the self condition, participants read that they have a VIP card that allows them to jump the line. In the friend condition participants read that their friend has a VIP card that allows both of them to skip the line up. In the same benefit control condition, the participant knows someone who is already at the front of the line so the participant will get in right away and will not have to wait (i.e., no status but still get to cut the line). In the no benefit control condition, participants arrived before the line forms, so access is gained into the club without waiting (i.e., no status but no special and/or negative treatment). Results demonstrated that individuals feel more status in both the self and friend conditions (which do not differ from one another) as compared to the two control conditions; the same pattern held for intentions to share WOM, and felt status mediated this effect.

A second lab study using the same nightclub scenario and a satiation paradigm in a 3(self, other, no benefit, between subjects) x 3 (frequency of experience, within subjects) showed that (1) feelings of status decline within person over time, (2) felt status and WOM are no different for the self and other conditions at all three points in time (replicating the previous study), (3) felt status satiates faster in the two preferential treatment (vs. no benefit) conditions, and (4) the decline in felt status over time again predicts reduced WOM. These results suggest that a VIP who has experienced repeated preferential treatment should be expected to feel less status and be less likely to share WOM than a guest for whom the experience is more novel, and experienced satiation drives this effect.

Study 3 was a field study involving both the owner/main decision makers and guests in real luxury suites at a professional football game. Respondents self-identified as either owners or guests of the suite in a survey. Results revealed that guests feel more status than owners (regardless of whether they were actual friends or merely friends of friends), and this mediated higher WOM intentions. These effects were negatively related to the number of games people have watched from the suite (i.e., more games, lower felt status and WOM intentions), again suggesting (via cross sectional data) that status decays over time and that WOM is harder to cultivate among long-standing status holders as a result.

Study 4 used Twitter data from an entire football team's season, matched with ticketing information from the team. Results showed that game-day tweets that came from sections of preferential treatment, without exception, came from those who were not registered as the ticketholders of the seat/luxury suites. In other words, WOM came from guests, not from VIPs themselves.

In Study 5, we asked a sample of marketing managers (n=250) to predict our central effect. Marketers (inaccurately) reported VIPs as contributing a greater degree of WOM than guests.

Collectively, our results show that frequent status holders may require more and more perks to feel the same felt status over time

as a person who only experiences VIP treatment on a single (or few occasions), and that a path to cultivating increased WOM for a firm's preferential treatment is to encourage VIPs to bring guests. Allowing VIPs to bring guests may be more beneficial than firms might think.

### **“The Preference for Simultaneity: When Different Events Happen to Different People at the Same Time”**

#### **EXTENDED ABSTRACT**

In this research, we explore the preference for simultaneity, which we define as the preference for events that happen to the self and to close others to occur at the same time. We propose that people prefer simultaneity because it facilitates social connection (Baumeister and Leary 1995). To that end, we further predict that the preference for simultaneity is both moderated and mediated by the desire to connect with others.

This account is consistent with research documenting the various positive effects of sharing experiences with others. We build on this work to suggest that simultaneity yields many of the same benefits, even when different events happen to different people in different places (unlike in shared experience paradigms, where the same event happens to different people in the same place). Simultaneity itself creates value.

But, of course, there are limits. The magnitude of these events represents an important boundary condition. Some events are simply too emotionally overwhelming to benefit from simultaneity. They exhaust the joint emotional resources of the self and other (Linville and Fischer 1991). Consequently, we predict that the preference for simultaneity systematically decreases as the magnitude of events increases. Moreover, due to loss aversion, this preference should disappear at lower magnitudes for negative events than for equivalent positive events.

Critically, this proposed preference for integration of events that happen to the self and to close others stands in contrast to the documented preference for segregation of events that happen to just the self. The hedonic editing hypothesis, in particular, suggests that people should segregate gains and integrate losses (Thaler 1985). But people actually tend to prefer segregating both (Thaler and Johnson 1990). Thus, our theory argues that shifting from intrapersonal to interpersonal preferences for event timing yields the exact opposite pattern.

In Study 1, we recruited 50 pairs of friends sitting together in an on-campus dining hall. We asked each pair of participants to schedule delivery of a pair of prizes (i.e., one prize for each participant). These prizes could be delivered to each person on the same day, requiring four total weeks of waiting. Or they could be delivered on different days, requiring three total weeks of waiting. We randomly selected one pair of participants to actually receive their prizes, based on this choice. Choices reflected a preference for simultaneity (“same day” choice share: 67%;  $\chi^2(1) = 21.78, p < .001$ ).

In Study 2, we sampled a wider range of experiences. These events spanned four categories (e.g., small positive, large positive, small negative, large negative) and three domains (e.g., academic, social, financial). For each combination of valence, magnitude, and domain, we asked participants to imagine that one event happened to them (e.g., finding a \$5 bill) and a different event (with the same combination of valence and magnitude) happened to a close other (e.g., receiving a \$5 refund). We then measured whether participants preferred these events to occur on the same or different days. Participants exhibited a preference for simultaneity for small positive events (80%;  $\chi^2(1) = 86.65, p < .001$ ), large positive events (75%;  $\chi^2(1) = 62.50, p < .001$ ) and small negative events (75%;  $\chi^2(1) =$



60.50,  $p < .001$ ). This preference did not extend to large negative events (50%;  $\chi^2(1) = .02$ ,  $p = .899$ ), consistent with our proposed boundary condition.

However, the events tested in Study 2 were not all objectively equivalent in magnitude. Therefore, Study 3 employed a 2 (valence: gains vs. losses; between-subjects)  $\times$  6 (amount: \$10 vs. \$100 vs. \$1,000 vs. \$10,000 vs. \$100,000 vs. \$1,000,000; within-subjects) mixed design. Participants imagined that they and a friend each gained or lost each of six amounts in their separate investment accounts. They then decided if they preferred these gains or losses to occur on the same or different days. Participants exhibited an overall preference for simultaneity (66%;  $\chi^2(1) = 60.17$ ,  $p < .001$ ), which decreased as magnitude increased ( $z = -7.62$ ,  $p < .001$ ) and was further qualified by an interaction ( $z = 2.70$ ,  $p = .004$ ), confirming the preference disappeared at lower magnitudes for negative events than for equivalent positive events.

Study 4 tested whether the preference for simultaneity is moderated by desire to connect. Study 4 employed a 2 (liking condition: like vs. dislike; between-subjects)  $\times$  6 (event: within-subjects) mixed design, in which participants considered whether they would prefer simultaneity for events that occurred to both the self and a person whom they either liked or disliked. We sampled a variety of everyday events. Participants in the like condition exhibited a preference for simultaneity (68%), while participants in the dislike condition did not (26%;  $z = 7.65$ ,  $p < .001$ ).

Finally, Study 5 tested whether the preference for simultaneity is mediated by the desire to connect, which we manipulated by identifying a counterpart with either the same or opposite political beliefs as participants. We then asked them to decide whether they preferred either a positive event (e.g., getting upgraded to first class) or a negative event (e.g., missing a flight) to occur on the same or different days as this counterpart. We also asked participants to indicate how much they desired social connection with this person. Participants desired both simultaneity and social connection more in the same condition ( $M_{\text{simultaneity}} = 4.69$ ,  $SD_{\text{simultaneity}} = 1.38$ ;  $M_{\text{connect}} = 5.13$ ,  $SD_{\text{connect}} = 1.43$ ) than in the opposite condition ( $M_{\text{simultaneity}} = 3.71$ ,  $SD_{\text{simultaneity}} = 1.56$ ,  $F(1, 202) = 22.95$ ,  $p < .001$ ;  $M_{\text{connect}} = 2.31$ ,  $SD_{\text{connect}} = 1.42$ ,  $F(1, 202) = 202.93$ ,  $p < .001$ ). Moreover, the desire to connect fully mediated the effect (indirect effect = 1.00,  $SE = .23$ , 95% C.I. = [.572, 1.482]).

Our work suggests marketers are potentially missing opportunities to capitalize on the preference for simultaneity (e.g., retailers shipping packages to multiple recipients often prioritize immediate rather than coordinated delivery). And people already exhibit this preference in the marketplace. Moviegoers flock to midnight movie premieres, protestors coordinate nationwide rallies, and sports fans eagerly refresh Twitter streams during games. Our research suggests one important reason why: Simultaneity facilitates social connection.

### **“Brought To You Live”: On The Consumption Experience of Live Social Media Streams**

#### **EXTENDED ABSTRACT**

Previously reserved for only large and commercial media outlets, social media platforms like YouTube and Facebook have now made live streaming widely accessible to the general public: 63% of millennials have watched live content and already 42% have created it (eMarketer). Previous research on live television has shown that people expect to enjoy live over delayed content because of indeterminacy, or the fact that events unfold in ways that are not determined *ex ante* (Vosgerau, Wertenbroch, and Carmon 2006). In this prior re-

search, broadcast format did not interact with the hypothetical presence of others, suggesting that preferences for live content were not driven by expectations of a shared social experience.

Our research builds on this prior work by (i) moving beyond expectations (to actual experiences), and (ii) examining the effects of peer-to-peer live streaming (rather than live broadcast television) on consumers' enjoyment and viewing decisions. Live streaming by individual consumers differs from live television in several key ways. Most relevant to our research, live streaming is a more intimate form of communication typically involving non-professional broadcasters and a more salient audience, or online community, who is also watching. As such, we argue that feelings of social connection and co-experience (e.g., Raghunathan and Corfman 2006; Shiteynberg et al. 2014) could serve to make content more enjoyable when it is streamed live vs. prerecorded.

Using a unique interface that we developed, we show that people enjoy the same exact experience more when they believe it is live than when they believe it is prerecorded. This effect is driven by the social connection that live viewing facilitates, and operates above and beyond the effect of indeterminacy.

In Study 1, participants ( $N=401$ ) were informed that they would watch a short video (e.g., aerobics lesson, musical concert) being broadcasted by an individual, and learned that the content was either streaming live or prerecorded (manipulated between-subjects). As in previous research, participants in the live condition expected to enjoy the video more than those in the prerecorded condition ( $M_{\text{live}}=3.96$ ,  $M_{\text{pre}}=3.50$ ;  $F(1,400)=7.09$ ,  $p=.008$ ). However, unlike in previous work, participants also anticipated greater social connection from the live viewing ( $M_{\text{live}}=3.93$ ,  $M_{\text{pre}}=3.23$ ;  $F(1,400)=20.89$ ,  $p<.001$ ), and this expectation of a shared, social experience fully mediated the effect of live streaming on predicted enjoyment (95% CI [.25, .68]).

In Study 2 ( $N = 209$ ), an additional condition that was told that the live video was streaming with a delay (and thus that the process and outcome were pre-determined) expected to enjoy the experience as much as the live condition, suggesting that indeterminacy is unlikely to be the only factor driving the preference for live content.

Study 3 ( $N = 608$ ) replicated these findings with real viewing experiences. All participants selected which of 6 types of content (e.g., puppies playing, painting lesson) being broadcasted by an individual online they would like to watch. Half the participants were told the video was streaming live, while half were told that the video had been prerecorded. Participants in the two conditions watched the exact same video (except for a small “live” banner at the bottom of the video in that condition). As predicted, we found a main effect of live streaming on enjoyment ( $F(1,607)=11.35$ ,  $p=0.03$ ): participants who thought they were watching the video live enjoyed it more ( $M=4.76$ ) than those who thought they were watching a prerecorded video ( $M=4.49$ ). They also felt a stronger sense of social connection ( $M_{\text{live}}=3.49$ ,  $M_{\text{pre}}=3.13$ ;  $F(1,607)=7.832$ ,  $p=0.005$ ) and reported greater willingness to attend a similar event in the future ( $M_{\text{live}}=5.10$ ,  $M_{\text{pre}}=4.74$ ,  $F(1,607)=5.33$ ,  $p=0.021$ ). We again found that social connection fully mediated the effect of live streaming on enjoyment (95% CI [.05, .27]).

Study 4 ( $N=138$ ) replicated the previous results while introducing a new direct behavioral measure. Participants chose their preferred content and were randomly assigned to watch it either “live” or “prerecorded.” Participants in the live condition again enjoyed their viewing experience more than those in the prerecorded condition ( $M_{\text{live}}=4.72$ ,  $M_{\text{pre}}=3.98$ ;  $F(1,137)=6.32$ ,  $p=0.01$ ) and felt directionally more socially connected ( $M_{\text{live}}=3.23$ ,  $M_{\text{pre}}=2.87$ ;  $F(1,137)=1.73$ ,  $p=0.19$ ). In addition, people who watched the experience live were significantly more likely to choose to continue

watching the same type of content for the next two minutes (24%) than those who watched the experience prerecorded (7%;  $\chi^2=7.575$ ,  $p=0.006$ ).

Finally, Study 5 ( $N = 620$ ) directly tested the social connection mechanism by manipulating social presence directly. In a 2(live, pre-recorded)  $\times$  2(solo, social) between- subjects-design, participants chose a username and which content to view, and were informed that the video was streaming live or recently recorded, as in the previous studies. Participants in the social condition were told that they would watch the video with 4 other people, and saw these people's avatars (along with their own) in a virtual viewing room. Participants in the solo condition were told that they were watching the video by themselves. We predicted that if enjoyment of live streaming is driven by the social nature of the experience, then the effect of live vs. prerecorded content would diminish when viewers already felt like part of a group.

As expected, participants in the social condition felt more socially connected than those in the solo condition ( $M_{\text{social}}=3.26$ ,  $M_{\text{solo}}=2.45$ ,  $F(1,616)=41.76$ ,  $p<.001$ ). However, this effect was qualified by a significant interaction ( $F(1,616)=4.90$ ,  $p=.02$ ); participants who watched the video solo felt more connected when the video was live than when it was prerecorded ( $M_{\text{live}}=2.63$ ,  $M_{\text{pre}}=2.29$ ;  $F(1,616)=4.112$ ,  $p=0.043$ ), but this was not the case for participants watching in a group ( $M_{\text{live}}=3.16$ ,  $M_{\text{pre}}=3.36$ ;  $F(1,616)=1.29$ ,  $p=0.26$ ). Similar results emerged for enjoyment: participants who watched the video solo enjoyed it more when it was live ( $M_{\text{live}}=4.75$ ) than when it was prerecorded ( $M_{\text{pre}}=4.37$ ;  $F(1,616)=4.71$ ,  $p=0.03$ ), but this was not the case for participants watching in a group ( $M_{\text{live}}=4.65$ ,  $M_{\text{pre}}=4.52$ ,  $F(1,616)=0.49$ ,  $p=0.48$ ).

In sum, we find that above and beyond indeterminacy, greater enjoyment from live streaming (vs. prerecorded) content is driven by social connection and a sense of shared experience. Given the increasing popularity of social streaming platforms and advertising through micro-influencers on social media, our findings have important implications for consumers and marketers alike.

### Signaling Fun: Anticipated Sharing Leads to Hedonic Choice Short Abstract

#### EXTENDED ABSTRACT

Prior research demonstrates that the presence of others impacts consumers' choices to assimilate an accompanying other's preferences, choices, and attitudes, resulting in congruency (Dzhogleva and Lambertson 2014; Lowe and Haws 2014; Mead et al. 2010; Ramanathan and McGill 2006). However, prior work is relatively scant on how the presence of others might systematically shift the direction of consumers' choices, controlling for the other person's preferences. Specifically, we investigate how anticipating that others will observe one's choices (i.e., anticipated sharing) impacts hedonic choice.

We propose that when making a public (vs. private) decision, consumers' choice for hedonic (vs. utilitarian) options increases, as a result of signaling efforts. When consumers are physically accompanied by a friend, they anticipate their consumption choices to be observed by the friend. In such public decisions, consumers employ hedonic choices to communicate positive information about themselves, such as they are having a good time and a fun-loving person. Moreover, with the recent advances in social media and smartphones, consumers can easily choose to make consumption decisions public by sharing it on social media, even if they are physically alone. We demonstrate that anticipating one's choice to become visible to social media friends (i.e., public decision) increases he-

donic choice, consistent with the effects of sharing through physical accompaniment. In addition, while hedonic choices have signaling values, choosing hedonic options often come at a personal cost (e.g., less preferred options). Thus, when the consumer is less motivated to signal positive impressions, such as when the target audience is a stranger or someone the consumer does not wish to pursue a relationship with, the effects are mitigated.

Study 1 tested the main hypothesis that in the presence of a friend, consumers make hedonic (vs. utilitarian) choices. In a 3-cell (condition: Alone vs. Friend-Public vs. Friend-Private) design, participants ( $N=233$ ) chose to redeem either a mint chocolate cookie (i.e., hedonic) or a granola bar (i.e., utilitarian). In a lab setting, participants either made the choice alone or in the presence of a partner with whom they had just completed a relationship induction task. Participants in the "Friend-Public" (vs. "Friend-Private") condition were told that they would receive their chosen snack in a transparent plastic (vs. brown paper) bag. Despite a pretest confirming that students personally prefer granola bars, 63% of students in the "Friend-Public" condition chose the cookie, while only 47.2% in "Alone" condition chose the cookie ( $p = .052$ ). "Friend-Private" condition fell in the middle. Follow-up analysis revealed that many in the "Friend-Private" condition voluntarily disclosed their snack choices to their friend, contaminating the manipulation, but suggesting the strength of consumers' signaling motives.

Study 2 again employed real choice as the main dependent measure, but instead of making a trade-off between hedonic versus utilitarian options, participants ( $N=172$ ) were faced with the choice of either redeeming or foregoing a free mint fudge cookie (i.e., hedonic choice). A 3-cell (condition: Alone vs. Friend vs. Stranger) design was used to test if closeness between the consumer and the other person moderates the effects. Participants in the "Friend" condition went through a relationship induction task with the person next to them, whereas the "Stranger" condition participants did not. Participants in the "Friend" condition chose to redeem a cookie significantly more than those in the "Alone" condition ( $p = .049$ ). Hedonic choice in the "Stranger" condition was marginally lower than in the "Friend" condition ( $p = .067$ ), and did not differ from the "Alone" condition ( $NS$ ). Furthermore, we find consistent patterns for how much of the cookie participants actually consumed.

In Study 3, we tested the prediction that the presence of an accompanying friend and virtual friends on social media both lead to hedonic choice. Participants were asked to imagine going shopping either alone ("Alone" and "Social Media" conditions) or with a friend ("Accompanied" condition) and whether they would choose to order ice cream during the shopping outing. Prior to considering the shopping scenario, participants in the "Social Media" condition recalled their most recent post on social media. Results ( $N=268$ , mTurk workers) confirmed that both the "Accompanied" condition and "Social Media" condition significantly increase the likelihood of ordering ice-cream, compared to the "Alone" condition ( $p = .050$  and  $p = .043$ , respectively). This effect was mediated by their signaling motives (i.e., desire to signal to others that they were having a good time; 95% CI: [.0310, .2512]).

Study 4 employed a more direct manipulation of anticipation of sharing one's choices on social media. In a 2-cell (condition: Control vs. Social Media) design, participants ( $N=391$ , mTurk workers) were presented with four retailers (i.e., two hedonic and two utilitarian) and asked to imagine choosing a retailer to receive a \$10 gift card from. Those in the "Social Media" condition were further asked to imagine uploading a photo of what they would buy with the gift card on a social media account of their choice. Choice results supported that anticipating one's choices becoming public to friends (on social

media) significantly increases hedonic (vs. utilitarian) choices ( $p = .030$ ). This pattern was again mediated by signaling motives (95% CI: [.0754, .3872]).

Study 5 directly manipulated consumers' signaling motives by asking participants ( $N=209$ , undergraduate students) to imagine that they were either on a "Good date," "Bad date" or a date without further information ("Control" condition). Participants were asked to indicate whether they would choose to walk with their date back to the car following a scenic route or a less scenic route (both taking the same amount of time to walk). As expected, participants in the "Good date" condition chose the more hedonic road significantly more than those in the "Bad date" condition ( $p = .024$ ), while the "Control" condition fell in the middle.

Taken together, our results show that anticipated sharing leads consumers to choose hedonic (vs. utilitarian) options, due to signaling motives. We further demonstrate that such effects of public decision expand beyond physical accompaniment. As consumers can easily make consumption decisions public via social media sharing, our results have important implications for consumer welfare and shared consumption.

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# Liminality, Portals, and Narratives of Transformation

Chairs: Fleura Bardhi, City University of London, UK

Linda L Price, University of Oregon, USA

## **Paper #1: Permanent Liminality in Flexible Consumer Lifestyles**

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Fleura Bardhi, City University of London, UK

## **Paper #2: Liminal Motherhood: Relational Partners Experience of Liminality**

Adriana Schneider Dallolio, Fundação Getúlio Vargas - FGV-EAESP, Brazil

Eliane Zamith Brito, Fundação Getúlio Vargas, Brazil

## **Paper #3: Walking the Thin Edge: The Dark Side of Brand Communities and Collecting**

Emily Chung, RMIT University, Australia

Marcia Christina Ferreira, Brunel University, UK

Daiane Scaraboto, Pontificia Universidad Católica de Chile, Chile

## **Paper #4: Portals of Transformation In Consumer Experiences**

Linda L Price, University of Oregon, USA

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### **SESSION OVERVIEW**

Self-transformation and life transitions constitute an important area of consumer research. Recently scholars have argued for a need to re-examine the nature of self-transformation and transitions in late modernity (Bardhi and Eckhardt 2017; Price et al 2017) as well as the theoretical lenses applied (Mimoun and Bardhi 2017; Sherry 2005). This session aims to examine several understudied aspects of self-transformations and life transitions, including the experience of multiple and purposeful self-transformations (first paper), the experience of liminality by relational partners (second paper) and the role of community and social media in transformation (third paper), as well as the dark side of transformations (all papers). Further, the session introducing new theoretical perspectives to examine self-transformation, such as that of portal theory anchored in literary fantasy and mythology (Campbell 2010; Mendlesohn 2008) (fourth paper). The session also extends the research on another important concept in this domain, consumer liminality through a) the notion of permanent liminality, b) relational liminality, and c) the portal. All papers articulate the role of brands, objects, consumption practices, and social networks in self-transformation and deploy a variety of interpretivist methodologies. The session examines consumer self-transformation in contemporary consumer society in three different cultural contexts: US, Brazil and France.

The session is comprised of four papers. The first paper examines the experience of being in permanently liminal among precarious professionals in Paris. Drawing on in-depth interviews and participant observations, the study examines the strategic pursued of flexibility as a new form of capital in global cities via variety seeking consumption and perpetual transitions. The second paper, examines how mothers of teenage daughters experience the liminal transition to adulthood in affluent Brazilian and American middle class families. They show that relational partners also go through a liminal transition where they institutionalize consumption rituals and communities to manage it. The third paper examines the transformation of consumer collectors as they are incessantly working to update their collections. Collectors change themselves and their collections to constantly provide novel content to their social media followers, and to make themselves more attractive to the brand as worthy influ-

encers. This study examines the dark side of ‘trying to keep up’ the influencer position online among collectors of the plastic shoe brand Melissa. The fourth paper introduces a new theoretical approach to examine self-transformation, portal theory that illuminates the practices involves around transformation as well as highlights the dark side of such transitions. It highlights the properties and requirements of portals and the consequences of passage between the ordinary and the magical realm to delve into consumer experiences of liminality and transformation in liquid modernity.

The authors examine the experience of transformation and transition documenting the fractures that returning through the portal causes and practices players enact to cope with these fractures. We anticipate broad interest in the session from scholars interested in consumer journeys of transformation, identity transitions, liminality, variety seeking, collections, motherhood, family identity, rituals, literary fantasy, and life transitions.

### **Permanent Liminality in Flexible Consumer Lifestyles**

#### **EXTENDED ABSTRACT**

Scholars argue that consumers must and are embracing adaptability and change to manage the demands of liquid modernity (Bardhi and Eckhardt 2017), where social structures are increasingly unstable and continuously evolving (Bauman 2000, 2007). Flexibility and adaptability have been important currencies historically and have mainly been included in a cosmopolitan travel ideology (cf., Thompson and Tambyah 1999). However, in liquid modernity, flexibility has become a currency and skill in all aspects of life (Bardhi, Eckhardt, and Arnould 2012; Weinberger, Zavisca, and Silva 2017). This has resulted in the emergence of the flexible consumer lifestyle, which we define as purposefully embracing instability, change, and adaptability in every aspect of life through professional precariousness (Gill and Pratt 2008). When following the flexible consumer lifestyle, work and life blur. Work becomes the space of self-development, social connection, and consumption. The flexible consumer lifestyle is also associated with a very reflexive project of the self and prioritizes variety, unpredictability, and change in consumption.

Consumers adopting a flexible lifestyle may occupy a space of permanent liminality, which refers to a social space “when a temporary suspension of the normal, everyday, taken-for-granted state of affairs becomes permanent” (Szokolczai 2009, 233). Indeed, flexible workers, who experience professional precariousness (Gill and Pratt 2008), are presented as permanently liminal as they dwell on the interstices between organizations and are undergoing many, frequent life transitions of various degrees and lengths (e.g., Garsten 1999; Ybema, Beech, and Ellis 2011). Permanent liminality is traditionally considered as a negative, macro-level perspective to characterize contemporary society (Szokolczai 2000; Thomassen 2014). Nonetheless, organization scholars apply it at the individual-level to characterize flexible work as a space of permanent liminality. In this context, permanent liminality is conceived as positive, and even empowering, under proper conditions (e.g., Czarniawska and Mazza 2003; Sturdy, Schwarz, and Spicer 2006; Ybema, et al. 2011). Because permanent liminality questions a fundamental assumption of liminality, that of its temporariness, whether and how occupying such social space is sustainable calls for further illumination.



We use a qualitative approach, combining in-depth interviews with 16 flexible consumers—characterized by both professional precariousness (i.e., contingent, casual, informal, and contractual work) and contingent accommodation conditions (e.g., flat-sharing, short- and medium-term renting, co-living, etc.)—, projective techniques, and participant observation in collaborative workplaces. We explore whether the flexible consumer lifestyle can generate a social space of permanent liminality, how to characterize the experience of consumers pursuing such lifestyle, and how this experience is managed in the marketplace. Our sample includes an equal number of male and female independent workers, aged 28 to 44, earning yearly between €10,000 and €48,000, and residing in Paris, a global city.

First, we unpack consumers' performance of the aspiration to flexibility. Our informants use extreme variety seeking and consumption routines' disruption as a key to enter an out-of-ordinary reality. They actively unsettle the everyday (e.g., breakfast routines, commute, daily cosmetic rituals, etc.) and work-related projects. They also proactively pursue the (re)discovery of novel food, music, and challenging experiences. Furthermore, our informants continuously attempt to demonstrate their lack of attachment to solid objects and brands. In doing so, they endeavor to weaken their connection to social structure and to facilitate their many micro-level moves, for example as they constantly change working and living spaces. Through these intensifying consumption performances, consumers move in and out of the everyday structure and develop resilient optimism and holistic thinking. These two skills are necessary to be comfortable in, and benefit from, the uncertainties, risks, and surprises of a flexible lifestyle.

Aspiring to flexibility requires a constant change and renewal of behavior, a detachment from material anchors and from status/role symbols, and the freedom to act outside of mainstream rules. This is reflected in permanent liminality, a constant cycle of transitioning within which one remains relieved from everyday life and ordinary social constraints. Flexible consumers strive to be enduringly liminal and use intensifying consumption performances to separate from their anchors in the structure (i.e., appearances, roles, and statuses). However, permanent liminality seems to be unsustainable over time as consumers are faced with external and internal forces pulling them toward the structure.

Under these pressures, our informants frequently transgress the performance template of permanent liminality, which entails constant in-betweenness, out-of-the-ordinariness, and transitioning. They are drawn into the structure as they enact transgressive consumption performances. First, they delineate breathing spaces, like transforming a closet into a private nest, to rest and recharge. Second, they restore boundaries by deploying objects and activities symbolizing belonging to specified categories, like a start-upper attempting to have her right to off-time acknowledged by purchasing a desk marking her workspace in her living-room. Finally, they fasten anchors, consisting of emotionally-charged places and objects, which can be reused or revisited to find one's way back to the structure. For instance, a mid-thirties freelancer keeps her bulky first adult bed as a transitional object, despite several international moves.

With this study, we contribute to consumer research on liminality by further theorizing permanent liminality at the individual-level. We depart from prior literature, primarily in organization studies, and support that permanent liminality cannot be sustained, even in liquid modernity. We advance that permanent liminality is unsustainable because individuals need a release from the pressures of its overwhelming pursuit. To preserve their wellbeing, flexible consumers transgress permanent liminality's required performances. Narrative strategies are deployed to cope with, and minimize, these trans-

gressions. Nonetheless, we evidence how permanent liminality as an aspirational lifestyle is bolstered by a marketplace ideology of flexibility and governs consumption practices.

## **Liminal Motherhood: Relational Partners Experience of Liminality**

### **EXTENDED ABSTRACT**

Liminality has been increasingly used in consumer research area to investigate the role of consumption in identity project formation, during periods of transition between two recognized sociocultural spaces. Schouten (1991) pioneered the theory's application in consumer research, studying American women who had cosmetic plastic surgery. Recently, Cody (2012) studied how Irish tweens girls, those aged eight to twelve years old, mediate identity transition through consumption. Drenten (2013) explored symbolic consumption of American adolescent girls going through coming of age process. Also, Cappellini and Ai-wan Yen (2016) investigated Taiwanese women living in the UK, highlighting how collective consumption practices may exacerbate negative feelings of ambiguity, perpetuating liminality. Nevertheless, the effects of socio-structural liminality, the social and structural invisibility experienced by those going through a recognized life transition (Turner, 1974), on those individuals emotionally involved in this change process were not studied. We fill this gap by researching mothers of tweens girls, and proposing that liminality may be comprehended as a physical and emotional state experienced by both the individual who goes through the socio-structural change and those emotionally involved in the process.

For over two years, we conducted a phenomenological research and hermeneutical data analysis (Thompson, 1997). Twenty non-structured in-depth interviews were conducted with mothers of tween girls, ten in Brazil and ten in the USA. Also, three Brazilian mothers participated in a second interview with the support of images. Besides, observation, mostly participatory, was conducted and registered in a field diary. Furthermore, one of the researchers, the mother of a tween, recorded her impressions in a second introspective diary. Both diaries contributed to achieving reflexivity within the study, broadening the scope of the phenomenon and complementing other studies (Wallendorf & Brucks 1993).

Guilt, self-charging, and concern with errors and hits are evident in the mothers' narratives. These feelings may occur in other phases of motherhood but in this transition, they are more pronounced, especially in the case of mothers who pursue a professional career. Contrary to previous historical periods, the maternal value is characterized as natural and social, establishing a pattern of conduct for women, imposing motherhood as an obligation, and constituting the myth of the maternal instinct (Badinter, 1985). This mother role model challenges those women who feel they do not play it to their fullest or feel pressured by conflicting social expectations of contemporaneity (Badinter, 1985; Thompson, 1996). Thompson (1996) highlights the challenges of working mothers who see themselves as jugglers trying to balance the various demands of their lives; consequently, they want products and services that facilitate balancing their life projects. However, as the market does not recognize tweens as a concrete space, the conflicts of this motherhood phase also do not exist; therefore, these mothers lack market support resources.

We identify two aspects of the way mothers experience their daughters liminal transition. First, they experience feelings of uncertainty and even self-loss, when not perceiving themselves as a mother of a child anymore. Second, they agonize over experiencing their daughters' growing pains, or transitional suffering; mothers

concern about girls' sense of belonging, finding their social group, or *communitas* (Turner, 1974). This is most evident in the narrative of mothers whose daughters experienced some problem of adjustment in the group, or difficulty in coping with body changes. That is, mothers suffer from both their mother-role transition and the difficulty that daughters experience during the transition from childhood to adolescence.

Considering that other people may be part of the individuals' extended self (Belk, 1988), mothers' identity, or how they see themselves, is intimately related to their daughters' identities. Thus, daughters are not part of the mothers' extended self only as an object to entertain them, or a means to achieve an ideal aspirational self (Kimura & Sakashita, 2013), but rather as a significant part of who they truly are. And this transition, characterized by the distancing of the mother, can be very painful, since it's as if mothers were losing a piece of their self.

Consumption that could play a role in facilitating the transition from childhood to adolescence has a limited role, due to the lack of market's options. Thus, not only are girls in a liminal space, but also their mothers, who do not have support mechanisms to cope with these changes. Therefore, perhaps to mitigate this sense of uncertainty, or to fill the void of rites of passage in contemporaneity, mothers create their own rituals of initiation (Van Gennep, 1978). So, consumer rituals fill the gap of the old rites of passage, representing mothers' individual mechanisms to re-establish the social order of their family unit, during the transition. Rituals represent a mechanism to reinforce the shared identity of the mother-daughter family group (Epp & Price, 2008).

Though data collected in both countries reinforced each other, narratives of US resident mothers also introduced evidence of a previously unexplored phenomenon. A liminal identity trace results from the intense mobility of individuals between countries and the actual American society configuration, an apparent melting pot of diverse cultures, which not necessarily completely merged (Jacoby, 2004). To mediate the tension of balancing values of distinct cultural heritages, while maintaining a sense of their cultural roots, mothers, though recognizing the girls' American reality, weave a particular narrative of proper conduct, education, and consumption patterns toward girls. Mothers produce a bricolage, building their social identity from the different cultural resources available to them, appropriating the symbols that suit them, often recreating them (Russell & Tyler, 2005).

Finally, just like girls do, mothers also seek the help of their *communitas*, other mothers facing the same dilemmas. Moreover, technology features as a tool enabling the interaction and full participation within the *communitas*. Also, amplifying this circle of relationship through social networks; though often weakening the institutional central role formerly exercised by the school.

We contribute to broadening the understanding of liminality as a threaded phenomenon, experienced simultaneously and differently by emotionally intertwined individuals. An experience mediated by symbolic consumption, even though market, generally, disregards it.

### **Walking the Thin Edge: The Dark Side of Brand Communities and Collecting**

#### **EXTENDED ABSTRACT**

Fans are often avid collectors (Fiske, 1992). Moved by passion and enthusiasm, they actively, selectively, and passionately collect objects (Belk, Wallendorf, Sherry, and Holbrook, 1991) that materialize their affection, such as for fictional characters, celebrities, movies and television shows, sporting activities, players, and teams.

Consumers can also become devoted to products and brands (e.g., Nutella and Apple), collecting merchandise and paraphernalia. An important aspect of fandom is social interaction (Schau, Muñiz & Arnold 2009; Oliver 1999). As such, online platforms play a pivotal role in supporting and disseminating information amongst fans within online communities where collections and collectable objects are hot topics.

Our review of the existing consumer behavior literature shows that although a general theory of collecting have been developed in the field (Belk 1982, 1994, 1995a, 1995b, 2014; Belk, Wallendorf, Sherry, Holbrook and Roberts, 1988; Belk et al. 1991), there are surprisingly few subsequent studies that have explored consumer collecting of products or brands (Baker and Gentry, 1996; Hughes and Hogg, 2006; Long and Schiffman, 1997; Martin and Baker, 1996; Slater, 2000, 2001). A recent interdisciplinary stream of research has shown that digital technologies have transformed the curatorial practices of collectors in extreme ways; often facilitating, but also complicating the acquisition, curation, and exhibition of collectable objects (Watkins, Sellen, and Lindley, 2015). For example, Scaraboto, Ferreira and Chung (2016) found that as collectors and their audiences jointly interpret and shape the meaning of collections online, conflicts can arise particularly due to consumers' high levels of involvement and emotional attachment to the brand and products.

Personal collections also serve to shape the self-definitions of collectors (Belk et al., 1988). For example, clothes, shoes, and accessories offer material support to consumers' identity narratives (Ahuvia, 2005; Belk 1988; Thompson and Haytko, 1997). Recent studies show that online communities promote deeper engagement with products and brands; therefore, encouraging collective self-transformations (Scaraboto and Fischer, 2012; Ferreira and Scaraboto, 2016). As branded clothes, shoes, and accessories are typically seasonal products that are issued iteratively, they invite "consumers to pay renewed attention when a next installment of the brand is released" (Parmentier and Fischer 2014, 1228). Hence, they work as "serial brands", leading "consumers to expect that there will be something new to pay attention to" (Parmentier and Fischer 2014, 1228). This encourages endless interactions among serial brands' collectors within online communities, with each new installment and every product release.

The longer term consequences of such endless pursuit of collectable objects and efforts to sustain their collective sense of identity remains under researched. Furthermore, there are also recent calls for research to explore the "fine line" that exists when consumers become "fanatical" about a product or brand; where they experience both positive and negative outcomes as a result of their "extraordinary pursuit of a consumption object" (Chung, et al, 2018, 17). Chung et al. (2018, 21) also suggest investigating the structures and dynamics of fanaticism that is driven and perpetuated by collectives. This study addresses this by focusing on a community centered around the plastic shoe brand, *Melissa*. Based on netnographic and ethnographic data collected over four years, we examine the thin edge (or the fine line) walked by *Melissa* fans and collectors (self-labelled '*Melisseiras*'), several of which have become brand influencers on social media.

While consumers can experience rewarding benefits of being *Melisseiras* (e.g., the 'feel good' factor associated with having many followers), they can also easily fall into a trap when their fascination over the plastic shoes lead them to deepen their engagement with the brand and brand community. *Melisseiras* who wish to maintain her status as collector and influencer need to continue adding items to their collections; updating their knowledge of *Melissa*, and produc-

ing brand-related content to share on social media platforms; all of which demands much effort that can become burdensome.

As a serial brand (Parmentier and Fischer, 2014), Melissa re-signifies the completeness of collections and the required knowledge of its items when introducing new collections and product extensions (e.g. bags), which could be as often as every two months. Consumers' collection and knowledge therefore become outdated quickly, and they may experience challenges trying to catch up and/or reinventing themselves in order to remain relevant to their followers, and develop/preserve their relationship with the brand.

While many Melisseiras' posts capture fantasy-like Melissa collections, Melissa-themed birthday parties, wedding proposals at Melissa retail stores, and visits to Disneyland in Melissa shoes and accessories, which may be the envy of many girls, a Melisseira cannot stop buying, collecting, or wearing her Melissa shoes. For many Melisseiras who are of working-class background, Melissa shoes can be considered expensive; they must make significant sacrifices in order to keep adding items to their collections, store the items, and produce content that is visually attractive and suggestive of an inspirational lifestyle. A Melisseira therefore walks along a thin edge in terms of balancing both positive and negative outcomes associated with their intense pursuit of Melissa shoes (and maintenance of their Melisseira/influencer status).

Our findings suggest that brands can allure consumers to keep on consuming by acknowledging them as collectors and granting them status as influencers. Melisseiras invest heavily to attract the brand's attention, and when they finally receive it, many continue developing their collection and their influence to preserve the relationship with the brand. Our findings also highlight the ambivalent role of social media and acquired audiences (McQuarrie, Miller and Phillips, 2012) – while Melisseiras can achieve "Instafame" (Marwick, 2015) via social media; they also expose themselves to audience members that have the ability to cast (sometimes negative and hurtful) judgment on them and/or their posts.

Our study of consumers as collectors from a dynamic and integrative perspective, exposes the dark side to brand community and collecting; providing fresh insights that contribute to our understanding of collectors and their pathways towards becoming (or ceasing to be) devoted collectors. This could in turn help brands develop tools to better relate to its most loyal consumers.

## Portals of Transformation In Consumer Experiences

### EXTENDED ABSTRACT

We examine portals drawing on theory from literary fantasy and mythology to motivate new understandings of contemporary consumer behavior. Although passages between worlds are a ubiquitous part of the postmodern consumer experience (Thomassen 2014), their characteristics have escaped much formal theoretical attention in consumer research. With few exceptions, portals, if discussed at all, are examined as interfaces between corporeal and online environments, with an emphasis on making them seamless and user friendly. Accessing a space beyond the everyday has captured the imagination for centuries. Fascination with alternative worlds and universes continues to present day—and customer experience places—real or virtual—offer a new frontier for innovative companies (Gilmore and Pine 2002). Marketing examples abound that use porters and portals to convey consumers' transportation into a magical realm. For example Disney uses fantasy portals in parks to allow time to transition from the real (unhappy) world to a magical one, and in a recent advertising campaign Toyota reimagines fairytales with the new C-HR crossover playing the role of porter between

the ordinary world and a magical realm. Portals in cathedrals, retail servicescapes, and virtual environments signal a change of roles and rules not dissimilar from passages represented in literary fiction such as Narnia's wardrobe, station 9 ½ in Harry Potter and the forest in numerous fairytales. Nevertheless, the use and limitations of the portal device as an allurement into a magical consumer realm has received little systematic attention. In particular, the consumer experience rarely addresses what must be given up. In order to access these experiences, the consumer pays a price. Drawing on literary theory, we posit that different configurations of portal experiences have critical implications for consumers' transformation experiences.

Our paper outlines the properties and requirements of portals drawing on literary fantasy and mythology. We focus on a close examination of how portals are integrated into contemporary consumer culture with the purpose of uncovering new insights into consumer transformation. A passage is "at its heart" "a displacement, a process of transformation undertaken, but not yet finished," (Thomassen 2014, 13). The portal is conventionally understood as a door or gateway between worlds, but scholars argue it is far more. As evident in many folk tales, the portal signifies a nexus point of magical agency where one world engages another and myriad power associations, imbalances, and liminality negotiate and interplay (Campbell 2010). Understanding portals consists of unpacking two parts: first, the means of accessing it—the portal key; and second, the physical, emotional and often transmutating experience that demarcates the two separate realms—the ordinary world and the "other" magical realm. An expansive definition of a portal key includes any person, place or thing that can act as an agent for the consumer to travel between worlds—literally or symbolically carving out a space through which the protagonist enters the other world (Campbell 2010). The portal key may be an object such as a product or brand that inspires transformation, or creation of a portal so that the consumer can access an alternative reality that holds the promise of a more meaningful rich life (Mendlesohn 2008). Consumers themselves can be their own portal key into an alternative realm—their own porters and guides. In consumer culture the individual draws on market resources to engage the transformation, although as Baudrillard argues rather than enveloping the imaginary, as the product of synthesis, it may spiral into simulacrum (1994).

The experience on the other side of the portal, while it may hold the promise of a better world or a higher plane of consciousness, is still liminal and exacts a price from its protagonist. Transmutation is a consequence of movement through the portal, both in passage into the magical realm and, when possible, passage back. Transmutation is the voluntary or involuntary rejection of bodily safety, sanctity and health in order to ascend (descend) to a "greater" stage of experience. Questing this "greater" stage of experience, consumers may be swept up into magical realms that hold them in their grip and exact a formidable price. Gambling, video gaming, virtual reality, wilderness adventures and numerous other consumer passages between realms might be better understood using portal theory. Many fairytales represent the way in which portals exact a price. For example, in the Hans Christian Anderson story, the Little Mermaid first ascends from the ocean to the mortal realm through transmutation of her tail and voice and then gives up her physical body and moves upward to become a daughter of the air. We illustrate how the transmutation device as a means to access the portal is relevant to consumer experience in a postmodern world. It is through transmutation that the consumers' imagined fairy realm on the other side of the portal reveals itself to be unsatisfactory. Tolkien defines the fairy world as the perilous realm, not only because of the monsters that dwell therein, but also because of the fairy world's seductive



and ultimately destructive power (1947). We illustrate how a deeper understanding of portals, including the physical and psychological anxiety or pain of passage that is intensified by prolonged exposure to the fairy realm has rich implications for consumers' contemporary experiences of longing, liminality and transmutation in their consumer journeys.

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# Not All Experiences Are Created Equal: Factors that Influence Evaluations of Experiential Consumption

Chairs: Nahid Ibrahim, University of Alberta, Canada  
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## **Paper #1: Good Gets Better, Bad Gets Worse: The Polarizing Effect of Rating a Consumption Experience**

Nahid Ibrahim, University of Alberta, Canada  
Gerald Häubl, University of Alberta, Canada  
Rory Waisman, University of Alberta, Canada

## **Paper #2: My Experience or My Expectations: The Effect of Expectations as Reference Points on Willingness to Recommend Experiential Purchases**

Stephanie Tully, University of Southern California, USA  
Amar Cheema, University of Virginia, USA  
On Amir, University of California San Diego, USA  
Davide Proserpio, University of Southern California, USA

## **Paper #3: Losing Fast or Slow? Preferences for Uncertainty Resolution**

Kurt P. Munz, New York University, USA  
Alixandra Barasch, New York University, USA

## **Paper #4: Reversing the Experiential Advantage: Happiness Leads People to Perceive Purchases as More Experiential than Material**

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Joseph K. Goodman, Ohio State University, USA  
Incheol Choi, Seoul National University, South Korea

### SESSION OVERVIEW

Experiential consumption has become an integral part of the market economy (Pine and Gilmore 2011), with consumers spending an increasing percentage of their incomes on restaurants, travel, and leisure (Quittner 2016). Extensive research has shown that this shift may be beneficial to consumers, as experiences bring people greater happiness and well-being than material goods (e.g., Dunn, Gilbert, and Wilson 2011; Gilovich and Kumar 2015; Nicolao, Irwin, and Goodman 2009; Van Boven and Gilovich 2003). However, not all experiences are created equal. Only recently has some work started to explore how consumers may evaluate their experiences more or less favorably depending on certain behaviors and mental processes that occur before, during, and after the experience (e.g., Barasch, Zauberaman, and Diehl 2018; Tully and Meyvis 2016; Yang, Gu, and Galak 2017).

In the current session, we contribute to this growing stream of research by uncovering new perceptual, cognitive, and affective factors that can enhance, or sometimes diminish, the very same experience. In particular, we examine: *How do memories, perceptions, and expectations shape evaluations of consumption experiences in a positive (vs. negative) direction?*

**Ibrahim, Häubl, and Waisman** examine how the act of rating consumption experiences influences consumers' retrospective evaluation of those experiences. They find that rating a consumption experience, compared to not rating it, leads to polarization of evaluations (i.e., positive experiences become more positive, negative experiences become more negative). Four longitudinal studies support a memory account of this polarizing effect.

**Tully, Cheema, Amir, and Proserpio** investigate the impact of eliciting different reference points on evaluations of experiences. Through a variety of lab experiments, extensive field studies, and

analysis of online reviews, they demonstrate how making expectations salient reduces consumers' likelihood of recommending experiences by shifting their focus to external, less emotional components of the experience.

**Munz and Barasch** examine consumers' preference for uncertainty resolution in experiences and its impact on subsequent appraisal of those experiences. Across four studies using real games, they observe that consumers prefer to resolve their uncertainty later (vs. earlier) in the experience when the outcome of experience is negative (vs. positive). But interestingly, after having the experience they prefer to resolve their uncertainty earlier, regardless of the outcome.

Finally, **Oh, Goodman, and Choi** study the bi-directional relationship between happiness and experiential purchases. Across four studies, they demonstrate that happy people tend to think more abstractly (vs. concretely) and as a consequence, view their purchases as more experiential and less material. They discuss the implications of experiential framing of purchases as a way to enhance consumers' subjective well-being over time.

Together, these papers highlight the diverse factors that can shape consumers' enjoyment of these experiences. Given the widespread interest and applicability of experiential consumption, we expect this session to have wide appeal and attract researchers interested in experiential versus material consumption, word-of-mouth, judgment and decision making, memory, and happiness/well-being. All four papers use a diverse set of approaches in studying this topic, which we believe will generate a lively and fruitful discussion.

## **Good Gets Better, Bad Gets Worse: The Polarizing Effect of Rating a Consumption Experience**

### EXTENDED ABSTRACT

Whether having just checked out of a hotel, left a restaurant, or made an online purchase, it is increasingly common for consumers to immediately rate their consumption experiences. With the growing popularity of net-promotor scores (Reichheld 2003), firms use this feedback to monitor quality, identify loyal customers, and display ratings on social media. As useful as this feedback is to firms, we know little about how giving this feedback impacts consumers.

We propose that responding to these surveys (i.e., act of rating) provides consumers with additional information about their consumption experiences. Just like the consumption experience itself, the rating experience is stored in memory and can influence future cognitions and behaviors. Prior literature suggests the affective dimensions of a consumption experience strongly influence consumers' evaluations (Mano and Oliver 1993). But over time, memory for an experience can be distorted (Cowley 2007; Murphy and Balzer 1986). In this paper, we specifically investigate how memory for rating a consumption experience interacts with memory for the focal experience to influence consumers' subsequent evaluation of that experience.

We consider two competing theoretical frameworks to derive predictions about how the act of immediately rating a consumption experience changes retrospective evaluation.

Exemplar models of memory (e.g., Hintzman 1984) suggest that rating an experience will always influence subsequent evaluation of

that experience to some degree. According to exemplar models, each experience is stored as a memory trace. Each trace contributes to a retrieved memory in proportion to its activation by a cue (i.e., being asked “How much did you enjoy the experience?”). As the interference from other memory traces increases, the retrieved memory is influenced less by the affective dimensions of the memory trace for the focal experience. Therefore, *ceteris paribus*, the greater the time intervening between experience and evaluation, the lower the affective intensity of the evaluation. But, when one of the interfering traces is itself an evaluation of the experience (the earlier rating) it adds to the affective intensity of the retrieved memory, attenuating the overall loss of intensity.

In contrast, the accessibility-diagnostics framework (Feldman and Lynch 1988) suggests that consumers’ evaluation of an experience is influenced by an earlier rating only when memory for that rating is the most accessible diagnostic memory. It is an all-or-nothing account that has been adopted to explain mere measurement effects (e.g., Chandon, Morwitz, and Reinartz 2004; Morwitz, Johnson, and Schmittlein 1993) and memory distortion in consumption experiences (Cowley 2007).

When little time intervenes between experience and retrospective evaluation, these frameworks suggest different processes leading to negligible effects. The accessibility-diagnostics framework (Feldman and Lynch 1988) suggests both immediate and retrospective evaluations are based on memory for the focal experience and thus, memory for rating will not influence retrospective evaluation. The exemplar memory account suggests memory for rating will compensate for some loss of affective intensity, leading to slightly greater affective intensity in retrospective evaluation compared to when a rating has not been previously solicited.

However, with more intervening time, both frameworks predict the effect of rating an experience (vs. not rating it) is to polarize retrospective evaluation. A positive (negative) consumption experience should be evaluated more positively (negatively) when it has been previously rated. Critically, these two theoretical perspectives suggest widely different causes and magnitudes for this polarization.

The accessibility-diagnostics framework (Feldman and Lynch 1988) suggests the retrospective evaluation will be based on the more accessible memory for the earlier rating. Immediate rating and subsequent evaluation should be consistent, so no loss in affective intensity is expected. Contrarily, an exemplar memory account suggests the influence of memory for rating only partly attenuates a drop in affective intensity over time. The longer the interval, the greater the drop in intensity, and the more evident the influence of the earlier rating in attenuating this effect.

We test these competing theoretical accounts in four longitudinal studies ( $N=1995$ ). Our findings support the exemplar memory account. We observe a polarizing effect of rating a consumption experience that increases in magnitude over time. In study 1, participants in a 2(Experience: positive vs. negative)  $\times$  3(Time 1 Rating: emoticon scale vs. slider scale vs. no-rating control) design used a 100-point slider scale to rate their enjoyment of a video seven days after watching it. Participants in the rating conditions also rated their enjoyment immediately after watching the video. Comparison of immediate ratings in the slider scale condition ( $M_{Time1-positive}=83.61$ ,  $M_{Time1-negative}=33.04$ ) to the ratings seven days later in the no-rating control condition ( $M_{Time2-positive}=69.12$ ,  $M_{Time2-negative}=52.61$ ) confirmed substantial reduction of affective intensity over time.

Contrary to the accessibility-diagnostics account, when participants rated the video immediately, their later enjoyment ratings also reflected less enjoyment. But, consistent with the exemplar memory account, a significant two-way interaction indicated polar-

ization compared to the no-rating control condition ( $p=.011$ ). Participants who previously rated the positively valenced video reported directionally greater enjoyment ( $M_{rating-positive}=71.64$ ) than those who had not previously rated it ( $M_{control-positive}=69.12$ ,  $p=.21$ ). The opposite occurred when participants watched the negatively valenced video: Participants who had previously rated the video reported enjoying the video significantly less ( $M_{rating-negative}=46.41$ ) than those in the control condition ( $M_{control-negative}=52.61$ ,  $p=.026$ ).

We also investigated the polarizing effect of rating the positively valenced video over seven-day (study 2a), three-day (2b), and one-day (2c) intervals. Consistent with the exemplar memory account, after seven days participants reported having enjoyed the video more if they had also rated it immediately ( $M_{rating}=78.83$ ) as compared to control ( $M_{control}=71.97$ ,  $p=.015$ ). The same pattern of means emerged after three days, but with only a marginally significant difference ( $p=.092$ ). After one day we found no difference across conditions ( $p=.646$ ).

Our findings demonstrate that, consistent with an exemplar memory account, rating a consumption experience changes consumers’ retrospective evaluation of that experience by attenuating the loss of affective intensity. The result is a polarization effect that improves retrospective evaluation of positive consumption experiences while making negative experiences feel even more negative. Because consumers are inundated with opportunities to rate their consumption experiences, these findings have important implications for when marketers can benefit from soliciting immediate feedback from consumers.

### My Experience or My Expectations: The Effect of Expectations as Reference Points on Willingness to Recommend Experiential Purchases

#### EXTENDED ABSTRACT

Consumers’ willingness to recommend their purchases is critical for businesses, with word-of-mouth being consistently rated as the most credible and trustworthy form of marketing (e.g., Nielsen 2015). However, research that speaks to the reason consumers decide to engage in word-of-mouth is still relatively nascent. In this work, we add to word-of-mouth literature by investigating whether the reference points against which experiential purchases are compared systematically influence willingness to recommend experiences.

We find that when consumers use expectations as reference points, it reduces their likelihood of recommending experiential purchases to others. Moreover, we demonstrate how and why this effect occurs. An experiential purchase consists of what is offered to a consumer (e.g., a movie, theater seats) and what is experienced by the consumer (e.g., enjoyment, comfort). When evaluating an experiential purchase, we suggest that people typically introspect and consider what they experienced (e.g., their emotional reactions). However, making expectations salient shifts their focus to the more external components of the offering. For instance, in the case of going to the movies, rather than considering one’s enjoyment, expectations shift focus towards external factors such as the plot quality, which is less emotional in nature. As existing research shows that word-of-mouth is greater when content is emotional (Berger 2014), this shift in focus results in a decreased willingness to recommend experiences.

In study 1, customers at a pub were asked to fill out a short customer survey as they paid for their meal. The survey varied whether customers considered their expectations or their experience at the restaurant prior to indicating their likelihood of recommending the restaurant to others. Participants in the expectations condition were

less likely to recommend the restaurant than were participants in the control condition,  $F(1, 246) = 4.03, p = .046$ .

In study 2, we replicated this effect with willingness to recommend college courses. In this study, we compared the effect of expectations to another plausibly high reference point: people's goals. Participants either reflected on their goals or expectations for the first college course they had taken before indicating their likelihood of recommending the course to a friend. Replicating study 1, participants considering their expectations were less likely to recommend the course compared to participants considering their goals,  $F(1, 375) = 7.84, p = .005$ .

In study 3, we compared the effect of evoking expectations to both goals and a control condition in another restaurant field study. Some participants wrote about either their goals or expectations for their restaurant visit while participants in a control condition did not complete any writing task. All participants then indicated their likelihood of recommending the restaurant. Expectations lowered evaluations relative to the goals and control conditions,  $F(1, 197) = 4.89, p = .028$ , whereas there were no differences between those in the goals condition and those in the control condition,  $F < 1$ . Open-ended responses regarding people's goals and expectations were coded for whether they pertained to the person's experience (e.g., "have fun" coded as yes vs. "good food" coded as no). Supporting our process explanation, expectations were less likely to involve personal experiences and emotional reactions, and this explained the lower evaluations by those in the expectations condition.

Study 4 provided greater evidence for the proposed process by asking lab participants to draw their expectations, goals, or experience for a recent restaurant visit. Replicating studies 1-3, participants in the expectations condition were less likely to recommend the restaurant compared to those in the goals and control conditions,  $F(1, 386) = 6.01, p = .015$ , whereas there was no difference between the latter two,  $F < 1$ . To examine whether participants in the expectations condition were less likely to think about their own experience, participants' drawings were coded as to whether the drawing included a person (e.g., themselves). Indeed, people were included significantly less often in the drawings created by participants in the expectations condition than participants in the goals and control conditions,  $\beta = -0.54, SE = 0.11, \text{Wald } \chi^2 = 23.59, p < .001$ , whereas there were no differences in drawing of goal and control participants,  $\beta = -0.16, SE = 0.13, \text{Wald } \chi^2 = 1.52, NS$ . Further, differences in the inclusion of a person in the drawing mediated the effect of condition on likelihood of recommending the restaurant.

In study 5, we further examine the process by manipulating the purchase type (material good vs. experience) orthogonally to manipulating the salience of expectations. If this is about shifting focus away from one's experience, this effect should depend on the extent one is focused on the subjective experience to begin with, and be more pronounced for experiences than for material goods. Indeed, there was a significant interaction,  $F(1, 380) = 11.71, p = .001$ . Whereas expectations decreased willingness to recommend experiences,  $F(1, 380) = 4.22, p = .041$ , they actually increased willingness to recommend material goods,  $F(1, 380) = 7.81, p = .005$ .

Next, we examined real online reviews. Analysis of 1,931,556 hotel reviews from TripAdvisor demonstrates that when review content references expectations, the star-rating associated with the hotel is, on average, 0.2 stars lower,  $p < .001$ . Using LIWC's affective language score as a proxy for reflecting on one's personal experience and emotional responses, we find that a reduction in affective language helps explain the lower evaluations by those referencing expectations. These results are robust to different specifications including hotel-year-month of stay fixed effects and user fixed effects.

Finally, in a dataset including 39,672 hotels from Expedia.com, we demonstrate that the proportion of users referencing expectations in their reviews reliably predicts a decrease in the percentage of consumers who recommend the hotel at an aggregate level,  $p < .001$ .

In summary, across a variety of contexts, we find that expectations reduce willingness to recommend experiences, and this reduction is explained by shifting focus away from one's subjective experience and emotional reactions. Consequently, firms may receive more word-of-mouth recommendations if they focus consumers' attention on their experiences rather than their expectations.

## Losing Fast or Slow? Preferences for Uncertainty Resolution

### EXTENDED ABSTRACT

Is losing like a Band-Aid—better resolved quickly? Or does holding onto hope for a positive outcome improve even an otherwise negative experience? In other words, if you knew for sure that you would lose, would you prefer to know earlier (perhaps to get the bad news over with), or would you prefer to learn later in the contest (perhaps taking some consolation in fighting until the end)?

On the one hand, knowing that losing is inevitable may be like a looming electric shock. To avoid *dreading* such a shock, consumers often pay to accelerate experiencing it, preferring to get it over quickly (Berns et al. 2006; Loewenstein 1987). Losing late in a game may also seem to consumers like a near-win. Such near-wins seem to amplify negative emotions such as unhappiness when earning a silver medal (Medvec, Madey, and Gilovich 1995) and regret when missing a train (Gilbert et al. 2004; Kahneman and Tversky 1982). Consumers may therefore avoid these feelings by choosing earlier resolution.

On the other hand, discounted utility models (Frederick, Loewenstein, and O'Donoghue 2002) presume that future events are discounted. If future bad news is downplayed or discounted, these models would predict that consumers today would choose to delay losing as long as possible. In addition, consumers may simply dislike giving up the chance to continue playing. They generally prefer keep their options open (Shin and Ariely 2004), avoid risking sudden death in games (Walker et al. 2018), and overweight scenarios that keep hope alive (Rottenstreich and Hsee 2001).

Given the plausibility of both hypotheses, we tested them by asking consumers for their preferences in the context of games. Across four studies, we observed that consumers preferred to lose more slowly (later in the game) when presented a choice between fast and slow (studies 1 and 2) and when compared to winning (all studies). We also replicated the pattern in a naturalistic setting involving March Madness basketball (study 4). Finally, we showed that playing the game led to changes in preferences to favor earlier resolution, regardless of the outcome (studies 3 and 4), a pattern not well-predicted by existing theory.

Study 1 demonstrated the main effect. Participants ( $N=144$ ) were given a choice between two losing best-of-seven sequences of coin flips. One involved being certain of losing earlier (L L L L W W W) and the other later (L W L L W W L). They could also indicate no preference. We also asked about their preference for winning earlier or later (counterbalanced). When facing certain loss, participants chose the latter sequence most frequently (62.5% later, 18.8% earlier, 18.8% indifferent), significantly more often than 50% of the time,  $\chi^2(1, N=144) = 10.03, p = .002$ . They were indifferent when asked about winning (45.1% later, 48.6% earlier, 6.3% indifferent).

Study 2 ( $N=236$ ) replicated study 1 with two key differences: preferences for winning and losing were incentive compatible (one



person was selected to see either their preferred win or loss scenario played out for a \$50 Amazon giftcard), and half the participants were randomly assigned to a condition where the game ended immediately when the winner was decided (if the best-of-seven game was decided on the fourth round, no other rounds followed). There was no difference when the game ended in this way, so we collapsed the data. When facing certain loss, participants chose the latter sequence most frequently (64.4% later, 18.2% earlier, 17.4% indifferent), significantly more often than 50% of the time,  $\chi^2(1, N=236) = 19.59, p < .001$ . They were indifferent when asked about winning (40.7% later, 47.5% earlier, 11.9% indifferent).

Study 3 explored whether preferring to lose later is an affective forecasting error. We examined how much enjoyment participants ( $N=276$ ) actually felt when experiencing the sequences from study 1. We measured enjoyment after each round and overall at the end. Consistent with participants' preferences in studies 1 and 2, losing on the seventh round was more enjoyable than losing on the fourth round based on the sum of all rounds,  $F(1, 272) = 18.1, p < .001$ , and overall enjoyment at the end,  $F(1, 272) = 14.7, p < .001$ . We also asked whether they would want to change to the other sequence if they were to play the game again. Those who lost on the seventh round preferred to switch to the lose-after-four sequence 78.5% of the time, while those who lost on the fourth round preferred to switch to the lose-after-seven sequence only 27.8% of the time,  $\chi^2(1, N=137) = 35.15, p < .001$ . A similar pattern emerged for winning (55.2% chose to win earlier, while only 16.7% chose to win later,  $\chi^2(1, N=139) = 22.60, p < .001$ ). Experiencing the game seemed to lead to preferences for earlier uncertainty resolution next time.

Study 4 replicated the effect in a field setting ( $N=217$ ). We conducted a longitudinal study prior to and immediately following the first basketball game of March Madness. At time 1, we asked participants what time in the game (0 - 40 minutes) they would want to *know for sure* that their favorite team would win or lose (counterbalanced). The results replicate the basic effect. Participants wanted to know for sure about losing significantly later in the game ( $M = 28.9, SD = 11.6$ ) than winning ( $M = 25.8, SD = 9.9$ ), matched  $t(216) = 3.09, p = .001$ . We also replicated study 3 when examining changes in uncertainty resolution timing preferences. At time 2 (after the game), participants preferred earlier certainty compared to time 1,  $F(1, 216) = 4.02, p = .046$ , regardless of being asked about winning or losing. These results hold when controlling for the outcome of the game.

We have shown that consumers prefer to lose games slowly, at least prior to experiencing them. Our work has interesting implications for consumers across a variety of domains that involve uncertainty resolution, such as sports games, election and health outcomes, and awaiting results from performance evaluations and job opportunities.

## Reversing the Experiential Advantage: Happiness Leads People to Perceive Purchases as More Experiential than Material

### EXTENDED ABSTRACT

Consumers derive more personal satisfaction and happiness when they consume experiences instead of material goods (Gilovich, Kumar, and Jampol 2015; Van Boven and Gilovich 2003), suggesting that consumers should be spending more of their discretionary income on experiences instead of material goods to increase happiness (Dunn, Gilbert, and Wilson 2011; Dunn and Norton 2013). In this research, we investigate whether part of this puzzle may be backwards: Could happy consumers view their purchases as more

experiential and less material? If so, can encouraging consumers to view their purchases as more experiential increase their happiness?

Related research hints at the possibility that happy people may view their purchases more experientially. First, happy people tend to construe the world more abstractly (Updegraff and Suh 2007) and a positive mood evokes an abstract construal (Labroo and Patrick 2009). If we assume that experiences are construed more abstractly, and given that happy people tend to think more abstractly, then we would expect that happy participants will perceive their purchases as more experiential than material compared to those less happy. Further, to test this abstract mindset mechanism, we test whether the effect of happiness on experiential perceptions is stronger when consumers are in an abstract mindset compared to a concrete mindset.

Studies 1 and 2 test our main hypothesis with chronic happiness, examining whether consumers high on subjective well-being (SWB) perceive purchases as more experiential (vs. material) than those low on SWB. Study 1 examined consumers' own purchases using the experience sampling (Csikszentmihalyi and Larson 1987). We measured SWB by creating an index based on satisfaction with life and PANAS and messaging participants five times a day by a smartphone notification for 7 days. Participants also identified their most important purchase for the day and rated how experiential or material they perceived their purchase (sliding scale 0 = *definitely material* to 100 = *definitely experiential*). An HLM model (controlling for age, gender, income, and the purchase category), found a positive relationship between SWB and experiential-material perceptions ( $\gamma = 0.23, t(206) = 1.99, p = .048$ ). In other words, the happier the respondent was, the more experiential he or she perceived their purchases.

Study 2 examined purchases made by others. Participants rated 37 different purchase items [varying from more tangible (e.g., wallet), less tangible (e.g., a movie ticket), and were ambiguous (e.g., television)] in terms of the extent to which each purchase was experiential or material on a 9-point scale (1 = *definitely material*, 5 = *equally material and experiential*, 9 = *definitely experiential*; counterbalanced). Consistent with study 1, there was a positive relationship between SWB and material-experiential rating ( $r = .24, p = .001$ ). In other words, the happier participants were, the more experiential they thought a purchase was in general.

Study 3 provides causal evidence by manipulating positive (happy), negative (sad), and neutral (control) affect. Participants first wrote about three recent events (either happy, sad, or neutral, depending on condition) in their life in a very detailed manner (Schwarz and Clore 1983). Then participants rated 14 purchases as more experiential or more material. As expected, happy participants perceived purchases as more experiential ( $M = 4.87$ ) compared to those in the sad condition ( $M = 4.56; t(356) = 2.31, p = .022$ ), and compared to the control condition ( $M = 4.58; t(356) = 2.15, p = .032$ ). No difference was found between the control and sad condition ( $p = .87$ ).

Study 4 tested our mechanism by inducing an abstract construal in a 2(emotion: happy vs. control) x 2(mindset: abstract vs. concrete) between subjects design. In the first part, 287 participants listed three ways of spending with the goal of advancing their happiness and enjoyment in life (\$10-\$1,000). In the second part, participants wrote about either a happy event or an event from yesterday (depending on condition). The abstract condition focused on the 'why' aspect of the event, whereas those in the concrete condition focused on the 'how' aspect (Vallacher and Wegner 1987). Results showed the predicted emotion by mindset interaction ( $F(1,283) = 5.67, p = .018$ ). In the abstract condition, happy participants rated their purchase more experientially ( $M = 5.89$ ) than control ( $M = 4.91; t(283) = 3.02, p = .003$ ). In the concrete condition, there was no difference

in experiential perception between the happy ( $M = 4.95$ ) and control condition ( $M = 5.05$ ;  $t(283) = 0.31, p = .75$ ).

Finally, study 5 tests the implications of our findings by examining whether consumers may increase their happiness by focusing on the experiential nature of their purchases. We conducted a 1-week intervention study where 131 participants first provided their baseline psychological state (i.e., life satisfaction, affect balance, happiness, and financial well-being) and demographics. In the *experiential framing* condition, we asked participants to consider all their purchases as experiential when both anticipating and making each purchase. In the *purchase-planning* condition, we asked participants to foster a habit of planning their consumption by thinking about when, where, and how much they spent before and during every purchase. In the *control* condition, participants simply reported all purchases they made at the end of each day. At the end of the intervention, participants completed the same well-being measures. Only participants framed their purchases as experiential reported significantly increased levels of life satisfaction, affect balance, happiness, and financial well-being over time ( $p$ 's  $< .05$ ). No differences between pre- and post-measures were found in the purchase-planning group and the control group.

In sum, these results suggest that happy consumers view their purchases as more experiential than their less happy counterparts. This bi-directional relationship between happiness and experiential framing implies that consumers can strategically use such malleability of purchase perception to increase their financial well-being and happiness by changing their way towards everyday purchases. Study 5 provides such evidence. The research provides an additional explanation for the experiential advantage and throws into question whether experiences lead to more happiness compared to material purchases or whether happiness leads to experiential framing (or both).

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# Believing in Two Marshmallows in the Future

Chairs: Sachin Banker, University of Utah, USA

Kelly Kiyeeon Lee, Georgetown University, USA

Haewon Yoon, Indiana University, USA

## Paper #1: The Asymmetric Effect of Highlighting Intertemporal Opportunity Costs

Christopher Olivola, Carnegie Mellon University, USA

David Hardisty, University of British Columbia, Canada

Daniel Read, University of Warwick, UK

## Paper #2: Decreasing Impatience with Bundled Donations

Sachin Banker, University of Utah, USA

## Paper #3: The Effect of Psychological Control on Temporal Discounting: Conceptual and Methodological Implications

Kelly Kiyeeon Lee, Georgetown University, USA

Selin A. Malkoc, Ohio State University, USA

Derek Rucker, Northwestern University, USA

## Paper #4: Tuition Myopia: Temporal Discounting Induces a Myopic Focus on the Costs of Higher Education

Haewon Yoon, Indiana University, USA

Yang Yang, University of Florida, USA

Carey K. Morewedge, Boston University, USA

### SESSION OVERVIEW

The current session discusses cognitive mechanisms that can drive consumers to prefer larger, later outcomes (i.e., two marshmallows tomorrow) to smaller, sooner outcomes (i.e., one marshmallow now). A myopic focus on smaller, sooner outcomes can negatively impact consumers' financial wellbeing. For example, this myopic focus can lead to suboptimal choices for home mortgage down payments (Atlas, Johnson, and Payne 2017), low credit scores (Meier and Sprenger 2012), and insufficient retirement savings (Hershfield et al. 2011). In the current session, we examine cognitive mechanisms and interventions that can lead to increased preferences for larger, later outcomes.

Paper #1 investigated the role of considering opportunity costs when making intertemporal choices. The authors examined psychological processes underlying the Asymmetric Subjective Opportunity Cost (ASOC) effect, whereby opportunity cost reminders increase the preference for the larger, later option, but not the smaller, sooner option. They found that highlighting opportunity costs serves as an implicit nudge, selectively increasing the preference for the larger, later option.

Paper #2 tested whether attaching a small donation option (as little as \$1) can lead people to choose a larger, later option. Previous literature suggests that when people make a decision that involves others, they focus on positive and prominent attributes. Building on this prediction, the authors found that attaching a charitable contribution increases the preference for a larger, later option by placing more emphasis on the consequential magnitude dimension.

Paper #3 tested the role of response mode in intertemporal outcome evaluations. The authors found that a choice task can increase the preference for larger, later options whereas a matching task can decrease the preference for larger, later options, especially when an individual experiences a loss of control.

Lastly, Paper #4 investigated intertemporal tradeoffs in college choices. The authors showed that college choices focusing on financial information (attending costs and expected salary after graduation) induce intertemporal tradeoffs between low-cost & low-return colleges and high-cost & high-return colleges. However, the authors

found that student loans that were supposed to increase forward-looking college choices (i.e., larger, later options) have only limited effectiveness in shifting college choices.

## The Asymmetric Effect of Highlighting Intertemporal Opportunity Costs

### EXTENDED ABSTRACT

Recent work (Read, Olivola, and Hardisty 2017) demonstrated that time discounting is driven by an asymmetric attention to the opportunity costs of choosing smaller, sooner (SS) vs. larger, later (LL) rewards. Specifically, highlighting the opportunity costs of choosing SS-rewards moves people toward more patient choices, whereas similarly highlighting the opportunity costs of choosing LL-rewards has no effect on patience – a phenomenon labeled the Asymmetric Subjective Opportunity Cost (ASOC) effect. For example, taking the 'standard' way of presenting an intertemporal choice ("Do you prefer \$100 today OR \$150 in one year?") and adding a subtle 'nudge' that highlights the opportunity cost of choosing the SS-option ("...\$100 today **and \$0 in one year** OR...") increases the likelihood that consumers choose the LL-option. By contrast, using the very same kind of nudge to highlight the LL opportunity cost ("...OR **\$0 today and \$150 in one year ...**") has no effect on choices. Finally, adding both nudges ("...\$100 today **and \$0 in one year** OR **\$0 today and \$150 in one year ...**") is equivalent to only adding the former ('SS-zero') nudge. This pattern of results suggests that *consumers naturally consider the opportunity cost of delaying gratification (i.e., no reward now), but are less likely to spontaneously consider the opportunity cost of choosing the immediate reward (i.e., no reward later)*. The ASOC effect helps explain why consumers tend to be impatient (e.g., Olivola and Wang 2016) and neglect their 'future selves' (e.g., Pronin, Olivola, and Kennedy 2008). It also helps explain previous findings in the literature (e.g., Loewenstein and Prelec 1991, 1993; Magen, Dweck, and Gross 2008; Wu and He 2012).

Here, we seek to characterize the nature of, and investigate the psychological processes underlying, the ASOC effect.

Study 1 ( $N=235$ ) examined two questions: whether the ASOC effect impacts future decisions and whether consumers anticipate the ASOC effect. Participants completed two separate blocks of intertemporal choices, separated by a filler task. In the first block, they were randomly assigned to one of the four 'core' framing conditions: the 'standard' format (no opportunity cost highlighted: "...\$54 today OR \$80 in 30 days..."), the LL-zero format (LL opportunity cost highlighted: "...\$54 today OR \$0 today and \$80 in 30 days..."), the SS-zero format (SS opportunity cost highlighted: "...\$54 today and \$0 in 30 days OR \$80 in 30 days..."), and the 'explicit zero' format (both opportunity costs highlighted: "...\$54 today and \$0 in 30 days OR \$0 today and \$80 in 30 days..."). Then, after completing the first block and the filler task, all participants were presented with the same set of choices in standard format. We replicated the ASOC effect in the first block, finding a positive effect of SS-zero on patience ( $F(1,231)=25.97, p<.0001, \eta^2=.10$ ), but no effect of LL-zero nor an interaction ( $F_s<.2$ ). More interestingly, the SS-zero manipulation in the first block also increased patience in the second ('nudge-free') block ( $F(1,231)=7.98, p=.005, \eta^2=.03$ ).



The second part of Study 1 examined intuitions concerning the effect(s) of making the opportunity cost(s) explicit. First, participants were presented with a single intertemporal choice in the standard format. After making their decision, they were presented with the same choice in one of the three alternative frames (explicit zero, SS-zero, or LL-zero), and asked whether this alternative frame would make people more, less, or equally likely to prefer the LL-option. Only 28% predicted that adding the SS-zero would increase patience (16% predicted it would *decrease* patience), while nearly the same proportion (26%) predicted LL-zero would have the opposite effect (22% predicted it would *increase* patience). In sum, the ASOC effect is strong enough to carry over into future decisions, yet too subtle for most consumers to anticipate its impact.

Study 2 ( $N=415$ ) replicated the dual-block design of Study 1, but with different sets of choices in each block. We replicated the SS-zero effect in both the first block ( $F(1,407)=21.00, p<.0001, =.05$ ) and second block ( $F(1,407)=8.50, p=.004, =.02$ ), and found no effects of LL-zero nor interactions in either block ( $F_s<1$ ). This shows that the ASOC effect can even influence a different set of future choices.

Study 3 ( $N=190$ ) used a thought-listing procedure to examine whether our opportunity cost manipulations would alter the explicit contents of consumers' thoughts during decisions (as categorized by independent coders, blind to the experimental design and hypotheses). We replicated our previous intertemporal choice results but found no significant differences between conditions in the content, order, or number of thoughts listed --in fact, any mentions of receiving "\$0"/"nothing" were extremely rare (only 1% of all thoughts listed across all conditions), suggesting that the ASOC effect operates at an implicit level.

Study 4 ( $N=227$ ) measured choice times to investigate whether the SS-zero increases patience by slowing decisions and promoting additional (implicit) consideration of the (otherwise neglected) SS opportunity cost. We again replicated the choice results. More interestingly, we found a similar pattern with response times: the SS-zero increased the time spent deciding ( $F(1,223)=15.4, p<.001, =.06$ ), whereas there was no effect of LL-zero nor an interaction ( $ps>.12$ ). This suggests that highlighting the opportunity cost of choosing SS prompts additional (implicit) processing by participants, leading to more patient choices, while highlighting the opportunity cost of choosing LL does not influence decision processing or choices.

Study 5 ( $N=381$ ) showed the ASOC effect replicates under both low and high cognitive load, further suggesting it is an implicit ('System 1') phenomenon that occurs regardless of whether consumers can allocate all (previous studies), most (low-load condition), or only some (high-load condition) of their cognitive resources to the decision.

Taken together, these five studies reveal novel insights regarding the ASOC effect. On the one hand, the effect is potent enough to influence future decisions and choice times; on the other hand, the effect seems to be largely implicit, as consumers do not anticipate it, it doesn't alter accessible thoughts, and it is immune to cognitive load. Finally, we showed that the effect seems to operate by slowing down the decision making process and getting consumers to (implicitly) consider the opportunity costs of being impatient.

## Decreasing Impatience with Bundled Donations

### EXTENDED ABSTRACT

People frequently make decisions that involve balancing tradeoffs across time, including situations as wide ranging as selecting expedited shipping options, making financial investments, or simply

choosing what to eat. Formal theories aim to describe and predict this behavior in general by applying discounted utility models of intertemporal choice. Building on traditional psychophysics findings, all discounted utility models adopt the position that time is processed in a similar manner as other psychophysical stimuli (such as brightness, loudness, etc.), suggesting that any future outcome will be discounted at a common rate, regardless of the item. The current work instead focuses on the context-related differences in the psychology of discounting and proposes that good-specific differences in time discounting exist, are predictable, and can be leveraged to encourage more forward-looking behavior.

In particular, this work examines differences in discounting when outcomes involve charitable contributions rather than purely pecuniary benefits. Research suggests that when people make decisions that impact others, they tend to rely more on positive attributes (Beisswanger et al. 2003; Polman 2012) and prioritize more prominent attributes (Kray 2000; Kray and Gonzalez 1999; Tversky, Sattath, and Slovic 1988). Thus, when making intertemporal tradeoffs that impact others, people may place more emphasis on the typically more consequential magnitude dimension rather than the time dimension. Furthermore, if charitable contributions do in fact increase the prominence of the magnitude dimension, bundling donations into one's personal intertemporal tradeoffs may shift preferences toward larger, later options. Many common decisions naturally contain other-regarding elements: shipping has an environmental impact, financial investments may support social causes, and food is associated with many ethical concerns. The experiments presented below abstract away from the social issues linked to the choice options themselves and identify a robust and general phenomenon in which the simple inclusion of a bundled charitable contribution in intertemporal tradeoffs nudges preferences toward larger, later options.

Experiments 1a-c first document within-individual differences in discounting that exist between monetary outcomes and charitable donations. In Experiment 1a, participants made 90 total intertemporal tradeoff decisions involving larger, later (LL) and smaller, sooner (SS) options in three sets: involving money only, contributions to a charity rated as close, and contributions to a charity rated as distant to the participant. Decisions were incentive compatible and task order, choice order, and choice option order were fully randomized. Exponential discounting parameters were estimated by maximum likelihood, and revealed that participants applied a significantly higher discount rate on their own personal future monetary outcomes compared to donations of equivalent value; no difference was observed between close and distant charities. In Experiment 1b, participants made choices involving subjective present value equilibrated choice options constructed through a matching task. Decisions made at this equivalence point favored LL options significantly more frequently when choices involved a charitable donation but not when they involved money only. In Experiment 1c, participants made a decision between SS and LL options constructed such that the SS option should be favored given preferences the participant shared earlier. Participants displayed significantly more preference reversals favoring the LL option when choices involved donations rather than money only. Together these data indicate that individual participants do not apply a single discount rate across items; they consistently displayed greater patience when choice options involved donations rather than money only. Further, the data are consistent with the notion that donations increase magnitude prominence and cannot be fully explained by psychological distance or an egocentric empathy gap.

Leveraging these findings, Experiments 2-5 examine how bundling donations in intertemporal tradeoffs facilitate more forward-

looking decisions. In Experiment 2, participants made a decision involving a bonus they would receive after having participated in a lab session. They were randomized into either a money-only or a bundled-donation condition. Holding total monetary payouts constant, in the money-only condition participants chose between either \$4.35 today and \$6.09 in 60 days; in the bundled-donation condition they chose between \$3.35 today with a \$1 donation made to the National Park Foundation, or \$5.09 in 60 days with a \$1 donation made to the National Park Foundation. Participants chose the LL option significantly more often when donations were bundled into the tradeoff. Experiment 3a examined this in a within-participant design involving 24 decisions at different values and time delays. To address concerns of differential valuation of choice options between tasks, Experiment 3b involved value-matched donations to ensure choice options were equally attractive in the money-only and bundled-donation tasks. Experiment 3c also held base values (rather than total monetary values) fixed across tasks. Experiment 3d examined decisions at higher magnitudes where base values were increased fivefold but donations remained fixed at \$1. Across all of these experiments, participants favored LL options significantly more frequently when donations were bundled with intertemporal tradeoffs. Experiment 4 then measured changes in attribute importance and observed that the magnitude attribute was more prominent in the bundled-donation task relative to the money-only task. This change in magnitude prominence mediated the effect of donation bundling on the choice of LL options. Experiment 5 subsequently moderated the effect by highlighting urgency associated with a charitable cause. Relative to when they the charitable cause was described in general terms, when the cause was described as providing urgent aid to victims of Hurricane Maria, participants selected LL options less frequently in intertemporal tradeoffs that were bundled with the small, \$1 donations.

In sum, these findings indicate that individuals adopt different discounting processes when thinking about money and charitable causes, in particular by increasing reliance upon the magnitude dimension. As a result, the inclusion of small donations added to both choice options in intertemporal tradeoffs can increase magnitude prominence and drive more forward-looking decisions even when the large majority of payoffs as a percentage are delivered to the self rather than others. These results have important implications for how managers may wish to frame decisions in the marketplace and also raise fundamental questions around how researchers should model time preferences.

### **The Effect of Psychological Control on Temporal Discounting: Conceptual and Methodological Implications**

#### **EXTENDED ABSTRACT**

People often exhibit a tendency to overvalue the present and undervalue the future, known as temporal discounting (Samuelson 1937). Researchers used several elicitation methods to examine temporal discounting. In the matching method, participants are provided with an outcome at time 1 and asked how much money at time 2 would make them indifferent between receiving the outcome at the two points in time. In the choice method, participants make choices between smaller sooner and larger later amounts (Ahlbrecht and Weber 1997). Using methods interchangeably is sensible if distinct methods are all inherently sensitive to the same psychological process.

We propose that psychological control has the potential to inform our understanding of both consumers' propensity to engage in

temporal discounting and when different elicitation methods lead to divergent results. When experiencing a loss of control, individuals engage in actions to restore their sense of control (Whitson and Galinsky 2008). We suggest that one means to restore control is to obtain valued objects immediately as opposed to after a delay. The immediate obtainment of an object can satisfy an individual's need for control because it signals to an individual that she is able to obtain desired outcomes in her environment. In contrast, the delayed obtainment of an object may do little to address an individual's need for control because desired outcomes are not, in fact, obtained. As a consequence, individuals experiencing a loss of control may overvalue the obtainment of items in the present and undervalue the obtainment of the same item in the future—that is, they will engage in greater temporal discounting.

We propose that, while similar in many ways, the matching and choice elicitation methods have an important methodological difference that could prove extremely consequential. Specifically, the choice method inherently gives participants control because it allows them to decide whether or not they want to incur a delay; choice is an established psychological salve for a loss of control (Inesi et al. 2011). If individuals' sense of control is restored by the act of making a choice, we would expect a loss of control to have little, if any, effect on temporal discounting. In contrast, the matching method does not give participants choice, instead asking them for their willingness to accept. As such, if our hypothesis about the link between a loss of control and temporal discounting holds, only the matching method might be suited to observe the effects of a loss of psychological control.

In Experiments 1A and 1B, we directly test (1) the relationship between psychological control and temporal discounting and (2) whether this relationship is contingent on the elicitation method employed. In Experiment 1A, to instill a loss of control we used an established recall paradigm (Whitson and Galinsky 2008). Participants in the low control condition were asked to write about a past incident where they felt a loss of control. Participants in the baseline condition were asked to write about their experiences yesterday. Next, we measured participants' propensity to engage in temporal discounting with either a matching or a choice task. In the matching task, participants were asked to provide a dollar amount that would make them indifferent between receiving \$100 now versus in a month (“\$100 now = \$ \_\_\_\_\_ in a month”). In the choice task, participants completed a series of eight binary choices, choosing between receiving \$100 now or varying amounts money (\$200, \$205, \$210, \$215, \$220, \$225, \$230, and \$235) in a month (Hardisty and Weber 2009). Our analysis revealed the predicted two-way interaction emerged between the treatment and elicitation method. While participants' temporal discounting in the matching task was sensitive to a loss of control, this was not the case in the choice task (see Table 1). In Experiment 1B, we replicated our findings using a different manipulation of a loss of control: participant in the loss-of-control condition experienced a technical problem they could not control while watching a video, whereas participants in the baseline condition did not experience this problem.

While informative, one concern can be raised about Experiments 1A and 1B: different results across elicitation methods might be driven by the limited variance in responses for the choice task. Experiments 2A and 2B sought to replicate previous findings while allowing for greater variance in the choice task. Both experiments were similar in their procedure, but employed different manipulations of control (the recall task in 2A and the video task in 2B). Participants in both experiments completed one of the three tasks: a matching task, a choice task with a low variance, or a choice

task with a high variance. As before, temporal discounting elicited through matching tasks revealed a significant effect of the control treatment. In contrast, temporal discounting measured via choice tasks show no differences of the control treatment in both the low-variance and the high-variance conditions.

In Experiments 3 and 4, instead of examining the carryover effect of psychological control induced in a prior task, we investigate whether relatively small alterations that are meant to change the level of control *within* the same elicitation methods influence the extent of temporal discounting. Experiment 3 framed the elicitation methods as tasks that limit the way participants can respond and thus lower their control while Experiment 4 framed the elicitation methods as tasks that give participants a sense of control. Across both experiments, we find that even manipulating a sense of control *within* the task is sufficient to affect temporal discounting for matching, but not for choice tasks.

Across six experiments, we find that when experiencing a loss of control, participants exhibit more temporal discounting. Importantly, this observation is critically moderated by the elicitation method used. A loss of control increases temporal discounting with the matching method, but not with the choice method because the choice elicitation method naturally gives participants control. As a consequence, the current work not only reveals a novel driver of temporal discounting, but suggests that it cannot be taken for granted that findings obtained with one elicitation method will generalize to another.

### Temporal Discounting Induces a Myopic Focus on the Costs of Higher Education

#### EXTENDED ABSTRACT

The second quarter of 2010 was an alarming moment for American consumers; for the first time in history, the size of student debts surpassed credit card loans, and became the second largest consumer debt in the United States (Haughwout et al. 2015). Now, 70 percent of students borrow student loans for their college education. The loan repayments after graduation could influence their future spending and wealth. The government, and nonprofit and for-profit agencies have started to provide college financial information for concerned students and parents (e.g., College Scorecard from the Department of Education, College ROI from Payscale). However, potential influences of college financial information on the college choice have not been studied extensively (Urminsky and Zauberman 2015). Our research explores how education consumers respond to the availability of this information, focusing on the effects of making proximal costs and future returns available and salient.

We propose that framing higher education as a financial investment leads to substantial tuition myopia, leading many students to overweight the costs of colleges relative to their long-term financial returns. We find that temporal discounting (Samuelson 1937; Koopmans 1960; Frederick et al. 2002), a tendency to devalue an outcome as it moves further away from the present, underlies the tuition myopia phenomenon. Using quantitative analysis and behavioral experiments, we demonstrated that financially impatient consumers prefer low-cost and low-return colleges and financially patient consumers prefer high-cost and high-return colleges in both hypothetical and real college choices.

To begin, we analyzed 498 colleges from the College Scorecard database that provide bachelor degree education, have an enrollment of over 5,000 students, and are currently operating. These 498 colleges generated 123,753 college choice pairs ( $= {}_{498}C_2$ ). This analysis demonstrated that there are two different types of college choices.

The first category is a choice between a Low-Cost and High-Return college (LCHR college, hereafter) and a High-Cost and Low-Return college (HCLR college, hereafter). Temporal discounting is not a critical factor for the LCHR vs. HCLR choice pairs because LCHR colleges provide greater financial benefits with lower costs than HCLR colleges. There is no economically rational reason to choose the HCLR colleges over the LCHR colleges, *ceteris paribus*. The second category is a choice between a High-Cost & High-Return college (HCHR college, hereafter) and a Low-Cost & Low-Return college (LCLR college, hereafter). These HCHR vs. LCLR choice pairs entail an intertemporal tradeoff, a resource allocation between present and future; larger investment now leads to greater return in the future (HCHR colleges) whereas smaller investment now leads to smaller return in the future (LCLR colleges). Thus, financially impatient consumers may prefer LCLR colleges because they focus on proximal outcomes (that is, school years with negative incomes) and LCLR colleges demand lower costs than HCHR colleges.

We tested this prediction using four behavioral experiments. In Study 1, we tested our main hypothesis by examining whether participants' discount rates are related to education attainments and real college choices - the kind of college they attended. We measured individual discount rates, education attainments, and asked them to name their alma mater if they attended a college. We categorized attended colleges using the college group ranking based on Carnegie Classification as a means by which to categorize chosen colleges as LCLR or HCHR colleges. The results demonstrated a relationship between individual discount rates and participants' choice of higher education ( $\beta = -.19$ ,  $t(458) = -4.07$ ,  $p < .001$ ). Respondents who showed high discount rates attended LCLR colleges, whereas respondents who showed low discount rates attended HCHR colleges. Study 2 replicated the findings in Study 1 in using hypothetical college choices. Drawing from the original total set of pairs of LCLR and HCHR colleges we sampled from College Scorecard, we randomly presented 12 pairs of LCLR and HCHR colleges with college financial information and measured the individual discount rates. We found strong evidence that respondents made intertemporal tradeoffs when making college choices ( $F(2,182) = 192.0$ ,  $p < .001$ ,  $\eta_p^2 = .68$ ) and also find a significant correlation between individual discount rates and the preference for LCLR colleges ( $r = .35$ ,  $p < .001$ ).

Study 3 and Study 4 tested whether the favorable student loans can remove the intertemporal tradeoffs demonstrated in Study 1 and Study 2. In the United States, backed by the Higher Education Act of 1965, the government offers several subsidized loan programs (e.g., Stafford loans, Perkins loans) that cover tuition and other attendance costs. These student loans alter the cost and benefit characteristics of the college education. College tuitions are no longer "immediate" costs under the student loans. Student loans stretch out the cost of higher education over many years after graduation, reducing the burden of immediate payments during the college education. Thus, these student loans remove intertemporal tradeoffs and make HCHR colleges a dominant option. HCHR colleges provide relatively larger net income during and after the loan repayment period than LCLR colleges.

However, we found that respondents still made intertemporal tradeoffs when making college choices even with the student loan options. In Study 3, we offered a favorable student loan options alongside the college financial information (3.76% APR with 30-year repayment plan). However, this additional information did not remove intertemporal tradeoffs from the college choice ( $F(2,344) = 211.82$ ,  $p < .001$ ,  $\eta_p^2 = .55$ ). We found similar results in Study 4. Instead of providing the loan information as we did in Study 3, we presented the student loan repayment information, which can high-

light the financial benefits of choosing HCHR colleges. This alternative cost information did in-fact increase the preference for HCHR colleges ( $F(1,172) = 6.57, p = .011, \eta_p^2 = .04$ ). However, this was not enough to remove intertemporal tradeoffs from the college choice ( $F(2,344) = 211.82, p < .001, \eta_p^2 = .55$ ).

To sum up, the current study provide insights regarding how education consumers would respond to college financial information when making college choices. The current study suggests that presenting college financial information leads to tuition myopia; people prefer less expensive colleges even when long-term financial returns are smaller than expensive colleges.

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# Contemporizing Scholarship on Consumption Rituals

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## **Paper #1: Ritual Scholarship in Marketing: Past, Present and Future**

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## **Paper #2: The Ritualistic Dimension of Microlending**

Domen Bajde, University of Southern Denmark, Denmark  
Pilar Silveira Rojas Gaviria, Pontificia Universidad Católica de Chile, Chile

## **Paper #3: Stigmatization of a Cultural Ritual**

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Natalie Maehle, Western Norway University of Applied Sciences, Norway  
Cele Otnes, University of Illinois at Urbana-Champaign, USA

## **Paper #4: Exploring the Intersection of Digital Virtual Consumption and Family Rituals**

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### **SESSION OVERVIEW**

In his pioneering article on rituals and consumer behavior, Dennis Rook defines rituals as expressive, symbolic, and repeated behaviors that are “performed with formality, seriousness and inner intensity” (1985, 252). Marketing scholars have studied the importance of rituals for consumers and marketers to individual consumers, consumer communities, consumer-marketer interactions, and culture. Rituals transfer meaning to consumption goods (Belk, Wallendorf, and Sherry 1989; McCracken 1986), enhance consumption experiences (Epp and Price 2008), and shape and influence the identities of consumers (Schouten 1991). Marketers successfully rely upon rituals to establish the iconicity and authenticity of brands by incorporating these enactments in marketer-consumer exchanges (Arnould and Price 1993), commercial spaces (O’Guinn and Belk 1989), marketing messages (Otnes, Ilhan, and Kulkarni 2012), and consumer socialization practices (Arsel and Bean 2012).

Although rituals remain a popular topic in consumer research, three broad areas noticeably warrant further investigation. First, scholars need to acquire a better understanding of the roles various market actors (e.g. marketers, consumers, service providers) play in perpetuating and valorizing consumer rituals in non-US contexts. Second, research on the “dark side” of rituals (e.g., the negative experiences and detriments consumers may experience by engaging in them) is limited, despite the consumer-welfare implications of such inquiry. Third, as Belk (2013) observes, extant research on rituals neglects exploring the intersection of the digital space and rapid technological changes with consumer rituals.

In this special session, we highlight these gaps by reviewing extant ritual scholarship, addressing these gaps through illustrative research, and pointing towards avenues for future research on contemporary consumer rituals. The authors of Paper #1 review thirty years of research on consumer rituals to examine the roles of rituals with regard to consumer identities, objects, experiences, relation-

ships, cultural institutions, and market interactions. In doing so, they also identify important areas for future research. In Paper #2, the authors examine moralized rituals of market actors who offer microloans to consumers in a poverty setting. Paper #3 investigates how stakeholders stigmatized a coming-of-age cultural ritual in Norway, denoting it as “dark-side” ritual activity and highlighting its consumer-welfare consequences. Finally, in Paper #4, the authors study how family identity is shaped by a digital platform, through the influence of digital forces on family rituals.

This session appeals to the need for making ritual scholarship consonant with consumer experiences and consumption practices in the contemporary market landscape. The papers included uncover potential areas for future research, focusing on how rituals influence consumer behavior in today’s globalized and digitized marketplace. Interested audiences should include the broad spectrum of scholars interested in ritual behavior, CCT research, and consumer welfare.

## **Ritual Scholarship in Marketing: Past, Present and Future**

### **EXTENDED ABSTRACT**

Since Rook (1985) first described important linkages between rituals and consumer behavior, scholars have examined consumer rituals from the perspectives of the individual consumer, marketers, marketing exchanges, and cultural institutions. New modes of communication and expression (e.g., digital media), and globalization calls for a thorough understanding of the consumption-related ritual topics, and what areas they should explore in the future. In this paper, we systematically review articles in the top marketing and consumer behavior journals to provide an overview of the current composition of ritual scholarship, and of prospective areas for future research. In so doing, we hope to categorize ritual scholarship into broad conceptual domains and evaluate our current understanding of rituals in each, identify gaps in our understanding based on the changing market environment, and suggest areas of inquiry to address these gaps.

We examined articles in the top twelve marketing journals identified in the SCImago Journal Rank of all marketing journals, each with an impact factor of at least 2.5. We searched for articles pertaining to consumption rituals in the twelve journals by consulting the three business databases included in the EBSCO database. Of these journals, five included pertinent articles: *Journal of Marketing*, *Journal of Consumer Research*, *Journal of the Academy of Marketing Science*, *Journal of Consumer Psychology*, and the *Journal of Retailing*. We determined that the authors’ foci led to an emergent partition of the literature into five domains (albeit with a few overlaps). The research team engaged in close reads and iterative discussion of articles, identifying various themes and research extensions within each domain. The themes are: foundational, macro-level, meso-level, marketplace-level, and micro-level.

### **Foundational**

This domain includes conceptual articles that define and describe the construct of consumption rituals, and theoretical papers that explore how rituals influence consumer behavior. The field continues to develop theoretically around the initial definition and conceptual exploration of consumption rituals that Rook (1985) offers. Research examines how rituals transfer meaning to objects through

exchange, possession, grooming, and divestment (McCracken 1986). During the process of meaning transfer, rituals may result in commodities becoming decommoditized (Belk, Wallendorf and Sherry 1989), which may apply to both material and digital possessions of consumers (Belk 2010; 2013).

### Micro-level

We delineate micro-level ritualistic consumption as involving individuals, dyads, or families. A dominant theme in these articles is people's reliance on rituals to help them socialize others' consumption practices, particularly through family rituals (Epp, Schau and Price 2014). Micro-level studies reveal ritual socialization practices may be highly gendered (Wallendorf and Arnould 1991), and that brands can be powerful forces of socialization (Diamond et al. 2009). The micro-domain also examines interconnections between rituals and identity (Bradford 2015; Schouten 1991).

### Meso-level

Meso-level articles focus on how rituals influence sociologically-similar groups of people who interact within or outside of market-mediated contexts (Kates 2004). We find that rituals at the meso-level primarily serve four emergent functions: socialization, belongingness, identity maintenance, and resistance. Within meso-contexts, rituals indoctrinate consumers into a collective, helping them socialize with other consumers in communal settings (Wooten 2006). Within groups such as brand communities, rituals may also help consumers deepen their connections and social relations to other consumers (Schouten and McAlexander 1995). Meso-level research also highlights how ritual artifacts assist consumers to form or sustain their identities (Mehta and Belk 1991); Ritson and Elliott 1999), and sometimes also transform identities within groups (Belk 1992).

### Marketplace-level

This domain pertains to the marketers' use of rituals. By far, the most pervasive way they do so is to help them iconize a marketplace. Ritualization is also one of the key socialization practices marketers leverage for their consumers (Arsel and Bean 2012). Other marketplace-level articles explore how practitioners use rituals to enhance aspects of the buyers/seller or customer/provider relationship (Sherry 1990), especially customer relationships and customer perceptions of the buying experience (Arnould and Price 1993). Research highlights the importance of language in marketers' rituals, and how marketers rely on performative, symbolic, and shared aspects of language to achieve customer-related goals (Otnes, Ilhan, and Kulkarni 2012; Sherry and Camargo 1987).

### Macro-level

Articles that we classify in the macro domain locate rituals within cultural phenomena. The entry of market forces in socio-economic spaces can spur new rituals, or reformulate the meaning of existing ones (Callon 2016; Vikas, Varman, and Belk 2015). Consumers use rituals as mechanisms to negotiate and interact with their cultural environments (Sherry 2000) and as sources of identity-related meanings (Arnould 1989; Fernandez and Lastovicka 2011).

We find extant articles typically do not focus on ritual aspects or elements that make them more or less efficacious. Specifically, future research could explore how rituals connect to a broader range of theoretical constructs (e.g., discourses, practices, and sentiments). In addition, research could ask: What roles do various actors (e.g., marketers, consumers, service providers) enact in perpetuating and valorizing rituals? How do the elements of ritual practices relate to

the individual and/or collective emotions of consumers? We also find inadequate investigation of the beneficial or detrimental outcomes of engaging in consumption rituals. Ritual scholarship also needs to capture the impact of current and disruptive dynamics in consumer culture (e.g., marketplace globalization; dominance of digital consumer culture). Finally, we identify the importance of ritual(s) scholarship in unexplored regions (e.g. non-US countries), economies (e.g. B-O-P; emerging) and cultural categories.

## The Ritualistic Dimension of Microlending

### EXTENDED ABSTRACT

The rise of microcredit as a popular tool for fighting poverty (Mader 2015), begs the question of how debt came to be seen as cure for poverty. The question becomes all the more pertinent with the recent popularization of online microlending, or the provision of interest-free credit to low-income borrowers through online platforms such as Kiva.org (Bajde 2013, Schwittay 2014). Every day, millions of lenders around the world devote their time, money and energy to low-income borrowers with the hope of helping them escape poverty. Despite the growing skepticism among development experts regarding the capacity of microlending to actually alleviate poverty and extensive media coverage on the damaging effects of microdebt (Banerjee and Jackson 2017), online microlending continues to thrive (Schwittay 2014).

Our study addresses this puzzle by investigating the role of ritual in the moralized market of online microcredit. We draw upon a four-year multi-method investigation of the online microcredit market, assembled by microlending platforms and microfinance institutions to attract interest-free capital from potential lenders. We show how this moralized market facilitates rituals of generativity (Magatti 2017), through which lenders adopt the role of socially-generative actors who generously help the poor and generatively tackle the problem of poverty. Through these rituals microcredit is dramatized as a potent and virtuous solution to social problems (i.e., poverty), and lenders are enthused and energized to act as generative and responsible moral actors by investing their money, time, and energy in microloans.

To holistically investigate the moralized market of microcredit, we followed the action of diverse market actors (Martin and Schouten 2014) via participant observation and interviews with lenders, borrowers, and microcredit professionals (n=27 interviews), and conducted a systematic analysis of microlending websites, promotional material, and media. During data analysis, we moved iteratively between data and theory, and between emerging analytical themes and relevant theoretical frames (Thompson and Troester 2002).

Our study unpacks microlending as a ritual of generativity (Magatti and Giaccardi 2014; Magatti 2017), assembled by microlending platforms to enable lenders to emotionally connect with the poor and empower them to escape poverty. Kiva.org, the world's leading microlending platform, states that microloans "celebrate and support people looking to create a better future for themselves, their families and their communities," giving them the "power to create opportunity for themselves" and "realize their potential." Due to high repayment rates, lenders can recuperate their money and perpetually reinvest it, further magnifying the horizon of opportunity (Varul 2009) for development through financial empowerment.

The rituals of microlending (i.e., selecting the borrower, making the loan, receiving updates, reinvesting repayments) dramatize credit as a potent engine of growth and prosperity for both borrowers and their communities. Microloans obtain a romantic aura of potentiality, typically absent from in other poverty-alleviation rituals (e.g.,

charitable giving). As stated by the lenders interviewed, every loan repayment update proves the loan has helped the borrower to improve his/her life. Some lenders, and even the institutions promoting microlending, do recognize that the power of credit is not infinite. Nevertheless, romantic renditions of microcredit as a magical cure for poverty continue to overshadow the realities of life in poverty and the complexities of development (Bateman 2010; Giesler and Veresiu 2014; Banerjee and Jackson 2017).

Further, the ritual of microlending transforms what is essentially a contractual relationship between the lender and the borrower into a relationship of solidarity and care. As Kiva's 'Product Philosophy' states bluntly: "Lending is connecting." Informant-lenders readily embrace this ethos. They convey how the stories and pictures of borrowers published on the platforms enable them to recognize the qualities and challenges they share with borrowers, despite their vastly different life circumstances. This enables lenders to emotionally connect with the poor and experience a sense of solidarity (i.e., shared commonality and a willingness to help others). Periodic loan updates and repayments temporally extend the ritual, enabling the lenders to experience the loan process as a prolonged interaction with the borrowers (Flannery 2007).

However, our data also shows the described rituals of generativity can be very one-sided. The borrowers interviewed know nothing of the lenders and their noble intentions. Rather, borrowers experience the loans as a commercial exchange with the local microfinance institutions, which actually charge interest rates to cover their expenses. They do not fully understand why their pictures and stories are recorded and shared online. Market-mediated rituals of microlending thus may induce solidarity, responsibility and generativity, but they also mask enduring imbalances of power (Rajak 2011).

The popularity of microlending can at least in part be accounted for by its ritualistic qualities. Online platforms assemble and coordinate flows of stories, images, data, and money to facilitate what we call rituals of generativity. Through these rituals, market resources like credit are dramatized as virtuous engines of social progress, empowerment and solidarity, providing consumers with opportunities to act as generative and responsible moral actors. Further research on moralized rituals is needed to explain the performative dynamics of consumer responsabilization (Giesler and Veresiu 2014) and neo-liberal moral governance (Shamir 2008; Rajak 2011).

## Stigmatization of a Cultural Ritual

### EXTENDED ABSTRACT

Cultural rituals are defined as "aesthetic, performative, and symbolic public events occurring on a grand scale that are broadly accessible to consumers" (Otnes, 2018, 489). When creating and sustaining these rituals, stakeholders from various institutions exert different roles in the ritual (e.g., service delivery, legislative permissions, media coverage, social control). This paper explores how such stakeholders stigmatize enactment of a controversial Norwegian ritual. We demonstrate that when concern emerges over the "dark side" of this cultural ritual, stakeholders engage in prolonged, pervasive stigmatization to enact change in ritual participation. We address this question: How do stakeholders in a cultural ritual stigmatize and shape the actions of ritual participants?

Our enabling theory is the "stigma turbine," a framework that "locates...stigma within the broader sociocultural context and illuminates its relationship to forces that exacerbate or blunt stigma" (Mirabito et al., 2016, p. 170). As sources of stigmatization / destigmatization, powerful historical, institutional, and commercial "winds" exert pressure on the turbine. Winds increase or decrease

the stigma, influencing directionality of the turbine toward stigmatization, destigmatization or stagnation (due to conflicting winds). We focus on how the cultural winds specifically influence the "societal" blade of the turbine, representing the meso-level of culture.

The "Russfeiring" or "Russe" is an annual national coming-of-age ritual celebration for Norwegian high school seniors in their final semester. Over the past thirty years, it has evolved into a large-scale, nationally coordinated event comprised of multiple sub-rituals. The most significant artifact (Rook 1985) is the "Russ-bus," a core element enabling participants to "roll to" other Russ events. It serves as a concealed party space away from authorities, schools, and parents. This lack of transparency contributes to conflicts with these stakeholders. Teams of 15 to 25 (mostly male) students invest substantial time, money (from 20,000 to 60,000 USD – focus group interview, 2018; Stavanger Aftenblad, 2017) and effort securing commercial sponsors for their buses, which feature custom logos, branded imagery, theme songs, special apparel, and social-media sites. A well-organized commercial ecosystem of suppliers, service providers, and contractors supports the Russ-bus industry. The bus is increasingly regarded as a disruptive social element, facilitating wild partying, excessive drinking/drug abuse, littering, noise, and irresponsibility. Parents and teachers worry about accidents, deviance, and academic consequences. The police monitor disruptions of public places and traffic violations. These concerns have been ineffectual in shaping norms pertaining to the Russ-bus – until recently.

In 2017, propelled by (among other activities) a stigmatizing media storm (Boydston et al. 2014), "Casanova2017," a Russ-bus team consisting of 25 males, became the national "poster-child" of criticism aimed at the Russ-buses. Its theme song, which the team bought from professional "Russ" song-writers, provided the media with the triggering wind it needed to initiate the stigma turbine. The media featured its song lyrics in headlines, triggering shock in the marketplace, as the lyrics suggested sex with a thirteen-year old girl. The release triggered public debate about the entire Russ-celebration. Casanova2017 faced public outrage, sponsorship withdrawal, condemnation by experts on rape and sexual misconduct, threats to personal safety, and an outcry among female students.

We draw upon four types of qualitative data: interviews, text from social media/the Internet, and written and broadcast news accounts. We created a database of media coverage, comprised of news articles in traditional and social media, recordings of available television and YouTube interviews, and meetings with educators, public authorities (e.g. local police, the Norwegian Public Roads Administration, a collaborating NGO), stakeholders, parents, and students. We analyzed 111 pages of interview transcripts, 321 pages of text in printed media, two documentaries, 228 YouTube videos, several hours of news broadcast, and chronological posts on Instagram and Facebook for themes pertaining to stigmatization activities and consequences. In January 2018, we conducted a focus-group with four members of Casanova2017.

We find stakeholders engage in the following stigmatizing actions: shunning, chastising, scapegoating, and responsabilizing (and/or denormalizing) (Bell et al. 2010), which we define, describe and differentiate in our analysis. The transcript indicates Casanova2017 members are cognizant of these practices: "When you get there and have published such a song – you have nothing to say...In that situation, we felt really small actually" (Focus group interview, January 2018).

Furthermore, these actions wielded both immediate consequences for Casanova2017, and longer-term consequences for Russe celebrations across the nation. Stakeholders involved in the Russ-bus ecosystem supported various agendas and contributed to both ritual



stigmatization and destigmatization. Media and school authorities represented the key stigmatizing forces. Local authorities, as neutral actors, focused on the actual (but relatively small) damage from the Russe celebration, instead of the morality aspects. Commercial actors for the Russ-bus (i.e., apparel suppliers, interior designers and music vendors) played contradicting roles, supporting/maintaining Russ-buses, but also exploiting the existing rebellion underlying the Russe foolishness in their commercial interest. As young consumers, Casanova2017 team members tried to resist these stigmatizing forces, but report feeling powerless and neglected, as stigmatized groups often do (Adkins & Ozanne 2005; Bell et al. 2010; Crockett et al. 2017).

Casanova2017 participants found public apologies and moderating their ritual practices were their only means to moderate the stigma that the winds generated. Commercial endorsers deemed the team untouchable. The stigma of sexual deviance transferred to many Russ-buses, associating them with violence and rape. In addition, the founder/leader of an NGO against sexual violence spoke at the high school of Casanova2017's team leader. The national celebration also saw longer-term consequences. For instance, the "russeknuter" (badges Russ participants earn when completing a task or dare during the festivities) now exclude sexual activities. Nationwide, female Russe participants are more aware of the increasing sexualization of Russ rituals, and now publicly criticize this development (Aftenposten 2018).

### Exploring the Intersection of Digital Virtual Consumption and Family Rituals

#### EXTENDED ABSTRACT

Ritual experiences contain four "tangible" elements: ritual artifacts; a ritual script; ritual performance role(s); and, a ritual audience (Rook, 1985). In light of a changing consumer culture that is increasingly digitized, how are rituals performed within and shaped by digital platforms and spaces? Belk (2013) specifically calls for research into how the digital world shapes rituals such as gift-giving and collecting. Scant existing research explores how digital spaces shape rituals. One exception is Epp, Price, and Schau (2014) who examine how technologies influence family practices, including rituals, during family physical separations (e.g., due to military service). However, their focus is on how technologies enable the reassembling of family consumption practices. Drenten and Zayer (2018), in their study of digital virtual consumption, highlight the need for future research with regard to how the changing digital landscape impacts rituals. In this vein, we broadly ask, how are consumer rituals shaped by digital virtual consumption?

We detail our findings based on in-depth interviews with fourteen users (ages 21 to 45) of Pinterest, a digital platform that allows users to collect, share, and organize "pins" (images and videos found online). The site claims usage among a third of American online users (Greenwood, Perrin, and Duggan 2016) and boasts 150 million active online users worldwide (Omnicores Agency Report 2017). We follow the conceptualization of Pinterest as a site for digital virtual consumption (see Drenten and Zayer 2018). In total, 506 pages of double-spaced text were analyzed.

We find digital virtual consumption (DVC) enables consumers to perform a wide range of rituals, from personal and small group rituals to rites of passage and aesthetic rituals. In particular, we leverage Molesworth and Denegri-Knott's theoretical work (2013, 223). They identify DVC as a space through which consumers "acquire and test out practices and subject positions, not always possible through either material real or the imagination on its own, but always

linked to both." We focus our analysis on how DVC enables family rituals in particular. We identify four ways DVC supports and enables family rituals: 1) they provide virtual ritual artifacts 2) they aid in locating ritual scripts 3) they build capacities in ritual performance and 4) they extend the reach of ritual audiences. This process, in turn, enables families to create and maintain their identity. Our findings illuminate the changing nature of family rituals in light of digital advances. We also reveal opportunities for marketers to become embedded in these rituals, and to aid in the betterment of consumers' lives through the solidification of family identities. For example, we find DVC serves to foster positive family rituals (e.g., family meal times; nightly parent-child bedtime rituals).

To demonstrate the four ways that Pinterest as a site for DVC supports family rituals, we offer these examples from our data. First, DVC provides virtual artifacts to support family rituals. Tom uses Pinterest to support bedtime rituals with his kids by maintaining a Pinterest board featuring French bulldog images. Tom says he and his kids share the dream of getting a French bulldog. For now, however, they use digital images to support their evening rituals.

*... yeah, I like to share [the pictures] with the kids too. At night, we like to look at French bulldog movies and pictures on here, and they are always like, 'Aww, let's get one like that!' It is just cool. We all snuggle together in bed. They will come in and be there, so we are physically close which is kind of cool. Instead of all of us on three devices, we are all on one device...just dreaming about having this dog is kind of fun too. (Tom)*

Thus, digital images act as virtual artifacts to support Tom's quality time spent with his children in the evening. DVC acts as an impetus to bring his family closer together—physically and emotionally.

Second, DVC aids in locating scripts for performing family rituals. Our data show various ways consumers turn to Pinterest for direction on how to execute family rituals. Rebecca, who is newly engaged, pins recipes to follow for her future family meals, in anticipation of creating new mealtime rituals with her fiancé: *"now I'm not just like cooking for myself, so I feel like I need to like cook a real meal rather than just make myself like half a sandwich"*. Third, DVC builds capacities in ritual performance. Consumers turn to Pinterest to support executing their ritual performances in the "real world." For instance, Kelsey pins Christmas list ideas to a Pinterest board shared with her parents, who can then click the links to shop for her. This type of capacity-building pinning practice is evident across the data to support a variety of family rituals (e.g., holiday traditions, family vacations, birthday-party planning). Fourth, DVC has the potential to extend the reach of ritual audiences by making family rituals viewable beyond the family unit. Thus, what once may have been a privately shared family ritual is instead emplaced in a public forum that is shared with friends and strangers via social media. For example, Emma's family has strict dietary guidelines due to their oldest son's peanut allergy, which shapes their family mealtime rituals. Emma shares peanut-related recipes and content, knowing her followers will see it: *"so people can see how my life can be affected by [my son's peanut allergy]."*

Emma uses DVC to educate others about the nuances in her family's mealtime rituals. Notably, some consumers utilize privacy settings on digital platforms to limit who can view their activities. In sum, our data suggest digital virtual consumption supports and facilitates family rituals. This process, in turn, enables the creation and maintenance of family identities.



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# The Complexity of Consumer Identity: How Consumer Choices and Outcomes are Driven by the Dynamic and Multi-Faceted Self

Chair: Stephanie Y. Chen, London Business School, UK

## **Paper #1: Don't Forget the Accountant: Role-Integration Increases the Fungibility of Mentally Accounted Resources**

Iman Paul, Georgia Institute of Technology, USA  
Jeffrey R. Parker, University of Illinois at Chicago, USA  
Sara Loughran Dommer, Georgia Institute of Technology, USA

## **Paper #2: Placing Identity into the Self-Concept: The Role of Causal Beliefs in Identity-Based Consumption**

Stephanie Y. Chen, London Business School, UK  
Oleg Urminsky, University of Chicago Booth School of Business, USA

## **Paper #3: Examining the Link between Predicted Identity Change and Future Well-Being**

Joseph S. Reiff, University of California Los Angeles, USA  
Hal E. Hershfield, University of California Los Angeles, USA  
Jordi Quoidbach, ESADE, Spain

## **Paper #4: When Prominent Logos Make You Feel Competent**

Sara Caprioli, Technical University of Munich, Germany  
Christoph Fuchs, Technical University of Munich and Erasmus University, Germany  
Nailya Ordabayeva, Boston College, USA

### **SESSION OVERVIEW**

Much research in consumer behavior has embraced the idea that identity drives choice. Consumers like and choose products associated with the social categories that they belong to (Escalas and Bettman 2003; Reed 2004), and use brands and product choices to build and express their identities (Belk 1988; Berger and Heath 2007). In contrast to theoretical perspectives on the self-concept that construe it as dynamic and multi-faceted (Chen, Urminsky, and Bartels 2016; Markus and Wurf 1987), much work on how identity influences consumption has examined a single, stable identity's (i.e., a social category's) influence on choice. While recent calls have been made to examine identity-based consumption from a perspective more in line with a dynamic, multifaceted view of the self-concept (Reed and Forehand 2016), explorations of how multiple parts of or changes to the self-concept influence choice are relatively rare. Further, even though theoretical approaches to the self-concept include aspects of the self that are not social categories (e.g., Chen et al. 2016; Linville 1987; Strohminger and Nichols 2014; 2015), most work on identity-based consumption has focused on social categories as the driver of choice.

This session addresses the need to understand identity-based consumption with a more complex approach to the self-concept. These papers examine open questions in the identity-based consumption literature that cannot be addressed by considering identities in isolation and treating the self-concept as static. How do beliefs about the interactions and relationships between various parts of the self-concept influence identity-based choices? How do beliefs about how the self will change over time relate to future well-being? And, how do individual-level aspects of the self influence decisions?

Taken together these papers seek to answer the question of how the complex and dynamic self-concept influences choice. The first two papers in the session examine how the various identities, roles, and personal characteristics that make up the self-concept influence the use of mentally accounted funds and likelihood of displaying

identity-consistent behaviors. The third paper examines how beliefs about the dynamic nature of the self-concept—beliefs about how one might change over time—are related to future life satisfaction. The second and fourth papers examine how aspects of the self-concept beyond social categories, individual-level traits like goals and desires, and the need for self-efficacy, drive consumption decisions.

By embracing the perspective that identity-based consumption is influenced by a complex and dynamic self-concept, these papers provide valuable insights into how consumers' beliefs about the self drive their choices and outcomes. The research in this session also expands the study of identity-based consumption into new areas; it examines not only preferences for products and behaviors associated with the social groups that consumers belong to, but also use of budgeted funds, life satisfaction, and preferences for brand logos. Further, this session raises important questions regarding the relationship between identity-based choice and satisfaction, and category-level and individual-level aspects of the self. Overall, these papers provide both a more sophisticated view of how consumers think about the self and broaden the scope of identity-based consumption research.

## **Don't Forget the Accountant: Role-Integration Increases the Fungibility of Mentally Accounted Resources**

### **EXTENDED ABSTRACT**

Inherent in any instance of mental accounting (Thaler 1985, 1999) is the accountant: the individual who is labeling and tracking personal expenses. While this seems obvious when explicitly stated, most mental accounting research largely takes the accountant for granted and, instead, focuses on how manipulating specific components of the mental accounting process (e.g., the relevant or active mental account, the potential expense being considered, or the source of the funds in the account) can influence consumers' spending or consumption decisions.

In contrast, the current research focuses on the accountant and builds on two empirically established premises: (i) many mental accounts are constructed around goals (Brendl et al. 1998) and (ii) integrated roles (i.e., roles that are overlapping and influenced by each other), versus segmented roles (i.e., roles that are separate and uninfluenced by each other), have a higher degree of hedonic spillover. In combination, these two premises lead to the prediction that life roles being more integrated (vs. segmented) will result in greater fungibility of resources allocated to mental accounts corresponding with those roles. Thus, individuals with integrated life roles will be more likely to use funds allocated to a specific role-aligned account in pursuit of goals associated with a distinct, yet integrated life role. This prediction is supported across six studies.

In study 1, participants (N = 100) were given descriptions of two common life roles: the (i) work-life role and (ii) home-life role. Participants then indicated the extent to which they integrated/segmented their work and home roles using a slightly modified version of the Work-Family Role Integration-Blurring Scale (Ilies et al. 2009). Lastly, participants were asked to imagine that they maintained a home-expense and work-expense budget (similar to Cheema and Soman 2006) and were asked the extent to which spending money from one account on expenses related to the other account would feel "right," "good," and "easy to justify" (which were combined into a single measure of resource fungibility). A linear regression

revealed that the work-home role-integration measures significantly predicted the perceived fungibility of funds between participants' work-expense and home-expense budgets ( $\beta = .283, t = 3.10, p < .003$ ), as predicted.

Study 2, examining the mentally-budgeted resource of time, asked participants ( $N = 194$ ) to explicitly categorize themselves as having either integrated or segmented work-life and home-life roles. They were then asked to imagine that they were supposed to attend a family barbecue (in other words, they had budgeted time for their home role), but had decided to go to work to help with an emergency project. It was found that those with integrated (vs. segmented) roles (i) found it easier to justify this decision ( $p < .03$ ), (ii) would experience less regret about this decision ( $p < .001$ ), and (iii) would consider this decision "right" and be more likely to make the "same" decision (items combined;  $p < .031$ ). Thus, integrated participants treated their home-budgeted time as being more fungible.

Study 3 ( $N = 100$ ) replicated the main results of study 2 using the same decision context (the choice to leave the family barbecue), but did so by manipulating participants' perceptions that their work-life and home-life roles were integrated. This was done by having participants explain ways in which they either (i) allowed these two roles to overlap with each other or (ii) kept these roles separate and distinct.

While studies 1-3 all examined first-person effects, they were limited in the breadth of life roles that could be examined—those studies needed to rely on roles that most, if not all, participants would have. Study 4 turned to a third-person design to generalize the results to a broader set of life roles. First, participants' ( $N = 160$ ) personal perceived life-role integration/segmentation (using work-life and home-life roles as examples) were manipulated as in study 3. Then participants were told of another person, Sally, that was a student athlete. They learned that Sally, like themselves (per the role-integration manipulation) either integrated or segmented her student and athlete life roles. They were then told that she had allocated time for one role or the other (studying or practice), but that she had received a request to use that time for the other role (by a team captain or study group, respectively). As expected, participants indicated that Sally was more likely to change plans (i.e., treat her budgeted time as being more fungible) when she was integrated versus segmented ( $p < .04$ ).

Studies 5 and 6 replicated the basic effect using third-person scenarios examining purchase decisions. In short, study 5 found that participants ( $N = 165$ ) believed another person's likelihood of purchasing a summer dress (an expense more linked with one's home-life versus work-life) was unaffected by role integration when that person had a budget surplus in her role-aligned, "home clothing" budget (and, concurrently, a depleted "work clothing" budget). However, when this other person's "home clothing" budget was depleted but her "work clothing" budget had a surplus (which would force her to purchase the dress from the "wrong" account), participants believed that she would be less likely to purchase the dress if her roles were segmented versus integrated ( $p < .001$ ).

Similarly, study 6 ( $N = 172$ ) found that the source of funds (which has been shown to influence spending decisions in previous research: Reinholtz et al. 2015) impacted the expected likelihood of another person making a purchase only when that person maintained segmented (vs. integrated) roles ( $p < .001$ ). This is consistent with the previous findings since role integration makes mentally-accounted funds more fungible and, thus, less constrained in use by their source.

In sum, six studies using both first-person and third-person tasks find reliable and robust evidence that mentally-accounted for

resources (be it money or time) are treated as being more fungible when (i) the focal mental accounts correspond with salient or active life roles and (ii) the individual integrates (vs. segments) those roles. Thus, this research expands our understanding of both the boundaries of mental accounting and the consequences roles have on consumption decisions.

## Placing Identity into the Self-Concept: The Role of Causal Beliefs in Identity-Based Consumption

### EXTENDED ABSTRACT

It is well established that consumers' identities, the social categories they belong to, are a key driver of choice. Much of this research focuses on situational factors, particularly salience of an identity, to explain differences in consumers' likelihood of acting in identity-consistent ways (Forehand et al. 2002; Reed and Forehand 2016). However, within the same situation, consumers who consider themselves members of a given social category vary in their likelihood of engaging in identity-consistent behaviors. Thus, explaining these differences requires a focus on consumer's internal beliefs about these identities.

A recent theoretical account of self-concept representation (Chen et al. 2016) suggests that subjective beliefs about the causal relationships between aspects of the self-concept (including social categories but also individual-level characteristics like personality traits, morals, etc.) are a critical part of the self-concept. More specifically, Chen et al. (2016) found that people who see an aspect of their self-concept as more *causally central* (linked to many other features of the self-concept) perceive it as more defining of who they are as individuals than those who see the same aspect as more *causally peripheral*. Thus, our prediction is that consumers who believe that an aspect of their self-concept (e.g., being a football fan) is more causally central are more likely to behave in ways that are consistent (e.g., pay more to see their team play) with that aspect than those who believe that the same aspect is more peripheral.

In Studies 1A and 1B, we examined whether the causal centrality of being a fan of a football team related to an identity-consistent behavior, willingness to pay for tickets to see the team play. The studies were conducted with football fans at a time when the identity of being a football fan was very salient, during the 2016 (Study 1A) and 2017 (Study 1B) Super Bowls. So, differences in willingness to pay cannot be attributed to differences in salience of the football fan identity. In Study 1A ( $N = 253$ ), to measure causal centrality, we had participants report which other important aspects of their self-concepts caused them to be football fans (e.g., a participant might report that she was a football fan because of some of her important childhood memories) or were caused by them being football fans (e.g., a participant might report that some of his close friendships were a result of his football fandom). As predicted, participants who perceived fandom as causally central (involved in more causal relationships) reported greater willingness to pay ( $\beta = 57.74, p < .01$ ). The effect of causal centrality on willingness to pay persisted when controlling for income ( $\beta = 57.64, p < .01$ ).

In Study 1B ( $N = 242$ ), we replicated the effect found in Study 1A ( $\beta = 33.74, p = .027$ ) and examined the relationship between identity importance and causal centrality. We found that importance of being a football fan mediated the effect of causal centrality on willingness to pay ( $\beta = 11.34, 95\%$  Bootstrapped CI = [4.76 20.87]), suggesting that causal centrality contributes to identity importance and causal centrality may drive behavior via importance. This result is consistent with theoretical accounts that suggest that important aspects of the self-concept influence behavior more (Markus and Wurf



1987) and provides a novel psychological explanation for what it means for an aspect to be important to the self-concept.

In Studies 2A and 2B, we expanded our exploration into an aspect of the self-concept that is not a social category, the desire to buy environmentally-friendly products. We measured the causality centrality of the desire and had participants complete a series of hypothetical purchase decisions in which they chose between two versions of a product: an expensive environmentally-friendly version and a cheap conventional version. Replicating the results of Studies 1A and 1B, we found that people who perceived their desire to buy environmentally-friendly products as more causally central chose more environmentally-friendly products ( $\beta = .127, p < .01$ ).

In Study 2B ( $N = 300$ ), we examined the relationship between salience, the focus of much research on identity-based consumption, and causal centrality. In a  $2 \times 2$  design, participants were randomly assigned to a salience manipulation (a writing task about what being frugal or environmentally friendly meant to them) and we measured the causal centrality of their goal to be environmentally friendly. We found a main effect of causal centrality (replicating the results of Study 2A,  $t(298) = 2.66, p < .01$ ) and of salience such that people who wrote about environmental friendliness selected more environmentally-friendly products ( $t(298) = 2.43, p = .016$ ). There was no significant interaction ( $F_{(1,290)} = .18, p > .05$ ) suggesting that causal centrality and salience independently influence choice.

Finally, in Study 3 ( $N = 243$ ), we examined political identity (being a Democrat or Republican) during a time when it was very salient, the 2016 Presidential election. A logistic regression predicting whether participants voted for their party's candidate based on causal centrality of political party (the number of causal links political party had to other features) revealed that, as predicted, people who believed that their political party was more causally central were more likely to vote with their party than those who saw political party as more causally peripheral ( $\beta = .099$ , Wald  $\chi^2(1) = 8.67, p < .01$ ). Further, the relationship between causal centrality and voting held even controlling for satisfaction with the party's candidate and ideology (liberal vs conservative) ( $\beta = 1.54$ , Wald  $\chi^2(1) = 6.99, p < .01$ ), suggesting that causal centrality predicts identity-consistent behavior above and beyond simple preference (satisfaction and ideology).

In five studies we find evidence that consumers who perceive an aspect of their self-concept as more causally central are more likely to engage in identity-consistent behaviors. Further, we find evidence that causal centrality predicts these behaviors above and beyond simple measures of preference and the salience of an identity. Thus, the research provides a more nuanced understanding of identity-based consumption and highlights the need to understand how consumers think about their identities in the context of the broader self-concept.

## Examining the Link between Predicted Identity Change and Future Well-Being

### EXTENDED ABSTRACT

The relationships that people have with their future selves can be important predictors of the decisions they make in intertemporal contexts, where decisions have consequences at multiple points in time (Hershfield and Bartels 2018). Greater continuity with one's future self, for example, has been associated with lower discount rates (e.g., Bartels and Rips 2010), greater accrual of financial assets (Ersner-Hershfield et al. 2009), more ethical decision-making (Hershfield, Cohen, and Thompson 2012) and that the consideration of future consequences mediates the extent to which people regard inappropriate negotiation strategies as unethical (Study 2, and better health (Rutchick et al. 2018).

Crucially, this growing body of work has examined the link between future self-continuity and outcomes in a *cross-sectional* context: feelings about the future self, in other words, are always linked to current outcomes. In theory, if feeling more connected to one's future self results in decisions that are more patient in nature (e.g., choosing to save now rather than spend), then feeling connected to one's future self should also result in more positive outcomes at distant points in time. However, an alternative possibility may exist: disconnection from the future self could shield individuals from continually denying themselves pleasures in the present, allowing them to experience sustained satisfaction over time (Keinan and Kivetz 2008). Whichever the case, research has yet to examine whether heightened future self-continuity actually affects the well-being that the future self experiences.

The current research is the first to check in with the future self. Using a 10-year longitudinal dataset of thousands of Americans, we estimate how thoughts about one's future self in an initial survey correspond with life satisfaction 10 years later.

## Method

### Participants

We use 10-year panel dataset from the first two waves of the National Survey of Midlife Development in the United States (MIDUS). 4,963 respondents were surveyed in both the first wave (MIDUS I, 1994-1995; MIDUS I age range 20-75,  $M_{\text{age}} = 46.5$  years; 53.3% Female) and the second wave (MIDUS II, 2004-2006).

### Questions and Measures

Our main independent variable is a bottom-up measure of predicted identity change constructed from questions in MIDUS I regarding present and predicted traits. The 1995 survey asks "How calm and even-tempered are you now?" (*MIDUS I present trait*) and "How calm and even-tempered do you think you will be 10 years from now?" (*MIDUS I predicted trait*). The survey includes similar questions for caring, wise, willingness to learn, and energetic. Using methodology from Quoidbach, Gilbert, and Wilson (2013), we calculate the absolute predicted change for the five traits:

$$\text{predicted change in [trait]} = | \text{MIDUS I predicted [trait]} - \text{MIDUS I present [trait]} |.$$

Next, we take the sum of the absolute predicted changes of the five traits to get our primary independent variable, *Predicted Identity Change*.

The dependent variable, life satisfaction, is a combined 5-item response (where individuals rate on a 0-10 scale their life overall, work, health, relationship with spouse or partner, and relationship with children).

## Results

As our main analytical strategy, we regress life satisfaction in MIDUS II on predicted identity change from MIDUS I (with controls including age, gender, income, and education). For a conservative estimate, we further include life satisfaction from MIDUS I as a control. After controlling for the concurrent relationship between identity predictions and wellbeing, greater predicted identity change significantly predicts less life satisfaction ten years later ( $\beta = -0.07, t = -4.39, p < 0.001$ ; See table 1). Note, the standardized coefficient is interpreted such that a 1 SD increase in predicted identity change in 1995 is associated with a .07 SD decrease in life satisfaction in 2005. The general result implies that after controlling for wellbeing in 1995, those that predict greater identity change experience less life satisfaction ten years after the original prediction.

These results holds after a number of robustness checks—using various controls, including alternate dependent variables, and running the analyses on predicted changes for each trait separately. Furthermore, we decompose the effect into predictions of trait improvement and predictions of trait decline, and show that predicted ID change in *either direction* is associated with less future life satisfaction.

We acknowledge that we measure predicted identity change differently than the previous research on psychological connectedness (Hershfield and Bartels 2018). However, a post-test validation study (N = 300) indicates that the bottom-up measure of predicted identity change is similar to the top-down, global assessment of future self similarity commonly used in previous research. Namely, bottom-up predicted identity change significantly correlates with a common top-down measure from the literature ( $r = .39, p < 0.001$ ), has moderately high test-retest reliability, as shown over a two-week period of time (N = 237;  $r = 0.64, p < 0.001$ ), and shows strong convergent validity in that it correlates with various outcome measures at similar magnitudes compared to the top-down measure.

## Conclusion

The research to date on the future self examines how measuring and manipulating predicted identity change corresponds with *current* outcomes. That said, the intertemporal decisions that are affected by impoverished relationships with the future self, such as inflated discount rates, lower asset accrual, and worse ethicality, should most profoundly negatively affect *future* wellbeing. We present the first project that demonstrates how greater predicted identity change corresponds with less subjective wellbeing ten years after the original prediction.

## When Prominent Logos Make You Feel Competent

### EXTENDED ABSTRACT

People want to feel good about their abilities, especially when they engage in performance-related activities that require skill (Alicke and Sedikides 2009, Leary 2007). We posit that when consumers engage in performance-related activities, brand logos displayed prominently (vs. subtly) on products help consumers feel more efficacious.

To conceptualize our research, we build on recent work examining whether, when, and why consumers prefer products prominent versus subtle logos (e.g., Han et al. 2010, Berger and Ward 2010). In contrast to that work's examination of this issue through the lens of social signaling, we study consumers' preferences for prominent versus subtle logos through an alternative theoretical lens of self-efficacy, which can enrich our understanding of logo preferences and yield novel predictions.

Self-efficacy refers to people's beliefs about their capabilities or competence to perform a specific task (Bandura 1994). Feeling good about one's ability to perform tasks is a fundamental psychological need (Alicke and Sedikides 2009). We posit that consumers prefer products with prominent (vs. subtle) logos as a strategy to enhance their feelings of efficacy. We argue that our proposed effect should materialize in product categories that have a performance-related component and thus involve consumer activities that require a certain level of skill and ability. Examples of such consumer activities include playing an instrument, doing sports, cooking, or home improvement.

We tested our proposed effect, the underlying process, and boundary conditions in nine studies that used diverse product categories, contexts, and samples.

In a pilot study, we examined the relationship between the size of brand logos and price in performance-related product categories. In contrast to the previously observed negative price-logo size relationship for non-performance products (i.e., that more expensive products have less prominent logos; e.g., Han et al. 2010), we observed a significant *positive* price-logo size relationship for performance products (i.e., that more expensive products have *more* prominent logos).

In Study 1A (N = 240), we tested whether consumers have a stronger preference for products with prominent (vs. subtle) logos for performance- versus non-performance products. Participants were randomly assigned to one of three product categories (gloves, backpacks, T-shirts) and one of two performance conditions (performance vs. non-performance). Participants were either told that the product was intended for a performance situation (e.g., gloves were intended for skiing) or a non-performance situation (e.g., gloves were intended for going out in winter). After choosing a brand for the product, participants customized their product by drawing the brand logo on a plain picture of the product. Participants drew (and hence preferred) bigger logos in the performance (vs. the non-performance) condition (effect of performance:  $F_{(1, 205)} = 9.45, p < .05$ ; other effects *NS*). In Study 1B, we replicated these results using choices between products with prominent logos versus no logo as the dependent variable ( $F_{(1, 1120)} = 24.44, p < .001$ ).

In Studies 2A and 2B (N = 529), we tested whether self-efficacy mediates this effect. Participants were assigned to a performance-versus a non-performance context and were asked to choose between a product with a prominent versus a subtle logo. Preferences for the product with a prominent (vs. subtle) logo were stronger in a performance context than in a non-performance context ( $\beta = 0.62, p < .05$  for choice in Study 2A;  $F_{(1, 242)} = 25.15, p < .001$  for preference in Study 2B). This effect was mediated by feelings of efficacy ( $CI_{95\%}$  [0.03, 0.65] in Study 2A;  $CI_{95\%}$  [-0.68, -0.26] in Study 2B). In Study 2C, we examined preferences for prominent (vs. subtle) logos in a private versus public performance-related setting, and we found that people preferred a prominent logo in both private and public settings (effect of public vs. private setting:  $F_{(1, 201)} = 1.64, p > .05$ ), showing that social signaling (present only in public settings) does not prevail over self-efficacy motives in driving the effect (present in both public and private settings).

In Study 3 (N = 322), we examined the first boundary condition of the effect – whether the brand is specialized in the activity versus not (i.e., a generic brand that also produces products for other activities). Since a generic brand is not specifically focused on performance in the focal activity, its logo should not promote an efficacious self-view in the activity. Accordingly, preferences for prominent logos for performance products were reduced when the focal brand was generic rather than specialized ( $F_{(1, 318)} = 7.47, p < .05$ ).

In Study 4 (N = 243), we tested whether the preference for a prominent (vs. subtle) logo for performance products is reduced when consumers are not motivated to improve in the given activity. If consumers are not motivated to improve their skills, they are also not motivated to feel efficacious; therefore, they should not look for products to enhance their feelings of efficacy. As predicted, we found that preferences for prominent logos for performance products were reduced when participants were not motivated to improve their skill in the activity vs. when they were motivated ( $F_{(1, 160)} = 9.29, p < .01$ ).

Finally in Study 5 (N = 147), we tested whether the preference for a prominent (vs. subtle) logo for performance products is reduced when the product is used for an activity that is easy, and hence requires little skill and involves low desire to feel efficacious (vs. difficult, and hence involves a lot of skill and high desire to feel effica-

cious). Our effect held when the activity was difficult ( $F_{(1,97)} = 8.69$ ,  $p < .01$ ), but not when the activity was easy ( $F < 1$ , NS).

In sum, this research broadens the existing knowledge connecting brand logo prominence to consumers' product preferences. Our research contributes to the literature on self-efficacy by proposing a new antecedent of self-efficacy, consumption choices. Moreover, the conceptual distinction between performance- and non-performance related products may improve the understanding of specific consumer phenomena (such as product preference for prominent logos). Apart from its theoretical value, this distinction is also relevant from a substantive perspective as performance products account for a large share of the consumer goods market.

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# New Insights Into Dynamic Framing of Choices in the Online Consumer Environment

Chair: Jen H. Park, Stanford University, USA

## **Paper #1: Improving Customer Satisfaction Online through Valence Matching**

Hannah Perfecto, Washington University in St. Louis, USA  
Leif D. Nelson, University of California, Berkeley, USA

## **Paper #2: Shades of Rejections: The Effect of Rejection Frames on Commitment to Choice**

Jen H. Park, Stanford University, USA  
Itamar Simonson, Stanford University, USA

## **Paper #3: The Quantity Integration Effect: Integrating Purchase and Quantity Decisions Increases Sales by Providing Closure**

Kristen Duke, University of California, San Diego, USA  
On Amir, University of California, San Diego, USA

## **Paper #4: Product Transparency in Online Selling Mechanisms: Consumer Preference for Opaque Products**

Lucas Stich, Ludwig-Maximilians-Universität München, Germany  
Martin Spann, Ludwig-Maximilians-Universität München, Germany  
Gerald Häubl, University of Alberta, Canada

### SESSION OVERVIEW

Despite the extensive research regarding framing effects on choice and perceived experience, we know very little about the role of task and option frames in the online environment. The proposed session examines this topic from a variety of angles. The unique characteristics of online shopping experiences (e.g., virtual shopping cart, multi-stage checkout process, side-by-side product comparison) present new opportunities for marketers to frame decisions in ways to increase customer engagement and revenues. These issues also raise important questions regarding the psychological processes triggered by alternative frames. The papers included in proposed session identify four specific ways in which framing matters in the online environment, including an examination of the psychological processes underlying such effects.

The first two papers examine how choice processes are represented when online consumers construct their consideration sets from a wide array of products. In particular, Perfecto and Nelson study how matching the valence of the frame (choose vs. reject) and the valence of the product attributes (positive vs. negative) can improve overall consumer experience. To that end, they find across four studies that consumers who derive their consideration set through matched valence—choosing from desirable products or rejecting from undesirable ones—feel more satisfied with their decision and enjoy the final product more than those who make “mismatched” decisions.

In the second paper, Park and Simonson examine alternative frames of rejection during consideration set formation. Throughout three studies in web-based store environments using virtual shopping carts, the authors vary the decision to pass on a product as either an active rejection (e.g., “reject this item”) or a passive rejection (e.g., “look at other items”) and find that active (vs. passive) rejection leads to a larger shopping cart and reduces cart abandonment.

The next two papers identify when and the extent to which dynamic option framing could be most effective in the online context. Specifically, Duke and Amir argue that compared to a two-stage format (e.g., “whether” → “how many” to buy), asking simultaneously “whether” and “how many” to buy in a quantity-integrated format

(e.g., not buy, buy 1, buy 2, buy 3) can significantly increase purchase likelihood. In a series of 22 studies, the authors find support for the effect across a number of online products and purchase contexts.

In the fourth paper, Stich, Spann, and Häubl identify another common option representation format for online products—opaque products. The authors suggest that through initially masking some attributes of a product from consumers and revealing only once a purchase has been completed, marketers may (1) offer an “easy way out” when choice among fully specified products is difficult, (2) enable consumers to explore products they would not otherwise be aware of, and (3) add an element of fun and excitement to the purchase decision.

Taken together, these papers identify distinct web-based features that give birth to novel frames and product representations. We expect the session to have broad appeal, given that these findings provide important implications for consumer behavior theory development and practical applications in the digital age.

## **Improving Customer Satisfaction Online through Valence Matching**

### EXTENDED ABSTRACT

Consumers are frequently stuck with decisions they would rather not make, between outcomes they would rather not obtain. For example, everyone would like to fly first-class but budgets restrict most to choosing seats in coach. Work on lose-lose decisions has shown that decision makers feel worse about their decisions than if someone else had made it for them (Botti and Iyengar 2004)—the opposite of the prevailing wisdom that people enjoy being able to decide for themselves (Langer 1975) or decide from positive options (Perfecto et al. 2017).

However, research on congruence in construal level theory (Liberman and Trope 2008) and regulatory fit (Higgins 2000) suggest that there is hope for decision makers faced with only bad options: matching the valence of the frame to fit with the valence of the options. Taking these literatures together, in an earlier project, we found that reframing the same lose-lose decision to be negative (e.g., “Reject the option you don’t want”) can leave participants feeling nearly as good about their lose-lose decisions as they did about win-win decisions (Perfecto et al. 2017).

Nevertheless, these studies used very abstract stimuli (e.g., rating liking of pairs of words) in artificial settings. As consumer researchers, we should be interested not just in reliable effects, but also in their applicability to consumers’ interaction with the marketplace (Inman et al. 2018). To that end, the present paper takes Perfecto et al.’s (2017) idea of attribute matching to more realistic consumer contexts and, importantly, to investigating actual consumption. Across four studies, we find that participants who make decisions matched on valence—choosing from positive options or rejecting from negative ones—feel more satisfied with their decision and enjoy the outcome more than participants who make “mismatched” decisions.

Study 1 (N = 406) demonstrates this basic effect with consumer goods. Consumer goods are an interesting case for valence matching since, by virtue of having a nonzero price, they do have some positive value. However, some goods are certainly more highly valued than others. With that in mind, participants were shown a pair of desirable goods—two new iPhones—and a pair of less desirable goods—two



flip phones—and were asked to make a selection. Furthermore, because online shopping sites (including Apple) frequently allow customers to compare a small number of items side-by-side, participants were told that they had put both options in their cart in order to better compare them. Finally, to make their selection, half of participants were asked to select the phone they would prefer to keep in their cart to buy; the other half were asked to select the phone they would prefer to delete from their cart before completing their purchase. After each decision, participants reported how certain they were that they selected the better phone and how satisfied they felt with their decision. Supporting previous research, when the valence of the options matched the valence of the frame (i.e., keeping iPhones and deleting flip phones), certainty and satisfaction were significantly higher than in mismatched conditions ( $t$ 's > 3.98,  $p$ 's < .005).

Study 2 ( $N = 512$ ) applies this effect to a more realistic scenario. Although companies frequently allow visitors to their websites to whittle down their offerings to a smaller set (the last step of which featured in the previous study), rarely are so few options offered to begin with. To that end, Study 2 was nearly identical to Study 1, except participants first saw several options: eight iPhones or eight flip phones. For each set, participants were asked to select two phones for closer consideration: half of participants were asked to select the two phones they wanted to keep under consideration, half selected the six phones they wanted to remove from consideration. Then, the study proceeded as in Study 1. Despite the preceding decisions, participants who made matched final decisions reported greater certainty and satisfaction than participants who made mismatched decisions ( $t$ 's > 3.01,  $p$ 's < .02).

The goal of Study 3 ( $N = 242$ ) was to investigate the downstream consequences of this increased satisfaction from matching. Participants evaluated 3 pairs of short videos, pretested to be entertaining or boring. On each trial, participants were asked to select by choosing or rejecting. After making their selection, participants reported how easy the decision felt to make in addition to their satisfaction. Then, after watching each video, participants rated it on four dimensions: liking, engagement, humor, and likelihood of sharing with friends, creating composite measure of enjoyment. In line with the previous studies, participants rated videos selected from a matched decision as marginally more enjoyable than participants who rated the same videos from a mismatched decisions ( $t$ 's > 1.96,  $p$ 's < .072).

Studies 4a and 4b extend this finding to intertemporal discounting, specifically selecting a plan for retirement. Since matched decisions feel easier to make (Study 3) and are made faster (Perfecto et al. 2017; Liberman and Trope 2008), consistent with System 1 thinking, perhaps participants will also be less patient, given matched decisions. Study 4a ( $N = 502$ ) looks first at abstract discounting decisions (i.e., smaller sooner vs. larger later amounts). Participants made choices or rejections across 12 trials, including both pure gains and losses. Participants' responses from matched decisions were less patient than those from mismatched decisions ( $t$ 's > 3.23,  $p$ 's < .003). In Study 4b ( $N = 608$ ), participants were shown 4 pairs of retirement plans, highlighting either gains (a secure future) or losses (paycheck deductions) involved, and asked either to choose or reject. Participants making matched decisions were more likely to select plans with lower deductions ( $t$ 's > 2.14,  $p$ 's < .031).

Together, these four studies show that by matching the valence of a decisions frame with that of its options, one can facilitate consumer decision making. When a company is selling less-than-desirable goods, they can frame the purchase decision as a rejection of alternatives and improve the customer's satisfaction and even enjoyment of the product. Employers, too, can improve their employees'

wellbeing by framing their retirement options in a matched manner, to nudge them towards greater patience.

## Shades of Rejections: The Effect of Rejection Frames on Commitment to Choice

### EXTENDED ABSTRACT

In the age of Amazon.com and online shopping, consumers today face an ever increasing number of options in the online market. As a result, customers often need to pass on more products than they choose to buy. Despite the prevalence of rejection of alternatives in the marketplace, the traditional focus of consumer research has been on understanding how decision makers navigate and *choose* among a set of alternatives (Tversky and Kahneman 1981; Bettman, Luce, and Payne 1998; Dhar and Simonson 2003). In fact, relatively little attention has been paid to the psychology of passing on (vs. choosing) an alternative and the different ways of framing the rejection.

In this research, we propose that the framing of decisions to *not* include an item to a consumer's consideration set can influence the experiential aspect of how the consumer constructs her consideration set, which in turn affects her commitment to the constructed set. Specifically, we test this idea in the online context, where the experience of adding items to the consumer's cart impacts the way the consumer ultimately evaluates the items in her cart and makes a purchase from the cart. Throughout four studies, we allow participants to browse through consumer products and add items to their shopping cart for reconsideration. When asking participants whether they would like to add the product to their cart, we vary the framing of decisions to pass on the product as either an active rejection (e.g., "reject this item") or a passive rejection (e.g., "look at other items") and examine its downstream psychological and behavioral consequences.

Study 1 ( $N = 604$ ) asked participants to imagine shopping for a microwave oven at an online store. Participants evaluated nine microwaves, one at a time, and decided between two buttons whether to add each microwave to their cart for reconsideration. The button to add was "add to shopping cart", whereas the decision to *not* add varied across three conditions ("reject this item", "look at other items", no button (control)). Participants then proceeded to their cart, where they found the items they had added earlier and were asked to buy one of them or the no-choice option. We found that when the option to not add an item was framed as "reject", individuals added more items to their cart compared to those in the "look at others" and the control condition  $M_{reject} = 3.57$  vs.  $M_{look\ at\ others} = 3.13$ ,  $M_{control} = 3.14$ ;  $F(2, 601) = 3.67$ ,  $p = .026$ ). Furthermore, individuals in the "reject" group were more likely to purchase a microwave oven from their cart (92.8% purchase likelihood) than those in the "look at others" (88%) and the control (86.7%);  $\chi^2(1) = 4.28$ ,  $p = .039$ . We also found longer decision time for the two rejection conditions compared to control  $M_{reject} = 5.37$  vs.  $M_{look\ at\ others} = 5.56$ ,  $M_{control} = 1.88$ ;  $F(2, 601) = 14.64$ ,  $p < .001$ ), indicating that the two rejection modes did not differ in their processing ease or deliberation.

Study 2 ( $N = 387$ ) investigated whether rejection elicits a greater sense of decision. Using a similar design, participants reviewed nine microwaves and were instructed that they could reconsider their previous options by clicking on them again. Consistent with our prior finding, the "reject" group added more items to their cart ( $t(385) = 2.102$ ,  $p = .036$ ) and were more likely to purchase from their cart compared to the "look at others" condition ( $\chi^2(1) = 4.06$ ,  $p = .044$ ). More importantly, individuals who passed on items via "reject" (vs. "look at others") were less likely to revisit and reconsider the items they had previously rejected ( $t(385) = 2.3$ ,  $p = .022$ ).

Study 3 ( $N = 219$ ) tested the underlying mechanism by asking participants to provide a reason for their choice. We found in a 2 (reason vs. no reason)  $\times$  2 (rejection frame: “reject this item” vs. “look at other items”) between-subjects design that when individuals had to provide reason for their choice, the cart size difference between the two rejection frames was no longer significant ( $M_{reject\ without\ reason} = 3.98$  vs.  $M_{look\ at\ others\ without\ reason} = 3.07$ ,  $p = .02$ ;  $M_{reject\ with\ reason} = 2.18$  vs.  $M_{look\ at\ others\ with\ reason} = 2.3$ ,  $n.s.$ ). This is because the threshold for adding to the cart has become higher when reasons for/against are articulated, and their willingness to add is not diminished by the reluctance to reject. We also observed that reason based choice moderates the framing effect on purchase likelihood.

Study 4 ( $N = 366$ ) further tested the mechanism and directly manipulated the selection threshold. Through a 2 (cart threshold: high vs. low)  $\times$  2 (rejection frame: “reject this item” vs. “look at other items”) between-subjects design, we found that the two rejection frames differed in their cart size when given a high threshold (“add up to 3 items”), but not when items could be added relatively freely (“add at least 8 items”);  $M_{high\ threshold-reject} = 2.54$  vs.  $M_{high\ threshold-look\ at\ others} = 2.32$ ,  $p = .085$ ;  $M_{low\ threshold-reject} = 10.44$  vs.  $M_{low\ threshold-look\ at\ others\ with\ reason} = 10.63$ ,  $n.s.$  The cart threshold also moderated the effect of rejection framing on the commitment likelihood.

In four studies, we demonstrate that framing of rejection can influence consumers’ consideration set size and their subsequent commitment to purchase from the set. Overall, this research has not only theoretical implications for understanding different rejection motivations but also practical implications for marketers to reduce shopping cart abandonment and recapture online consumers’ commitment.

### The Quantity Integration Effect: Integrating Purchase and Quantity Decisions Increases Sales by Providing Closure

#### EXTENDED ABSTRACT

Consumers have countless opportunities to purchase products in multiple quantities. For example, when shopping online, a customer may encounter a pop-up asking, “Would you like to add any cookies to your order?” with options, “No” or “Add to cart.” She would respond by choosing whether or not to buy, and could later adjust the quantity. Alternatively, this appeal could be quantity-integrated, requiring her to simultaneously indicate whether and how many to buy, with options such as: “No thanks,” “Add 1 cookie to cart,” “Add 2 cookies to cart,” and “Add 3 cookies to cart.” Although these two selling formats provide consumers with the same ultimate choice (whether and how many cookies to buy), we find that quantity-integrated formats significantly increase purchase likelihood.

Twenty-two hypothetical and consequential experiments with over 13,000 observations find evidence of this “quantity integration effect.” Overall, they find a 40% increase in average likelihood of purchase, and an increase in overall sales volume of 29%. The effect persists across myriad product offers and purchase contexts (e.g., buying for oneself vs. others), although an important moderator exists: the attractiveness of the product ( $\beta = -.19$ ,  $t = -3.02$ ,  $p = .005$ ). The effect is largest among product offers that are the least naturally attractive. Thus, a managerial strategy of changing a two-stage appeal to a quantity-integrated appeal appears most effective for the product offers that need it most.

We rule out several explanations for this effect. First, two-stage formats tend to initially offer only two options (e.g., “buy” vs. “don’t buy”), while quantity-integrated formats tend to offer one non-pur-

chasing option (e.g., “don’t buy”) and multiple purchasing options (e.g., “buy 1,” “buy 2,” “buy 3”). Thus, purchasing takes up a greater share of the options in a quantity-integrated decision, which may lead individuals to choose it more (Fox, Ratner, and Lieb 2005). Yet, we find a significant quantity integration effect even when the maximum purchase quantity is only one. In Study 1, participants ( $N = 600$ ) imagined ordering a pizza online and encountering a pop-up advertising a sale on Coke. They could purchase a maximum of 1, 3, or 5 Coke bottles (between-subjects). Two-stage participants answered, “Would you like to add any 2 liter bottles of Coke to your order?” with either “yes” or “no.” Quantity-integrated participants answered, “How many 2 Liter bottles of Coke would you like to add to your order?” with options “0” and “1” (when the maximum quantity was 1, and “2” and “3” as additional options when the maximum quantity was 3; etc.). Significantly more quantity-integrated (57%) than two-stage (40%) participants purchased soda ( $\chi^2(1) = 22.94$ ,  $p < .001$ ). Importantly, this effect was significant at all maximum quantity values ( $p$ 's  $< .05$ ), including one, where there were two choice options in both formats.

Further, the effect arises even when the phrasing of the questions is identical in both formats. In Study 2 ( $N = 201$ ), participants imagined encountering a chewing gum sale, where they could purchase up to five packs. All participants indicated what they “would do in this situation.” For two-stage participants, the options were: “Not buy any” and “Buy.” For quantity-integrated participants, the options were instead: “Not buy any,” “Buy 1 pack,” (...) “Buy 5 packs.” Still, significantly more quantity-integrated (67%) than two-stage (45%) participants purchased gum ( $\chi^2(1) = 9.37$ ,  $p = .002$ ).

Thus, differences in the number of choice options or phrasing of questions cannot explain the quantity integration effect. Instead, we propose it arises because of an asymmetry in the cognitive closure afforded by the two formats. Purchasing in a quantity-integrated format is more specific (e.g., “buy 1,” “purchase 3”) than it is in a two-stage format (e.g., “buy,” “add to cart”). Moreover, purchasing in a two-stage format is inherently less complete—it requires the subsequent selection of a quantity. Thus, making a purchase is necessarily less ambiguous, more structured, more precise, and more complete in a quantity-integrated format; these characteristics define “cognitive closure” (Webster and Kruglanski 1994). As consumers tend to seek closure in their choices, we propose the higher cognitive closure afforded by quantity-integrated (vs. two-stage) formats drives the effect.

Study 3a tests for differences in closure. Participants ( $N = 266$ ) imagined encountering a candle sale and chose whether to purchase in either a quantity-integrated or quantity-sequential format. Again, the quantity-integrated format yielded higher purchase rates (51% vs. 26%;  $p < .001$ ). After their initial decisions, participants respond to items measuring choice closure (Gu, Botti, and Faro 2013), such as, “To what extent do you feel you have reached closure about your choice?” Consistent with expectations, non-purchasers (for whom the purchasing process is completely finished) reported higher closure than purchasers ( $\beta = 1.07$ ,  $t(263) = 7.01$ ,  $p < .001$ ). More importantly, quantity-integrated participants reported higher closure ( $\beta = .41$ ,  $t(263) = 2.74$ ,  $p = .007$ ) than two-stage participants, supporting our framework.

To corroborate the role of cognitive closure, Study 3b participants ( $N = 603$ ) responded to the Study 2 scenario and completed the Need for Cognitive Closure scale (NFCC; Roets and Van Hiel 2011). Again, significantly more quantity-integrated (31%) than two-stage (22%) participants purchased ( $\chi^2(1) = 5.45$ ,  $p = .02$ ). Further, the selling format interacted with NFCC ( $\beta = -.29$ ,  $z = -2.17$ ,  $p = .03$ ). A floodlight analysis revealed that the quantity-integrated format

increased purchase among individuals moderate to high in NFCC (3.84 out of 6 and above; 60% of participants). However, individuals low in NFCC, who are influenced very little by the allure of closure, showed no quantity integration effect.

Broadly, individuals face many decisions that could be framed as two-stage or quantity-integrated decisions: whether and how much to invest in the stock market, whether and how much to exercise, whether and how much to volunteer, and more. In examining purchase decisions, we identify a critical difference in how individuals respond to these two choice processes, opening the door to further exploration of the power of integrating decisions to act and quantity decisions.

### Product Transparency in Online Selling Mechanisms: Consumer Preference for Opaque Products

#### EXTENDED ABSTRACT

Selling opaque products refers to a marketing practice where some attributes of an offered good or service are initially concealed from buyers and revealed only once a purchase has been completed (Fay 2008; Jerath et al. 2010). Opaque products represent inherently dynamic choice options because they involve the chance of getting any product from a set of known (or unknown) alternatives to be revealed after purchase. While the concept of opaque products is very general, most real-world implementations of it are currently in the domain of online shopping.

Since opaque products are not concrete but “virtual” products, they allow sellers to extend their product line without incurring the cost of developing new products or services (Fay and Xie 2008). This virtual nature also allows the seller to dynamically customize the product. Hotwire and Priceline were among the pioneers of this selling strategy. They offer, for instance, opaque hotel bookings, hiding the hotel’s name and exact location from their customers until after the transaction has been completed. However, opaque selling has become a widespread practice beyond the travel industry. Trading under various names (e.g., grab bag, lucky bag, or mystery bag), a number of major online retailers have started to sell opaque products. Amazon has recently begun to offer thematic surprise boxes, and at least 900 different sellers are listing opaque products on Alibaba Group’s Taobao.com platform (Chu and Manchanda 2016; Fay et al. 2015).

While prior research has thoroughly examined what motivates sellers to offer opaque products and the conditions that make this marketing practice effective (Rice et al. 2013), very little is known about consumers’ preference for such offers. Prior research on the phenomenon commonly assumed that consumers are rational and forward-looking, choosing the product that maximizes their expected utility. Consumer preference for an opaque product thus depends on consumers’ valuations of the non-opaque alternatives that compose it, as well as their expectations about the likelihood of each of the non-opaque alternatives turning out to be the opaque product. Consequently, consumers demand for opaque products is driven by price discounts that compensate for the uncertainty about the characteristics of the product at the time of purchase.

The central thesis of the present research is that, under some circumstances, consumers might have a preference for opaque (vs. fully specified) products even in the absence of a discount or other economic incentive. We propose three psychological mechanisms that are potential drivers of such a preference – choosing an opaque product may (1) offer an “easy way out” when choice among fully specified products is difficult, (2) enable consumers to explore prod-

ucts they would not otherwise be aware of, and (3) add an element of fun and excitement to the purchase decision.

We examine the proposed mechanisms in three online experiments. Study 1 investigates whether people choose opaque products even when non-opaque (i.e., fully specified) products are readily available, and whether they are more likely to do so the more difficult they perceive the choice to be. In this experiment, we test the hypothesis that greater choice difficulty, driven by the number of fully specified alternatives, promotes consumer choice of an opaque product. Study 2 examines the impact of choice difficulty on opaque product choice in a paradigm with real consequences. In this experiment, we manipulate choice difficulty via the composition (rather than the size) of the set of fully specified alternatives that are available. Study 3 investigates the role of consumers’ desire to explore, and of the fun and excitement that opaque products might add to the purchase decision, in motivating consumers to choose such products. In this experiment, we manipulate both the availability (yes vs. no) and the nature of the opaque product (included in the set of specific products vs. a different product).

Evidence from the three experiments demonstrates that consumers frequently choose opaque products even when fully specified alternatives are readily available, and it provides support for each of the three proposed mechanisms. In particular, we find that greater perceived choice difficulty promotes consumer choice of opaque products. The more difficult choices feel for consumers, the more likely they become to take the “easy way out” by choosing an opaque product. The choice difficulty that results in greater preference for opaque products can arise from both the size of the set of fully specified products that are available and the composition of that set (e.g., the presence or absence of a dominant alternative). In addition, we show that consumers’ desire to explore is a key driver of preference for opaque products. The concealment and eventual revelation of specific product information are essential features of an opaque product, implying that consumers can discover something new when choosing such a product. Moreover, our results show that the anticipated pleasure from experiencing surprise (and uncertainty resolution) also motivates consumers to choose opaque products. Consumers intentionally seek out the uncertainty involved in opaque products because this adds an element of excitement to the purchase decision.

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# Perceiving Financial Resources in the Present and Future

Chairs: Justin Pomerance, University of Colorado at Boulder, USA

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## Paper #1: A Slack-Based Account of Pain of Payment

Justin Pomerance, University of Colorado at Boulder, USA

Nicholas Reinholtz, University of Colorado at Boulder, USA

## Paper #2: How Temporal Separation in Budgeting Affects Spending Behavior

Yuna Choe, Texas A&M University, USA

Christina Kan, Texas A&M University, USA

## Paper #3: The Last Hurrah Effect: End-of-Week and End-of-Month Time Periods Increase Financial Risk-Taking

Xinlong Li, University of Toronto, Canada

Avni M. Shah, University of Toronto, Canada

## Paper #4: Causes and Consequences of the Expense Prediction Bias

Chuck Howard, University of British Columbia, Canada

David Hardisty, University of British Columbia, Canada

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### SESSION OVERVIEW

When a consumer contemplates a purchase, she must determine whether she currently has sufficient funds, and whether the purchase would leave her with enough funds for the future. Such decisions require judgments about both present and future financial resources.

A growing literature investigates perceptions of present and future financial flexibility. People generally believe they will have more time and money in the future (Zauberman and Lynch 2005). Perceptions of resource availability alter the strategies by which people plan, and whether they feel they must make sacrifices due to a paucity of resources (Fernbach, Kan and Lynch 2015). Perceptions of future resources are skewed by the future feeling closer, and more typical, than the past (Caruso and Van Boven 2013; Sussman and Alter 2012). The papers in this session build on prior research, investigating how perceptions of financial resources in the present and future influence spending and saving.

The first paper offers a novel influence on the pain of payment. The authors link pain of payment and financial slack, arguing that perceived decreases in financial slack are one possible antecedent to the pain of payment. They demonstrate an association between the extent to which a purchase reduces perceived slack, and the extent to which it is painful.

The second paper demonstrates that the effectiveness of budgeting is not uniform in time. When consumers create a budget, they experience some degree of pain due to a new financial commitment. However, over time they hedonically adapt, incorporating the new commitment into their status quo. As such, the effect of the budget dissipates. Four studies—including scenarios and real-world manipulations—provide evidence consistent with their hypotheses.

The third paper demonstrates a simple tool for de-biasing consumers' predictions about their future financial situations. Because people anticipate the future being more typical than the present, they have trouble imagining unplanned expenses arising in the future. The authors demonstrate with lab and field data that simply asking people to list reasons why future expenses may be *atypical* can mitigate or entirely eliminate this bias.

The fourth and final paper, demonstrates that approaching the end of a budgeting cycle can alter behavior. Analogous to a lab group attempting to spend money that will disappear at the end of a fiscal period, consumers become less thrifty and more risk-seeking towards the end of their budgeting periods.

Our session contains four papers that shed new light on how perceptions of financial resources in the present and future influence saving and spending. The papers offer lab and field / secondary evidence across multiple studies, and each aims to be published in a top tier marketing journal. We believe that the present session will have specific appeal to researchers studying consumer financial decision making. We also believe the session will generate interest more broadly, as the topics—spending, budgeting, saving, and accruing debt—are important consumer topics that manifest in many subfields of study.

### A Slack-Based Account of Pain of Payment

#### EXTENDED ABSTRACT

Pain of payment is the negative emotion a person may feel when making a purchase. We propose a novel influence on pain of payment that builds from prior work on financial slack (Zauberman and Lynch 2005) and mental accounting (Henderson and Peterson 1992; Thaler 1985, 1999).

Financial slack is “the perceived surplus (or deficit) of spare money an individual has at a given point in time” (Berman et al. 2016). People are averse to reductions in financial resources (Hobfoll et al. 2003), here operationalized as perceptions of financial slack. We propose that the more a purchase decreases one's slack, the more psychologically painful it will feel.

Consistent with past research, we suggest that slack judgments are formed in a manner consistent with mental accounting—people behave as if they (i) identify the mental accounts relevant to financial slack, (ii) judge each account's balance, and (iii) combine these judgments into an overall evaluation of financial slack. Critically, each mental account a consumer has may factor more or less into judgments of slack (Morewedge, Holtzman, and Epley 2007; Sussman and Shafir 2012). We predict that the more a mental account factors into judgments of slack, the more painful it will be to deplete.

We test this idea in study 1. We ask participants to rate nine financial profiles of other individuals. The profiles are comprised of four accounts (checking, savings, credit card debt, physical cash) that vary in value, allowing us to recover which accounts are most mentally related to slack for each individual. We then ask participants how painful it would be for them (the participants) to make purchases out of each of the four accounts. We find that the extent to which an account contributes to slack judgments predicts pain of payment out of that account ( $\beta = 1.90$ ,  $t(131.98) = 2.59$ ,  $p = .011$ ). Two replications (omitted for brevity) lend additional support, and suggest that the more frequently an account is used, the more it loads on judgments of slack, and the more painful it is to deplete.

Studies 2–4 seek to manipulate the extent to which a mental account factors into slack judgments, thereby manipulating pain of payment from them. In study 2, participants ( $n = 101$ ) imagined having \$1000 divided between either five different or two different mental accounts (between subjects). We reasoned that the more mental accounts present, the less any one would factor into judgments of slack (Anderson 1974; Kruglanski et al. 2002). As predicted, equat-

ing total amount of money one has, an equivalent transaction-reduced perceived slack more (7-pt scale;  $M = 3.10$  vs  $3.80$ ,  $t = 2.60$ ,  $p = .01$ ) and was more painful (7-pt scale;  $M = 3.21$  vs  $3.80$ ,  $t = 1.78$ ,  $p = .08$ ) when consumers had fewer total mental accounts.

Study 3 manipulates the extent to which a mental account contributes to slack using the phenomenon of *earmarking* (designating funds for a specific purchase). When funds are earmarked, they feel as though they have already been spent (Webb and Spiller 2014). Given that they feel spent, they should not contribute to one's sense of financial slack. By virtue of not contributing to slack, they should be less painful to spend. Participants ( $n = 299$ ) imagined spending money on either a book, a gift, or car repairs. As a manipulation of earmarking, they imagined either spending out of their checking account (non-earmarked), or a purchase-specific fund (e.g. a car-repair fund; earmarked). Across products, participants rated spending earmarked funds as less painful than spending non-earmarked funds ( $\beta_{\text{earmarking manipulation}} = -.80$ ,  $t(296.04) = -3.05$ ,  $p = .003$ ). This effect was mediated by perceived decreases in slack (95% BCCI [.04, .29]).

Study 4 manipulated the extent to which mental accounts were factored into slack by manipulating the fungibility of a mental account. We reasoned that more fungible resources (resources that have fewer limitations on where and how they can be spent; e.g. cash versus a gift card) should contribute to slack more. Participants ( $n = 200$ ) imagined that they had to purchase a textbook on Amazon.com, and were randomized into one of two scenarios: high fungibility (their purchase would be made with a regular gift card to Amazon) or low fungibility (their purchase would be made with a gift card to Amazon that could only be used to purchase books). As predicted, participants who paid with the more fungible asset felt that the purchase cut into their slack more (7-pt scale;  $M = 5.51$  vs  $3.43$ ,  $t = 9.00$ ,  $p < .001$ ), and found the purchase to be more painful (7-pt scale;  $M = 3.54$  vs  $2.97$ ,  $t = 2.11$ ,  $p = .036$ ).

Previous studies have shown that buy-now-pay-later purchases are less painful (Prelec and Loewenstein 1998). This is consistent with our theorizing so long as the consumer believes, as is typical, that she will have more slack in the future (Zauberman and Lynch 2005). However, we argue if the consumer believes she will have *less* slack in the future, the future payment would require more of the consumer's available slack and should be *more* painful.

Study 5 tests this prediction: 100 participants imagined an increasing or decreasing salary over the course of their career as a manipulation of slack. They then rated how painful two payment options for the same product would be: payment now versus payment in 20 years (in both cases the product would be owned immediately). We replicate previous findings when slack is increasing in the future: paying later is rated as less painful ( $t(100) = 3.71$ ,  $p < .01$ ). However, when slack is decreasing in the future, people rate the later payment as *more* painful ( $t(96) = 4.47$ ,  $p < .01$ ).

## How Temporal Separation in Budgeting Affects Spending Behavior

### EXTENDED ABSTRACT

A common strategy for controlling spending is to decide how much consumers want to spend before they begin shopping. Consumers often use mental accounts as budgets, allocating resources for specific expenses before they are incurred. Because mental budgets are set in advance of purchase opportunities, there is typically some amount of temporal separation between the moment that a budget is set and the moment that a purchase is made. Although it is relevant to real life budgeting experiences, little is known about how the temporal separation between budgeting and purchase influences

spending behavior. We suggest that consumers become increasingly likely to overspend the budgeted amount as temporal separation in budgeting increases.

One possible underlying reason for this effect is diminishing pain of paying towards the budgeted money. Prior research demonstrates that people gradually adapt to the hedonic cost, or pain, of a purchase over time (Gourville and Soman 1998). Consumers first open a mental account for a purchase, and as time passes since the payment was made, they slowly incorporate the payment into their status quo, reducing pain of paying (Soman 2001). While pain of paying is typically explored in the context of actually spending money (e.g., Shah et al. 2015, Soster et al. 2014), people may also experience similar feelings when they make the decision to spend money and budget for an upcoming purchase. Simply earmarking money for a specific purpose can result in the sense of spending (Webb and Spiller 2014), showing that budgeting money may produce a similar experience to spending money. We suggest that after people set a budget for a purchase, they begin to adapt to the cost of that decision. As this adaptation increases over time, the pain associated with the decision lessens, which in turn increases the willingness to spend money when actual purchase occurs.

In Study 1, participants ( $N=248$ ) were randomly assigned to imagine that they had budgeted \$200 for a tablet PC either one-day, one-week, one-month, or six-months ago. Next, they indicated how likely they would be to spend \$250, instead of their \$200 budget, for the tablet PC to purchase 1) a premium version and 2) a more appealing option as a measure for overspending ( $= .79$ ). As hypothesized, the likelihood of overspending significantly rises as the temporal separation increases ( $b=.22$ ,  $p=.02$ ).

Study 2 was a two-phase experiment where participants experienced *actual* time separation between budget setting (phase 1) and a subsequent choice decision (phase 2) for a class ring. Undergraduate students ( $N=89$ ), who were close to purchasing their rings, were randomly assigned to experience either an eight-week vs. one-week separation between phase 1 and 2. In phase one, participants set a ring budget based on actual prices and options. In phase two, they selected their ring from a set that included additional options at higher price. Overspending was calculated by subtracting the amount budgeted from the amount spent. Participants in the eight-week separation condition showed significantly greater likelihood to overspend ( $M=55.12$ ) than those in the one-week condition ( $M=2.83$ ;  $F(1,87)=3.76$ ,  $p=.05$ ). A post-experiment survey completed by recent ring purchasers ( $N=247$ ) showed that greater temporal separation significantly predicted overspending ( $b=6.10$ ,  $p=.03$ ), concluding that people are increasingly likely to overspend as temporal separation increases.

Study 3 investigated the proposed process. Because hedonic purchases generally induce greater pain of paying (Kivetz and Simonson 2002), we reasoned that the effect of temporal separation would be stronger for hedonic than utilitarian purchases. Participants ( $N=354$ ) imagined setting aside \$300 either two-months or one-week ago to purchase a tablet PC that provided either hedonic or utilitarian benefits. Overspending was measured by asking about willingness to buy a premium version of the tablet PC for \$330 on a seven-point scale (1=very unlikely, 7=very likely). We found a significant interaction between the temporal separation and the benefit type ( $F(1,350)=3.84$ ,  $p=.05$ ). For the hedonic-framed good, participants in the two-month condition showed greater likelihood to overspend ( $M=5.61$ ) than those in the one-week condition ( $M=5.10$ ;  $F(1,350)=4.83$ ,  $p=.03$ ). However, overspending did not differ across the time condition for the utilitarian-framed good ( $M_{\text{utilitarian}^* \text{distant}} = 5.46$ , vs.  $M_{\text{utilitarian}^* \text{near past}} = 5.59$ ;  $F < 1$ ).

Study 4 also investigated the process. When consumers experience temporal separation, they may reevaluate their budget as they search for and acquire more information about their potential purchase. If it is true that this effect is driven by pain produced at the time one budgets one's money, then prolonging the budgeting decision through increased deliberation should effectively reduce the temporal separation between the final budget and actual purchase, increasing pain and mitigating overspending. We employed a minimalistic experimental paradigm to explore this issue in the lab. Participants ( $N=211$ ) received a set number of credits to allocate to watching films. To manipulate temporal distance, participants set a budget for how many credits to spend on films they would watch following either a 5 or 20 minute wait period. To manipulate deliberation during the wait period, participants either engaged in an unrelated task, or were asked to repeatedly reconsider their options and adjust their film budget as necessary. Thus, the final budget decision in both 5-minute and 20-minute deliberation conditions were made at the same time; consequently, there should be no difference in overspending between these two groups. After the wait period elapsed, participants purchased films to watch using their credits. We calculated the difference between budget and purchase to measure overspending. A two-way ANOVA revealed a significant interaction ( $F(1,207)=3.94, p=.05$ ); non-deliberators were more likely to overspend when the film budget was set 20-minutes ago ( $M=3.40$ ) than 5-minutes ago ( $M=-3.58$ ). However, for deliberators, overspending was no longer different ( $M_{\text{deliberator} \times 20\text{-minutes}} = -3.52$  vs.  $M_{\text{deliberator} \times 5\text{-minutes}} = -3.24$ ). Furthermore, greater temporal separation raised overspending through lower pain of paying for non-deliberators ( $b=.63, 95\% \text{ CI: } [.01, 2.07]$ ), but not for deliberators ( $b=-.45, 95\% \text{ CI: } [-1.96, .12]$ ).

Together, our findings explore how temporal separation in budgeting affects spending behavior. We found that as the temporal separation between budget setting and actual purchase increases, people are increasingly likely to overspend their budget. The results provide preliminary evidence of an unintended side effect of greater temporal separation in budgeting.

## Causes and Consequences of the Expense Prediction Bias

### EXTENDED ABSTRACT

A number of important financial decisions that consumers face require them to accurately predict their future expenses. For example, a consumer's decision about how much money to save or borrow today hinges on knowing how much money they will spend in the future. However, past research suggests that consumers will tend to under-predict their future expenses (Ulkumen et al., 2008; Sussman and Alter, 2012), a phenomenon we label the expense prediction bias (EPB). The present research introduces a simple cognitive tool that markedly improves consumers' expense prediction accuracy. Underlining the importance of such a tool, we also provide evidence that EPB is associated with lower savings and higher debt.

To develop this tool we theorize that people mentally represent the future using prototypes, which we define broadly as cognitive "blueprints" based on the central or typical instances of a category. This proposition is consistent with research showing that the future is mentally represented in relatively more prototypical terms than the past (Kane, Van Boven, & McGraw, 2012). We further propose that prototypical prospection causes consumers to under-predict their future expenses because behavioural predictions are based on mental representations of the future (Buehler, Griffin, and Peetz, 2010), and prototypes lack contextual detail (Van Boven, Kane, and McGraw, 2009). Accordingly, we also propose that decreasing perceived typicality of future expenses will increase expense prediction accuracy.

Study 1 ( $n = 485$ , Mturk) tested the hypotheses that consumers believe their future expenses will be lower and more typical than their past expenses. Participants first reported and predicted their expenses for the past and the next week, then indicated how typical they perceived their expenses for each week to be. In support of our hypotheses, participants predicted their future expenses would be more typical than their past expenses, ( $M_{\text{nextweek}} = 5.03, M_{\text{pastweek}} = 4.71, p < .001$ ), and that their future expenses would be 10.80% lower than their past expenses ( $M_{\text{nextweek}} = \$161.43, M_{\text{pastweek}} = \$180.98, p < .001$ ).

Study 2 ( $n = 1048$ , nationally representative sample from T.E.S.S.) tested the hypothesis that experimentally decreasing perceived typicality of future expenses will increase consumers' expense predictions. Participants were randomly assigned to one of three conditions: control, typical, or atypical. In the control condition participants recalled and predicted their expenses for the past and next week as in study 1. Participants in the typical condition also recalled and predicted their expenses but were instructed to list three reasons why their expenses for next week would be similar to a typical week before making their prediction. We hypothesized that this would not significantly impact predictions (vs. control) because, if our theory is correct, predictions in the control condition should already be based on a prototypical mental representation of the future. The atypical condition tested our tool which instructed participants to list 3 reasons why their expenses for next week might be different from a typical week. We hypothesized that this would decrease perceived typicality of future expenses and therefore increase expense predictions. As expected, predicted expenses were significantly lower than recalled expenses in the control condition ( $t(415) = 2.76, p = .006$ ) and typical condition ( $t(331) = 2.07, p = .039$ ), but statistically equivalent in the atypical condition ( $t(299) = -1.49, p = .14$ ).

In study 3 ( $n = 302$ , Prolific Academic) participants were randomly assigned to predict their expenses for the coming week in one of the three conditions from study 2. Then, over the next seven days, they reported their expenses at the end of each day in an online financial diary. This allowed us to test the hypothesis that consumers under-predict their future expenses as compared to their actual expenses. Predicted expenses were significantly lower than actual expenses in all three conditions ( $ps < .001$ ), but the size of the bias was 30.7% lower in the atypical condition vs. control. A 3(condition: control vs. typical vs. atypical)  $\times$  2(expenses: predicted vs. actual) between-within ANOVA confirmed a condition by expenses interaction ( $F(2, 299) = 3.26, p = .040$ ), and planned contrasts further confirmed that expense predictions were significantly higher in the atypical condition ( $M_{\text{atypical}} = \$210.61$ ) than in the control ( $M_{\text{control}} = \$165.67, t(299) = 2.01, p = .046$ ) and typical conditions ( $M_{\text{typical}} = \$142.59, p = .001$ ). The data also revealed that higher EPB was associated with lower savings, ( $r(299) = -.14, p = .02$ ), more frequent credit card interest charges ( $r(216) = .16, p = .02$ ), lower credit scores ( $r(206) = -.13, p = .06$ ), and greater self-expressed need to repay debt ( $r(300) = .17, p < .01$ ).

In study 4 we conducted a five week field study with 187 clients of a midsized North American bank. On the Sunday preceding week 1 of the study participants predicted their expenses for the next week and next month. On the Sunday of each subsequent week participants reported their actual expenses for the target week from their online bank account, and predicted their expenses for the coming week. They also indicated how typical they perceived their expenses for the past and next week to be. For the last week of the study, half of our sample was randomly assigned to receive our "atypical" intervention. In each of the first four weeks of the study participants predicted that their expenses for the next week would be more typical



than they had been in the past week ( $ps \leq .005$ ), and correspondingly, expense predictions were significantly lower than actual expenses in each week ( $ps < .01$ ). Participants also under-predicted their expenses for the month ( $M_{diff} = \$416.77, p < .01$ ). In the last week of the study EPB was replicated in the control condition ( $M_{diff} = \$79.99, p = .002$ ) but completely neutralized by our intervention in the atypical condition ( $M_{prediction} = -\$6.65, p = .85$ ).

In sum, this research identifies a key driver and several consequential correlates of EPB. Importantly, it also provides a simple intervention that policymakers and FinTech companies can use to improve consumers' financial predictions, and in turn, their financial well-being.

### **The Last Hurrah Effect: End-of-Week and End-of-Month Time Periods Increase Financial Risk-Taking**

#### **EXTENDED ABSTRACT**

“TGIF: Thank Goodness it’s Friday.” It is a phrase that is ubiquitous in modern society and used to signify the positive feelings associated with the transition between the work-week ending and the weekend beginning. Modern society is filled with examples of various temporal landmarks, largely driven by social construction, that have subsequently created clear associations structuring individuals’ memories and experiences (Robinson 1986; Shum 1988), but also our current behavior as well. The end-of-the week, in particular, has had a pervasive impact on the way we dress, behave, and make decisions at work. For example, it is not unusual for individuals to dress a bit more casually or have that extra beer during a happy hour event. This feeling of slack has spilled over to work habits as well. A recent survey of HR professionals found that a majority of workers reportedly felt the least productive in the office on Fridays. This brings up a natural question: Could this end-of-the-week effect affect decision-making as well? More specifically, does the potential slack associated with the end of a period affect investors’ risk tolerance and risky decision-making?

Understanding when people are most prone or vulnerable to making budgeting errors and risky choices is important for many reasons. For many individuals, just a few poor investment decisions may be quite consequential for one’s likelihood to go into debt. Moreover, these small decision biases can have a major impact in terms of how markets are constructed and perform. DellaVigna and Pollet (2009) document significant under reaction to information in earnings announcements when the announcements came on Fridays—a time period when individuals, they argue, are more inattentive to the news relative to other days of the week. While a number of articles have identified calendar effects in financial domains, the literature has largely focused on how the end-of-week create led to abnormal trading volumes and returns as evidenced by delays in response or action. But what happens to individuals who are *actively* making investment choices? Could the end-of-week, or end-of-period effects, influence optimism and perceptions of slack that could subsequently increase the risk investors are willing to tolerate?

Using a unique panel dataset of peer-to-peer lending loans, combined with a lab experiment, we find that investors are significantly more likely to invest in riskier loans at the end of a work week or end of the month, subsequently yielding worse returns in comparison to non-end of week periods. We obtained data from Prosper.com, a platform that provides P2P lending service in America but allows both investors and borrowers to set their own interest rates. A borrower can post an auction style listing specifying the maximum interest rate (reserve interest rate) he is willing to accept and the

amount he requests. Borrowers who set their reserve interest rate high are more likely to default. On the other hand, lenders can expect higher lender rate (the interest rate a lender receives on a loan) when they invest in a loan with higher reserve interest rate. Lenders (investors) on this platform face the trade-off between high interest rate and high riskiness.

In particular, we collected all bidding data from Nov 09, 2005 to Oct 14, 2008. The data includes 5,829,817 different bids submitted by 54,821 lenders. We find that investors (i.e., lenders) are significantly more likely to invest in listings with higher reserve interest rates on Fridays (the end of week) ( $p < .001$ , robust to various individual-level such as experience and average interest rate of loans for the investor, as well as firm-level controls, such as availability of loans, proportion of risky to riskless loans). To rule out the possibility that Friday is intrinsically different from other weekdays, we also test Wednesdays and Thursdays that are ends of working periods. We find similar patterns in lenders bidding behavior. To address the concern that our findings are driven by holiday effect, we provide evidence that at the end of a month, lenders prefer high reserve interest rate listings as well. We also rule out the potential that ego depletion is driving our results by looking at end-of-day effects. When mental energy is low, self-control is likely to be impaired, potentially leading to less consideration of the costs or losses. However, we did not find a significant relationship between the time of day (measured as either the last two hours of the work day or last two hours of the day). Finally, we compare the payoff rates lenders receive on regular working days and end of period working days. We find lenders risk seeking bidding behavior on end of period working days results in lower payoff rate on average.

In order to get a better idea of the mechanism driving these effects, we ran a follow-up laboratory experiment where we investigated the proportion of risk individuals were willing to take as a function of whether the decision was in the middle (control group) or end of a cycle (end-of-period). More specifically, we asked individuals to complete a series of tasks, one of which was to allocate \$100,000 to either risky (stock) versus riskless (bond) asset. Individuals who had the risk decision at the end of the cycle were significantly more likely to put more money into stocks (vs. bonds) relative to those who made the allocation decision in the middle of the cycle ( $p = 0.014$ ). Both increased feelings of happiness and perception that there will be a fresh start partially mediate the relationship between the end-of-period effect and risky decision-making.

Across two empirical studies—panel data from real investment decisions and a laboratory experiment on asset allocation—we find evidence that individuals are prone to an end-of-week bias. Investors are more likely to select riskier loans due to feeling more positive and believing that the next period offers a fresh start, despite the fact that these loans and end of period working days result in lower payoff rate on average.

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# Managing Finances: Insights into Consumers' Perceptions of Budgeting, Savings and Debt Management

Chairs: Nell Putnam-Farr, Yale University, USA  
Anastasiya Pocheptsova Ghosh, University of Arizona, USA

## **Paper #1: Turning “Expenses” to “Bills”: How Spending Categorization Impacts Budget Optimism and Likelihood of Success**

Nell Putnam-Farr, Yale University, USA  
Anastasiya Pocheptsova Ghosh, University of Arizona, USA

## **Paper #2: Time-insensitive Budget Tracking: Nudging Consumers to Spread out Spending over Time**

Liang Huang, University of Arizona, USA  
Anastasiya Pocheptsova Ghosh, University of Arizona, USA

## **Paper #3: Doing it the Hard Way: More Effortful Saving Leads to Less Investing**

Joshua I. Morris, Stanford University, USA  
Szu-chi Huang, Stanford University, USA  
Christopher Bechler, Stanford University, USA

## **Paper #4: Scope Insensitivity in Debt Repayment**

Daniel Mochon, Tulane University, USA  
Nina Mazar, Boston University, USA  
Dan Ariely, Duke University, USA

### **SESSION OVERVIEW**

Consumer financial decision-making is an important topic for the ACR community both from academic and public policy perspectives. Consumers' financial well-being is linked to overall well-being (Netemeyer et al. 2018) and positively affects a number of societal outcomes (Diener 2000). Numerous public opinion polls demonstrate that consumers feel uncertain or insecure in their ability to successfully manage their family's limited financial resources, plan for the future (retirement, college funds) and pay off debt (credit cards, loans; PWC 2016). The session looks at three critical financial management issues facing consumers: budgeting, savings and credit card debt repayment.

Significant research has examined how a lack of basic understanding of financial decisions negatively affects consumer decision making (Benartzi and Thaler 2001; Fernandez et al. 2014; Soll et al. 2013). Similarly, a large body of work in mental accounting examined how cognitive biases in categorization of funds into mental accounts leads to suboptimal financial choices (see Soman & Ahn 2011; Zhang & Sussman 2017 for review). Finally, more recent work has started to examine how consumers' subjective feelings about and while completing various financial tasks affect their financial decision-making (Park & Sela 2018). Complementing this line of work, the four papers in this session look at a novel factor affecting financial decisions - consumers' subjective feelings about three critical financial tasks.

The first two papers in the session focus on the domain of budgeting. First, Putnam-Farr & Ghosh explore consumers' differential feelings of control over their discretionary and non-discretionary spending and how these feelings affect consumers' ability to set and follow realistic budgets across different spending domains. Second, Huang & Ghosh examine budget tracking and adherence. They find that subjective feelings of progress in budgeting adversely affect consumer spending, increasing spending over the time of the budget.

Next, Morris, Huang & Bechler examine how perceived feeling of difficulty impact savings behavior. They find that increases in per-

ceived saving difficulty affect consumers' willingness to invest the money to get higher future returns. Finally, Mochon, Mazar & Ariely examine the domain of credit card debt payment. They find that while consumers are insensitive to the size of their debt, they are also insensitive to the frequency of making payments. They demonstrate that increasing payment frequency positively affects repayment rate and the likelihood of paying off credit cards.

Taken together the papers demonstrate that consumers' subjective feelings about their performance in three distinct financial decision-making domains have important consequences for their ability to successfully set and manage budgets, invest for the future and pay off debt. Importantly, all papers suggest simple interventions (for example, time-insensitive view of budgets and more frequent payment options for credit cards) that can improve consumers' financial management. We believe this session will be interesting to a broad ACR audience, including researchers in the area of financial decision making, affective influences on consumer behavior, and consumer welfare.

## **Turning “Expenses” to “Bills”: How Spending Categorization Impacts Budget Optimism and Likelihood of Success**

### **EXTENDED ABSTRACT**

According to the most recent Federal Reserve report, just under one-fourth of adults are not able to pay all of their current month's bills in full and forty-four percent of adults say they either could not cover an emergency expense costing \$400, or would cover it by selling something or borrowing money. (Board of Governors of the Federal Reserve System, 2017) While there is a case to be made that this problem is caused by broader issues of economic insecurity and income inequality, the issue can also be attributed to poor financial planning, specifically failure to set and adhere to budgets. Making and sticking to a budget is important. It allows for retirement savings, rainy day/emergency fund, and general financial preparedness. But despite the fact that 41% of Americans say they use a budget for planning (Jacobe, 2013), and many of them are using apps and bank software to track expenses, consumers often fail to budget in a way that promotes their long-term financial well-being. Popular press articles abound with reasons why people might fail, and most revolve around the fact that budgets are not set in a way that encourages people to adhere.

This focus on budget setting contrasts with the majority of prior academic work that instead examines adherence to pre-determined budgets (Baumeister, 2002; Heath & Soll, 1996; Peeters, Rijk, Soetens, Storms, & Hermans, 2018). In this work, we choose to focus on the very first step of budgeting process – setting budgets – in order to understand how the budget setting process impacts potential budget adherence. We propose that people set overly optimistic budget targets that fail to take into account the reality of how they spend *in certain categories* and therefore predispose them to failure and prevents from long-term engagement with budgeting efforts (Nelson, Malkoc, & Shiv, 2018; Soman & Cheema, 2004).

Most people underestimate future spending, and are even more likely to underestimate their spending when they estimate in the

context of goal setting (Peetz & Buehler, 2009), where aspirations often trump past experience. This may be in part because of overall consumer optimism (Tam & Dholakia, 2011) or because consumers view past spending behavior, which they often classify as non-recurring extraordinary expenses, as less diagnostic of future spending (Sussman & Alter, 2012). We examine this misestimation process in more detail, showing that people demonstrate optimism only in certain types of spending categories (defined by their combination of uncertainty and optimism), and that inaccuracies in prediction are driven mostly by these categories. We also provide suggestions for how to increase the accuracy of budget forecasting overall.

First, we demonstrate presence of this phenomenon in real-life budget planning. Using a large dataset from a popular budget tracking application, we demonstrate that while people are optimistic in general (budgeting less than they actually spend), they are almost twice as inaccurate in “expense” categories (e.g. clothing, restaurants, gifts), where they underestimate spending by an average of \$66 (s.e. 2.77) in the first month after setting a budget, compared to “bills” categories (e.g. cable, rent, insurance, loans), where they underestimate spending by only \$23 (s.e. 4.66, comparison controlling for individual level effects using random effects GLS regression). The same pattern is observed in months 2 and 3 after initial budget failure, suggesting that consumers are not updating their expectations to reflect actual spending. The “expense” category is one that is native to the tracking app, and describes all spending in areas that are not represented by monthly bills. In other words, it includes most spending that would be considered discretionary in nature.

In a subsequent series of lab experiments, we explore ways in which we can increase consumers’ accuracy in budgeting for these expense categories. Specifically, we demonstrate that we do not eliminate this category optimism by providing additional information about peer levels of spending (Study 1 and Study 2) or by asking consumers to first recall their own past spending (Study 2). In all cases, the projected spending in expense categories is significantly lower than in an equivalent group of bill categories (matched by actual spending from our field data).

We subsequently asked consumers (Studies 3&4) how they would respond to feedback about budget mispredictions. We found that people generally adjusted their future budget in the direction and magnitude of the actual amount spent last month for bills categories only. By contrast, for the expense categories, participants either kept their previous budget (no change to estimate) for large budget failures or decreased the budgeted amount to make up for last month’s overspending for smaller budget failures. Both of these reactions suggest that consumers are not using information from the budget failure to improve their budget estimates for discretionary expenses. We also find (Study 4) that consumers are more likely to attribute budget failure in expense than bills categories to themselves, yet they still do not sufficiently incorporate such failures into future budgets.

Finally, we demonstrate that the difference between one’s own past spending and one’s budget is attenuated when consumers are asked how much they are *likely* to spend, rather than how much they *should* spend (Study 5), suggesting that the optimism does not come from lack of awareness of past spending, but from overly aggressive spending targets in areas where people feel they ought to be spending less. We also find (Study 6) that the difference between bills and expenses is eliminated when participants are asked to project how their best friend would budget. The optimism thus appears to be personal in expectation. Both of these moderators open up interesting additional avenues for exploration. In follow up experiments, we attempt to improve budgeting by encouraging people to think of “expense”

categories as being more like bills, thus increasing focus on the accuracy of budgeting as opposed to minimizing spending.

### Time-insensitive Budget Tracking: Nudging Consumers to Spread out Spending over Time

#### EXTENDED ABSTRACT

Budgeting is considered a useful tool for consumer financial management (Heath & Soll, 1996; Thaler, 1999). It provides specific reference points and allows consumers to monitor spending relative to those reference points (Heath & Soll, 1996; Krishnamurthy & Prokocec, 2010). Despite the large body of work that examines biases in consumers’ tracking of prior spending (Soman, 2001; Sussman & Alter, 2012; Stille, Inman, & Wakefield, 2010; Cheema, & Soman, 2006), there is little work that examines different ways in which consumers can interpret accurate (unbiased) spending feedback. Yet, marketplace is abounded with bank software and financial applications that offer consumers accurate tracking of their expenses.

Research has shown that feedback affects consumers behavior (Etkin, 2016; Fishbach & Finkelstein, 2012). While most research focuses on situations where consumers strive to achieve a desirable end state (i.e. an approach goal, Amir & Ariely, 2008; Cheema & Bagchi, 2011; Kivetz, Urminsky, & Zheng, 2006), we study feedback in a budgeting context, where both approach and avoidance goals are salient: consumers want to curb spending (i.e. focusing on the \$0 reference point), yet make desired purchases within the budget constraint (i.e. focusing on the budget reference point). Consider a consumer with a \$50 monthly coffee budget. Her budget tracking app shows that she has spent \$13 in the first week. The consumer can see her spending in a time-insensitive way (e.g. I am in safe range) or in a time-sensitive way (e.g. here is what I spent in one week). We test how these different interpretations of spending feedback affect consumers’ purchasing behavior over the budget period. We argue that time-sensitive focus would increase spending over time, as consumers move away from \$0 as a reference point and closer to the allocated budget. Yet, time-insensitive interpretation of spending feedback would lead to more consistent spending over time. Thus, we should expect both lower spending at the beginning of the budget period and higher spending at the end of the budget period for consumers with time-sensitive (vs. time-insensitive) focus.

We first tested manipulation of time-insensitive and time-sensitive focus in a pilot study. We expected that asking consumers’ about perceptions of overall budget progress versus budget success at a time would increase focus on the elapsed budget time. Participants imagined having a monthly \$200 budget for eating out. They were given feedback on their spending once every five days. The participants spending speed was kept at a pace to be equal to \$200 budget by the end of the budget period. As expected, while perceptions of budget progress increases over time ( $F(1,49)=16.33, p<.05$ ), perceptions of budget success were insensitive to elapsed budget time ( $F(1,49)=1.45, n.s.$ ).

In study 1, we tested if directing consumers’ attention to budget progress (time-sensitive) or success (time-insensitive) affects spending likelihood. Study 1 employed a 2(success vs. progress)\*5(feedback time) mixed design, using a scenario identical to pilot study, with progress and success measures manipulated between subjects. After receiving spending feedback, on day 5 and day 25, participants indicated their likelihood of eating out the next day. As predicted, focus on budget progress led to an increase in spending over budget time ( $M_{\text{progress}_t1}=2.98, M_{\text{progress}_t2}=4.00, p<.05$ ), while focus on budget success kept spending constant ( $M_{\text{success}_t1}=3.39, M_{\text{success}_t2}=3.25, n.s.$ ). Note that participants in success



condition spend more than participants in progress condition at the beginning of the budget period, suggesting that our effect is not driven by greater commitment to curbing consumption, because such commitment should decrease spending across time.

We replicated this effect in study 2 using a computer-simulated grocery shopping task where staying within the budget was rewarded. Study 2 used a 2(success vs. progress)\*2(unplanned purchase timing: at the beginning, at the end) between subject design. Participants were given a \$50 budget to complete a 15-item shopping list. Participants were given accurate feedback on their accumulated spending and were asked to indicate either their progress or success at managing their budget after they purchased the 5th and 10th items. Further, participants were shown chocolate bars that they can purchase after item 5 (vs. item 10, manipulated between subjects). They were told that the chocolate bars were not planned for in their budget, but that the purchase, if made, would add to their total spending (Stilley, Inman, & Wakefield, 2010a, 2010b). Consistent with Study 1, chocolate purchase intention increased when participants focused on budget progress ( $M_{\text{progress\_t1}}=2.51$ ,  $M_{\text{progress\_t2}}=3.71$ ,  $F(1,188)=8.31$ ,  $p<.05$ ), but not when they focused on budget success ( $M_{\text{success\_t1}}=3.29$ ,  $M_{\text{success\_t2}}=3.72$ ,  $F(1,188)=1.06$ , n.s.).

In Study 3, we test a simple, practically relevant way to make consumers less time-focused when interpreting spending feedback by giving them discrete yes/no feedback to indicate their budget standing. The study had a 3(success vs. discrete-feedback vs. control)\*2(feedback time) mixed design, with the first factor manipulated between conditions. We used a scenario similar to study 1. Participants reported their success or gave discrete answers (i.e. doing good vs bad) to indicate their budget status respectively in success and discrete-feedback conditions, while they didn't report anything in the control condition. Participants in the control condition increased their spending over time suggesting that time-sensitive focus is default in this setting (measured in dollars spent:  $M_{\text{progress\_t1}}=14.81$ ,  $M_{\text{progress\_t2}}=18.62$ ,  $F(1,51)=5.22$ ,  $p<.05$ ); while the spending remained constant in both success and discrete feedback conditions ( $M_{\text{success\_t1}}=13.89$ ,  $M_{\text{success\_t2}}=14.75$ ,  $F(1,54)=.84$ , n.s.;  $M_{\text{discrete\_t1}}=13.87$ ,  $M_{\text{discrete\_t2}}=14.56$ ,  $F(1,54)=.44$ , n.s.).

As tracking of real-time spending becomes a more common practice among consumers, understanding how consumers interpret unbiased spending feedback is important. Our studies add to the research on budgeting and financial well-being and have implications for helping consumers stay within their budgets.

### **Doing it the Hard Way: More Effortful Saving Leads to Less Investing**

#### **EXTENDED ABSTRACT**

The allure of having a leisurely, work-free retirement is becoming less of an American Dream and more of a proverbial American nightmare. To retire, consumers need to accumulate wealth—and today, most consumers have far too little. Recent surveys show 28% of Americans over the age of 55 have no monetary assets for retirement, and 60% have less than \$100,000.

For consumers to accumulate sufficient wealth for retirement, merely exerting effort to save money is not enough. They also need to invest. Indeed, the best instrument for growing one's long-term assets is to invest one's savings in the stock market over a long period of time and utilize the exponential growth of compound interest (Malkiel 1999). To illustrate, imagine two consumers who each save \$10,000 a year: Consumer A does not invest his savings while Consumer B invests all his savings per year in an S&P 500 index fund. If we conservatively assume an average annual return for the S&P 500

of 5% per year, in 40 years, Consumer A will have \$400,000 while Consumer B will have \$1.2 million.

There are numerous reasons why individuals don't invest, including the lack of financial literacy (Fernandes et al. 2014) and myopic loss aversion (Benartzi & Thaler 1995). Relatedly, there has been much research over the past several decades that seeks to understand the barriers consumers face when attempting to accumulate wealth, mostly focusing on changing the process through which one saves (Thaler & Benartzi 2004; Ulkumen & Cheema 2011; Tam & Dholakia 2014). In this research, we examine the interplay between these two financial behaviors—the effect of perceived effort in saving on one's likelihood to then invest this money to accumulate greater overall wealth.

Prior literature has shown that both reducing one's required effort to save (e.g., nudges, Thaler & Sunstein 2009) and increasing one's effort to save (e.g., through increased financial monitoring, Kan et al. 2015) can be beneficial for accumulating wealth. We hypothesize that, when it comes to investing one's savings, higher perceived effort in saving can backfire. This occurs because greater effort invested to obtain a good can lead to a greater attachment and value placed on it (Arkes et al. 1994; Cherry et al. 2002; Muehlbacher & Kirchler 2009; Norton et al. 2012), even if the "good" in this case is only a means to an end of accumulating greater wealth. Across seven studies using savings paradigms that involve accumulation, budgeting, and physical effort, we show that perceiving savings as being obtained in a more effortful way decreases willingness to invest this money, leading to lower accumulated financial assets. Importantly, reframing this effort as being exerted in order to invest, rather than as being exerted in order to save, can attenuate this effect.

In Study 1 we created lab-managed savings accounts for 251 individuals and had them transfer us \$70 in several increments over a two-week period using Venmo.com. Then, we asked them to rate how effortful they felt had been to accumulate their \$70 in savings, and gave them an opportunity to invest as much of their savings as they wanted into a 3-year period S&P 500 simulation task. For every 1-point increase in reported effort exerted in accumulating savings, individuals invested \$2.94 less in the simulation,  $t = -2.16$ ,  $p = .032$ , and received \$2.94 less in overall returns from their savings,  $t = -1.91$ ,  $p = .057$ .

Then, across five studies (Studies 2a-e) on mTurk with a total of 1,200 participants, we developed a saving and investing paradigm where participants exerted real effort (in the form of repeatedly pressing a button on a keyboard) to save money. Using a within-subjects design, participants performed the button pressing tasks for multiple repeated trials, mimicking a monthly saving cycle for multiple months. The trials required different amounts of effort to complete, and once participants received their savings that month, they decided how much of these savings they would like to invest (see, Gneezy & Potter 1997). Across the five studies we manipulated several variables, such as the expected value and riskiness of the investments as well as how these investments were presented. We found a consistent significant pattern in each study that the more times the button had been pressed in order to save, the less participants would allocate of their savings to the investments,  $ps < .001$ . Furthermore, in Study 2e, we asked participants to evaluate how valuable they felt their savings were on each trial and found a significant mediation from effort to investment through participants' perceived value of their savings, 95% CI: [-.005, -.001]; greater effort exerted in saving led to a greater attachment and value placed on the money saved, accounting for participants' reluctance to then invest.

Finally, in Study 3 ( $N = 401$ , mTurk) we found that the effect of effort on investment can be attenuated when effort exertion is



framed as for the accumulation of overall wealth rather than for the accumulation of savings. Using a similar paradigm as Studies 2a-c, we directly manipulated whether participants' effort was associated with accumulating savings or with having an opportunity to invest to increase overall wealth. We found a significant interaction between effort framing and effort exertion on the amount that participants invested,  $t = -2.00$ ,  $p < .05$ . We replicated the negative effect of effort exertion on investment when effort was framed as for the accumulation of savings,  $t = -3.33$ ,  $p < .001$ , such that every additional button press corresponded to a .01% decrease in investment; framing effort exertion as providing an opportunity to invest attenuated this negative effect,  $t = -.46$ ,  $p = .65$ .

Overall, these studies identified an important psychological barrier to one of the most instrumental financial tools for accumulating wealth—investing. While it is of paramount importance that individuals work hard to save, our findings suggest policymakers, banks, and marketers must attend to the potentially negative downstream consequences that can result from increasing consumers' awareness of the effort they exert when saving.

### Scope Insensitivity in Debt Repayment

#### EXTENDED ABSTRACT

Many consumers struggle with high levels of debt. For example, it is estimated that U.S. consumers hold \$995 Billion of revolving debt (Board of Governors of the Federal Reserve System 2017), and the average credit card debt for a balance carrying household is \$16,048 (Harrow 2017). Moreover, the amount of credit card debt continues to grow each year, as younger cohorts are borrowing more and repaying at lower rates than older generations (Jiang and Dunn 2013). As credit card debt grows, so do the burdens associated with it, such as fees, interest payments, delinquency and bankruptcy (Agarwal and Liu 2003; Stango and Zinman 2009).

In this project we examine whether scope insensitivity, the finding that people are often insensitive to the number or quantity of something they are paying for (e.g. Schkade and Payne 1994), can provide a partial explanation and solution for excessive credit card debt. Specifically, we argue that people are largely insensitive to the amount of debt they have when making credit card payments, which can lead them to fall further into debt. However, a different form of scope insensitivity can help them better manage their debt. To the extent that people are insensitive to the number of payments they make (Kahneman and Knetsch 1992), changing the frequency of payment within a billing cycle can help them pay off their debt more quickly.

In order to provide initial evidence for our claims, we analyzed a large data set of real credit card transactions. Specifically, we examined the payment frequency and amount for 160,218 credit card accounts over the course of one year. Importantly, this was a sample of people who were struggling with their credit card debt. Our analyses provided support for the potential dual role of scope insensitivity in credit card debt. First, people were largely insensitive to the amount of debt they had when deciding how much of it to pay off. Indeed, we found a weak relationship between magnitude of balance owed and amount paid ( $\beta = .09$ ,  $SE = .001$ ,  $p < .001$ ). That is, for every extra dollar that they owed, they increased their payment by only 9 cents. Additionally, we found that the majority of payments were round numbers. Indeed, 36% of all non-zero payments were multiples of 100 (and 51% were multiples of 50). This suggests that when deciding how much of their balance to pay, people seemed to be using simplifying heuristics that were largely insensitive to the scope of the problem they were facing (their balance), much as it

is common in the scope insensitivity literature (e.g. Schkade and Payne, 1994)

We also found an insensitivity to the number of payments in a billing cycle. When using a fixed effects regression model, we found that when people chose to make more frequent payments in a billing cycle, they paid off more of their credit card debt ( $\beta_{\text{payments}} = 351.1$ ,  $SE = .93$ ,  $p < .001$ ). That is, people paid \$351 more of their credit card debt for each additional payment within a billing cycle. This translated into paying off an additional 6 percentage points of their credit card debt for each additional payment in the billing cycle. While these results are correlational and open to multiple explanations, they provide initial evidence in the field consistent with the proposed dual role of scope insensitivity in credit card repayment. We next conducted a series of lab studies to test for its causal effect.

In the lab experiments, participants were given scenarios where they were presented with a credit card bill and asked to decide how much of it they would pay. In all of our studies we manipulated the size of the debt as well as the payment frequency—e.g. in some studies participants were told that they could make two payments during a billing cycle, and were asked to decide how much each payment would be. Across three studies, with slight variants on the same scenario, we found a pattern consistent with the field data. Participants were largely insensitive to the magnitude of the debt they were facing (the payments were not higher when the debt was larger). They were also somewhat insensitive to the number of payments made. When they had to make more payments within a billing cycle, they paid off a larger portion of their credit card debt (Table 1; Studies 1-3).

In study 4, we again manipulated the payment frequency and balance within a credit card repayment scenario. Additionally, we included a condition which allowed participants to choose their preferred payment frequency. This allowed us to test whether there would be demand for such an intervention, and whether the right set of people self-select into this payment condition. We found that about half of the participants chose a bi-weekly payment frequency over a monthly one. Moreover, participants in the choice condition behaved on average the same as those assigned to the bi-weekly condition, suggesting that the people who most benefit from the increased payment frequency were those who self-selected into this option. In this study we also found a main effect of balance, which was due to a ceiling effect in the low balance condition, which was lower than in the other studies. In sum, these results suggest that scope insensitivity may be both a source of the problem, and a potential solution for excessive credit card debt.

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# New Paradigms in Myopic Choice

Chair: Adelle X. Yang, National University of Singapore, Singapore

## **Paper #1: Search Predicts and Changes Patience in Intertemporal Choice**

Crystal Reeck, Temple University, USA  
Byung Lee, Columbia University, USA  
Eric J. Johnson, Columbia University, USA

## **Paper #2: Situation Neglect Underlies Both Psychological Myopia and Psychological Hyperopia**

Sarah Wei, University of Warwick, UK  
Christopher K. Hsee, University of Chicago, USA

## **Paper #3: The Effect of Bariatric Surgery on Delay Discounting for Food and Money: A Longitudinal Study**

Ratnalekha Viswanadham, INSEAD, France  
Yann Cornil, University of British Columbia, Canada  
Liane Schmidt, Sorbonne Université, France  
Christine Poitou, Université Pierre et Marie Curie Paris VI, France  
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## **Paper #4: Anticipated Interpersonal Feedback Reshapes Other-oriented Intertemporal Choices**

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### **SESSION OVERVIEW**

Consumers often appear myopic in intertemporal choices between a smaller, sooner option and a larger, later option. Myopic choices relate to a wide range of consequential impatient behaviors, including health and financial decisions. This session features four papers that move beyond the traditional research paradigms and use novel, interdisciplinary approaches to understand myopic consumer choices. From comparative versus integrative search strategies (paper 1), to the neglect of duration ratio between present and future events (paper 2), to surgically-induced biological changes (paper 3), and anticipated interpersonal consequences (paper 4), each paper sheds light on a previously unidentified determinant underlying myopic choices.

Reeck, Lee and Johnson examine how the individual variation in information search strategies influences intertemporal choices. Using eye-tracking and neuroimaging data, they identify two distinct search strategies - comparative (i.e., alternative-based) and integrative (i.e., attribute-based), and find that consumers using comparative search are more patient and more sensitive to acceleration vs. delay framing than those using integrative search. Moreover, manipulating strategies can increase patience without the participant's knowledge.

Wei and Hsee find consumers often neglect the relative duration ratio between present and future events. Experiments demonstrate that the neglect of present-future duration ratio can give rise not only to myopic choices, when the ratio is low (i.e. when future events are longer than present events) but also to hyperopic choices, when the ratio is high (i.e., when future events are longer than present events).

When prompted to deliberate on the present-future duration ratio, consumers' choices become less myopic and less hyperopic

Viswanadham et al. investigate the effect of bariatric surgery, a drastic weight loss intervention, on the delay discounting for food and money. In two longitudinal studies, they find that obese patients exhibit more impatience for food rewards compared with lean individuals, and that one of the most successful current weight loss intervention - bariatric surgery - reduces impatience for food and thus attenuates this difference. Moreover, these effects were domain-specific and did not extend to money.

Yang and Urminsky find that intertemporal choices made for others are often more impatient than choices for oneself, contrary to predictions from prior theories that interpersonal choices would be the same or less impatient. Seven experiments suggest that the interpersonal feedback that consumers spontaneously anticipate from recipients reshapes the intertemporal tradeoff between immediacy and magnitude, and they identify how recipient specificity, feedback timing, and decision accountability each moderate the effect of interpersonal feedback.

In sum, myopic choices may be improved, these papers suggest, by subtly manipulating information acquisition (paper 1), highlighting the relative duration of present and future events (paper 2), weight loss interventions that impact the biological underpinnings of myopic behavior (paper 3), but not by delegating one's choices to others (paper 4). In sum, this special session provides new insights into consumer impulsivity and facilitates an interdisciplinary discussion on the topic.

## **Search Predicts and Changes Patience in Intertemporal Choice**

### **EXTENDED ABSTRACT**

Consumers often discount future rewards, making them less attractive than lower-value rewards delivered sooner (Laibson, 1997; Samuelson, 1937). When facing decisions involving outcomes over time, consumers use different psychological processes. Despite growing interest in heuristics in intertemporal choice (Ericson, White, Laibson, & Cohen, 2015; Read, Frederick, & Scholten, 2013), when heuristics are used and their impact on behavior remains unclear. Search strategies – how and in what order people acquire information – offer insight into the heuristics used in decision making. The present research examines individual differences in search strategies and how they influence patience in intertemporal choice. We identify two main types of search strategies and demonstrate that (1) search strategies influence patience, (2) that the effects of acceleration framing depend upon which strategy is used, and (3) subtly manipulating strategies increases patience.

In Study 1, participants (N=193) completed an intertemporal choice task in which decisions were framed as either choices to delay or accelerate consumption. In the delay condition, the smaller, sooner option was presented as the default, and participants had the option to switch to the larger, later option. In the acceleration condition, the larger, later option was presented as the default, and participants had the option to switch to the smaller, sooner option. We used MouseLabWeb (Willemsen & Johnson, 2011), a method similar to eye-tracking, to examine how participants acquired information during deliberation. Importantly, there were substantial differences in process across individuals, with individual differences explaining



six times more variation in search than variability across the options presented. Cluster analyses revealed two dominant strategies across individuals. Some people integrate both information about the timing and monetary value of an option, searching in an alternative-based manner. Other people instead search comparatively, evaluating how options differ on a key attribute (e.g., monetary amounts) and searching in an attribute-based manner. Importantly, differences in search also significantly predicted differences in choice. Comparative searchers were both more patient than Integrative searchers ( $\beta = -0.41$ , *s.e.* = 0.12,  $p = .001$ ) and exhibited a larger effect of acceleration framing ( $\beta = 0.08$ , *s.e.* = 0.03,  $p = .004$ ). Although Comparative searchers exhibited a significant effect of acceleration framing ( $\beta = 0.41$ , *s.e.* = 0.09,  $p < .001$ ), Integrative searchers did not ( $\beta = 0.07$ , *s.e.* = 0.08,  $p = .363$ ). These findings were replicated in a supplemental eye-tracking experiment, indicating that these results are not sensitive to the process tracing method employed. We also re-analyzed data from a previous experiment in which participants ( $N=20$ ) completed an intertemporal choice task while undergoing functional neuroimaging and eye-tracking. Comparative searchers exhibited greater differences in brain activation between delay and acceleration framing in lateral prefrontal cortex, ventromedial prefrontal cortex, and ventral striatum.

Study 1 established that individual differences in search strategies correlated with differences in patience and framing; Study 2, sought to establish a causal link between search strategy and behavior. Participants ( $N=207$ ) completed the intertemporal choice task in one of two conditions, presenting information in the display to encourage either comparative or integrative search. Consistent with Study 1, those in the Easy Comparative condition exhibited more patience than those in the Easy Integrative condition ( $\beta = -0.23$ , *s.e.* = 0.10,  $p = .027$ ). Additionally, those who used the Comparative search strategy exhibited a significant effect of acceleration framing ( $\beta = 0.65$ , *s.e.* = 0.12,  $p < .001$ ), while those who used the Integrative search strategy did not ( $\beta = 0.04$ , *s.e.* = 0.10,  $p = .702$ ). Further, these manipulations were not obvious to participants, and they did not believe that they affected their choices.

Study 3 explored the relationship between individual differences in search strategy and other individual differences that might influence patience in intertemporal choice. 200 participants completed the intertemporal choice task, with MouseLabWEB tracking information acquisition. After completing the task, participants then also completed measures of numeracy and financial literacy. Payne Index was computed as a continuous measure of search strategy, with higher scores associated with integrative search and lower scores associated with comparative search. Importantly, Payne Index exhibited a significant relationship with patient choice, ( $\beta = -0.05$ , *s.e.* = 0.02,  $p < .05$ ), with more comparative searching associated with greater likelihood of selecting the larger, later option, replicating the findings from Studies 1 and 2. When entered as separate predictors of patience in intertemporal choice, financial literacy exhibited a significant positive relationship with patient choice ( $\beta = 0.05$ , *s.e.* = 0.02,  $p = .033$ ), while numeracy exhibited a marginal relationship with patient choice ( $\beta = 0.04$ , *s.e.* = 0.02,  $p = .076$ ). Neither numeracy nor financial literacy predicted Payne Index ( $p$ 's  $< .1$ ), indicating there was not a significant relationship between these measures and search strategy. However, when Payne Index was included in the model as a predictor of intertemporal choice, neither numeracy nor financial literacy exhibited a significant relationship with choice any longer ( $p$ 's  $> .05$ ), while Payne Index still exhibited a significant relationship with patience ( $p < .05$ ). Thus, search strategy subsumes the variance explained by numeracy and financial literacy in predicting patient choice.

Taken together we show that 1) there are large and systematic individual differences in information acquisition, 2) these differences alter patience, and 3) manipulating information acquisition alters choices without the participant's knowledge. These results are important for both theory and practice. Cognitive models of intertemporal choice that do not take individual differences in information acquisition into account omit an important component of how choices are actually made. Analyses that do not investigate these effects may be averaging over two very different cognitive processes, and indeed different theoretical models may fit different subgroups better (Wulff & van den Bos, in press). Given the causal relationship between search strategies and time preferences, our results point to potential choice architecture interventions to increase patience.

### Situation Neglect Underlies Both Psychological Myopia and Psychological Hyperopia

#### EXTENDED ABSTRACT

Life consists of joy (e.g., play) and pain (e.g., work). How much time people spend on joy in the present often inversely determines how much time they spend on pain in the future. The more one works today (or when young), the more one can play tomorrow (or when older).

We study situations with the following structure: People go through two phases—the present and the future. In each phase, they spend their time either on joy (pleasant activities) or pain (unpleasant activities) or some combination of the two. In the present phase, people can choose how much time to spend on joy and how much time to spend on pain. In the future phase, people cannot choose; rather, how much time they will spend on joy versus pain will be inversely related to the time they spend on joy versus pain in the present.

We manipulate a key situational variable: the future-present relationship, which we operationally define as the ratio of the length of the present phase and the length of the future phase. If the future is longer (shorter) than the present, we say that the future is more (less) important than the present.

To maximize overall happiness in both the present and the future combined, people, when deciding how to allocate their present time between joy and pain, should be sensitive to the future-present relationship. The more (less) important the future is relative to the present, the more (less) time people should spend on pain rather than joy in the present. However, we propose that people are vulnerable to “situation neglect”: People are insufficiently sensitive to the future-present relationship. As a consequence, they make choices that do not maximize their overall happiness. Specifically, we propose:

- Hypothesis 1* When the future is more important than the present, people do not spend enough time on pain now and thereby appear myopic.
- Hypothesis 2* When the future is less important than the present, people do not spend enough time on joy now and thereby appear hyperopic.
- Hypothesis 3* Myopic and hyperopic choices yield less happiness than the choice that maximizes joy-to-pain ratio (i.e., “overall-ratio-maximizing strategy”).

*Hypothesis 4* Nudging people to deliberate on the hedonic consequences of their choices increases the joy-to-pain ratio in their choices as well as their overall happiness.

We present two experiments examining these hypotheses. In both experiments, participants were instructed to view flower pictures (joy) and cockroach pictures (pain) in two sequential phases. They learned the following two key features of the paradigm. First, participants could choose any combination of flower and cockroach pictures they wished to view, but only in Phase 1. In Phase 2, the proportion of flower versus cockroach pictures was inversely related to that in Phase 1. Second, participants needed to view different numbers of pictures in the two phases. When a participant needed to view more (fewer) pictures in Phase 2 than Phase 1, the choice in the present (Phase 1) commanded greater (less) importance for the future than for the present. We measured how many pictures of each type participants chose to view in Phase 1 and their overall happiness (i.e., mean value of sampled happiness after viewing each picture: 1=bad, 5=good).

Experiment 1 employed a 2 (future-present relationship: future-more-important vs. future-less-important) x 3 (strategy: free-choice vs. overall-ratio-maximizing vs. yoked) between-subjects design. In the free-choice condition, participants made their own choice in Phase 1. In the overall-ratio-maximizing condition, participants viewed the combination of pictures that maximized the overall flower-picture-to-cockroach-picture ratio without making any choices. In the yoked condition, each participant viewed the combination of pictures consistent with that chosen by the participant in the free-choice condition to whom s/he were yoked. In Phase 1 participants viewed 12 pictures. As hypothesized, when Phase 2 was long (i.e., 36 pictures), participants chose more flower pictures in Phase 1 than the overall-ratio-maximizing strategy ( $M=3.42$ ,  $t(49)=6.33$ ,  $p < .01$ ). When Phase 2 was short (i.e., 4 pictures), participants chose fewer flower pictures in Phase 1 than the overall-ratio-maximizing strategy ( $M=6.79$ ,  $t(42)=-8.52$ ,  $p < .01$ ). Regardless of the future-present relationship, participants in the overall-ratio-maximizing condition were happier than participants in both the free-choice condition (future-more-important:  $M_{\text{Free-Choice}}=3.32$  vs.  $M_{\text{Ratio-Maximizing}}=3.76$ ;  $t(272)=3.55$ ,  $p < .001$ ; future-less-important:  $M_{\text{Free-Choice}}=3.43$  vs.  $M_{\text{Ratio-Maximizing}}=3.82$ ;  $t(272)=3.62$ ,  $p < .001$ ) and the yoked condition (future-more-important:  $M_{\text{Yoked}}=3.40$ ;  $t(272)=3.89$ ,  $p < .001$ ; future-less-important:  $M_{\text{Yoked}}=3.28$ ,  $t(272)=4.04$ ,  $p < .001$ ). Results from Experiment 1 suggest that people are insufficiently sensitive to the future-present relationship and make choices that do not maximize their overall happiness.

Experiment 2 examined whether nudging people to deliberate before they make their choices would make them more sensitive to the future-present relationship and thereby improve their choices. Experiment 2 employed a 2 (future-present relationship: future-more-important vs. future-less-important) x 2 (deliberation: prompted vs. not prompted) between-subjects design. In the deliberation-prompted condition, prior to making any choices, participants were asked to pause and think carefully about the choice that would maximize their happiness. In all conditions, participants were free to choose how many cockroach and flower pictures to view in Phase 1. Replicating results in Experiment 1, participants' choices of flower pictures did not maximize the flower-picture-to-cockroach-picture ratio in the future-more-important condition ( $M=1.52$ ,  $t(62)=8.70$ ,  $p < .01$ ) and the future-less-important condition ( $M=8.10$ ,  $t(70)=-10.84$ ,  $p < .01$ ). Importantly, deliberating on the hedonic consequences of one's choice increased the flower-picture-to-cockroach-picture ratio

in both the future-more-important condition ( $M_{\text{NotPrompted}}=1.52$  vs.  $M_{\text{Prompted}}=0.96$ ;  $t(277)=-3.13$ ,  $p=.002$ ) and the future-less-important condition ( $M_{\text{NotPrompted}}=8.21$  vs.  $M_{\text{Prompted}}=9.66$ ;  $t(277)=2.38$ ,  $p=.019$ ). Consequently, deliberation increased their overall happiness in both the future-more-important condition ( $M_{\text{NotPrompted}}=2.69$  vs.  $M_{\text{Prompted}}=2.86$ ;  $t(277)=-2.18$ ,  $p=.030$ ) and the future-less-important condition ( $M_{\text{NotPrompted}}=2.76$  vs.  $M_{\text{Prompted}}=2.90$ ,  $t(277)=2.09$ ,  $p=.039$ ). Thus, myopia and hyperopia were both attenuated after participants were prompted to consider the hedonic consequences of their choices.

This research offers a new perspective on psychological myopia and hyperopia, that is, the situation neglect of the future-present relationship. People appear myopic when the future is more important than the present, and hyperopic when the future is less important than the present.

## The Effect of Bariatric Surgery on Delay Discounting for Food and Money: A Longitudinal Study

### EXTENDED ABSTRACT

Obesity has been recognized as a “global epidemic” (Caballero 2007), given its prevalence and its impact on the risk of cardiovascular disease, type-2 diabetes, and cancer. Countries are vastly heterogeneous in obesity rates; for instance, obesity concerns 38.2 percent of U.S. adults versus 15.2 percent of French adults, according to OECD. Yet obesity rates keep increasing in all developed countries, making it critical to understand the causes and the possible cures of obesity.

One of the most effective—and drastic—treatments against obesity is bariatric surgery, which consists in reducing the size of the stomach or re-routing the small intestine to a stomach pouch. Meta-analyses conclude that bariatric surgery promotes a sustainable reduction in weight, health risks, and mortality (Buchwald et al. 2004; Chang et al. 2014). Burgeoning research relying on before-after surgery studies also aim to better understand the psychological factors of obesity and the psychological impact of drastic weight loss (Hindle, Piedad Garcia, and Brennan 2017).

Impulsivity, measured by delay-discounting (DD, the preference for sooner smaller vs. larger later rewards) has been identified a potential psychological factor of obesity. Compared with lean subjects, overweight and moderately obese subjects exhibit greater DD (Fields, Sabet, and Reynolds 2013; Meule and Bleichert 2017). There are also correlations between DD and eating disorders such as anorexia or binge-eating (Davis et al. 2010; Decker, Figner, and Steinglass 2015). However, current literature provides little evidence of a causal effect of DD on weight gain (and no evidence of a causal effect of weight loss on DD). Also, DD has not been investigated in morbidly obese people, and it is unclear whether obesity-related impulsivity is specific to the food domain, or extends to other (e.g., monetary) domains.

In this research, we investigate the causal impact of drastic weight loss (via bariatric surgery) on DD. We also investigate DD in food and in monetary domains. We conducted two longitudinal studies with groups of French female morbidly obese patients from a hospital population qualifying for bariatric surgery, and groups of French female lean individuals with similar demographic characteristics.

In Study 1, the obese patients ( $N=74$ ,  $BMI\ 45.3\pm 0.65$ ) participated in a DD task before surgery, 3 months after surgery, and 12 months after. The lean individuals ( $N=40$ ,  $BMI\ 22\pm 0.40$ ) participated in the task twice with a 6-month interval. We used a simplified version of Li (2008)'s delay discounting procedure adapted for food and money. Participants made a series of binary choices between

four chocolates now and a larger number of chocolates one week later. The task was repeated with Euros.

Overall, obese patients exhibited greater DD for food (i.e. they asked for more chocolates in exchange of waiting one week) compared to lean individuals ( $\beta_{group} = 3.81$  ( $SE_{group} = 1.36$ ),  $Z_{group} = 2.88$ , [1.24, 6.57]). These differences were particularly pronounced at  $T_0$ , that is, when comparing pre-surgery obese patients and lean individuals ( $M_{obese, T_0} = 14$  ( $SE_{obese, T_0} = 0.94$ )  $>$   $M_{lean, T_0} = 10.2$  ( $SE_{lean, T_0} = 1.11$ );  $T_{group, T_0} = 2.60$ , [0.89, 6.70]) Delay discounting for food was attenuated post-surgery among obese patients but remained stable over time among lean subjects, as shown by the significant interaction effect between participant group and time ( $\beta_{group \times time} = 4.89$  ( $SE_{group \times time} = 1.85$ ),  $Z_{group \times time} = 2.64$ , [1.26, 8.52]). We found no difference between obese and lean subjects for monetary rewards, and no change post-surgery.

In Study 2, lean individuals (N=45, BMI 21.7±1.4) and obese patients (N=17, BMI 44±2.5) from the same hospital pool completed an incentive-compatible, delay-discounting task consisting of choosing between smaller-sooner and larger-later rewards for money and monetarily-equivalent chocolate rewards (Decker et al. 2015). Both groups repeated the task 6 months later, the obese patients after bariatric surgery.

We estimated discounting behavior with the “as soon as possible (ASAP)” DD model (Kable and Glimcher 2010) and compared differences in the discount parameter  $k$  between groups and across time. The ASAP model is a recent derivative of the standard hyperbolic discounting model (Green and Myerson 1996) from the neuroeconomics literature. As compared to the standard hyperbolic model, it can account for whether an individual is inconsistent when the sooner-smaller is available immediately versus not immediately (e.g. €10 now versus €15 in a week; €10 in one week versus €15 in two weeks).

We found again that obese patients exhibited greater impatience for food rewards than lean individuals ( $\beta_{group} = 0.065$  ( $SE_{group} = 0.019$ ),  $Z_{group} = 3.52$ , [0.029, 0.10]) and that this difference was most pronounced before surgery ( $k_{obese, T_0} = 0.0912$  ( $SE_{obese, T_0} = 0.023$ )  $>$   $k_{lean, T_0} = 0.0296$  ( $SE_{lean, T_0} = 0.007$ ),  $T_{T_0} = -2.48$ , [-0.114, -0.01]). While we did not find a significant interaction effect between participant group and time ( $\beta_{group \times time} = -0.029$  ( $SE_{group \times time} = 0.021$ ),  $Z_{group \times time} = -1.38$  [-0.070, 0.012]), a planned contrast for the difference in discounting before and after surgery showed that patients became less impatient after the surgery ( $M_{difference} = 0.041$ , ( $SE_{difference} = 0.018$ ),  $\chi^2 = 5.48$ , [0.0067, 0.076]). We found no such effects for money.

In conclusion, we provide novel evidence of differences in impatience for food between lean individuals and *morbidly* obese patients. We also show that bariatric surgery reduces such differences and that patients become less impatient post-surgery. Our results indicate that differences in DD are food-specific and do not extend to other rewards like money.

Interestingly, previous research has shown that lean and obese individuals show differences in the homeostatic control of food intake. For example, the functioning of hormones involved in signaling hunger and satiety (i.e., ghrelin and leptin) shows dysfunction in morbidly obese, which is restored after bariatric surgery (Poitou et al. 2005). This is why we also sampled different biomarkers of homeostatic control by collecting blood samples in both studies. We are currently exploring whether the differences in DD for food could be linked to differences in such biomarkers with the goal to provide a more holistic and biologically grounded model of differences in dietary decision making.

## Anticipated Interpersonal Feedback Reshapes Other-oriented Intertemporal Choices

### EXTENDED ABSTRACT

Consumers tend to appear myopic in their own intertemporal choices, favoring smaller sooner gratifications over larger later rewards that are more consistent with long-term wellbeing. However, many intertemporal decisions involve other people. How do these other-oriented decisions compare with otherwise identical self-oriented decisions?

We propose that other-oriented decisions may yield greater myopia (more choices of sooner-smaller options) than self-oriented decisions because the interpersonal feedback that consumers anticipate from their other-oriented decisions reshapes the tradeoff between immediacy and magnitude. In contrast, prior research has posited that other-oriented choices would be less impatient than self-oriented choices because the decision maker would be less tempted by the immediate gratification of the rewards (Hoch and Loewenstein 1991, Malkoc, Zauberman and Bettman 2010). This prediction has not been thoroughly tested, but is supported by some empirical results comparing decisions made for a nonspecific, abstract recipient with decisions made for the present self (Albrecht et al. 2010, McClure et al. 2004, Pronin, Olivola and Kennedy 2008).

Notably, the abstract other-oriented decisions previously studied lack the interpersonal consequences of typical other-oriented decisions, a critical factor in decision-making (Tetlock 1983). In an intertemporal choice involving other people, the anticipated consequences of feedback from the recipient often coincide with the timing of each option and covary with the magnitude of each choice option. Hence, besides the widely studied immediacy-magnitude tradeoff underlying the choice options per se (which underlies both self-oriented and other-oriented decisions), other-oriented decisions also involve a parallel immediacy-magnitude tradeoff in the anticipated feedback consequence associated with each option. In particular, discounting may be steeper for affect-rich stimuli (Tsukayama and Duckworth 2010) and interpersonal feedback can be more affect-rich than monetary outcomes. We thus theorize that anticipated interpersonal feedback renders other-oriented choices more impulsive than otherwise identical self-oriented decisions

In particular, we propose a decision model that incorporates both perspective-taking and anticipated interpersonal feedback and empirically test the four hypotheses derived from this model. Studies 1A-1C compared impatience in other-oriented decisions with self-oriented decisions, establishing a systematic difference. Studies 2-4 tested how recipient specificity, decision accountability, and feedback timing each moderate impatience in choices.

In Study 1A (N=157 MBA students), we examined intertemporal choices made for specific recipients with real consequences in 2 between-subjects conditions (choice for other vs. choice for self). Participants filled out a 5-min survey, and choose between two thank-you gifts for taking the survey, either to keep themselves or to give to a friend they had listed: a \$5 immediately redeemable gift card and a \$6 gift card redeemable in three weeks. More participants chose the \$5 gift card when the choice was for their friend to receive than when the choice was for themselves to keep (50.6% vs. 27.6%,  $\chi^2(1) = 8.59$ ,  $p = .003$ ,  $\eta_p^2 = .06$ ).

We replicated these results in another two scenarios with real recipients and real consequences. In Study 1B, with pairs of newly acquainted strangers making simultaneous choices (N = 88), participants were more likely to select an \$5 gift card when choosing for the other person (61.4%) than when choosing for themselves (34.1%;  $\chi^2(1) = 6.6$ ,  $p = .018$ ,  $\eta_p^2 = .08$ ). In Study 1C, with pairs of friends mak-



ing simultaneous choices ( $N = 116$ ), participants were more likely to choose an *SS* gift card when choosing for their friend (41.4%) than when choosing for themselves (19.0%,  $\chi^2(1) = 6.9$ ,  $p = .015$ ,  $\eta_p^2 = .06$ ). In sum, decision-makers made more impulsive choices when they chose for others than when they chose for themselves when these choices have real interpersonal consequences.

In Study 2, we aimed to reconcile the findings in the prior literature with those that we found in Study 1, by manipulating recipient specificity. We randomly assigned 552 Mturkers to 3 between-subjects conditions (choosing for-self, for-specific-other, for-nonspecific-other). Participants were asked to imagine a hypothetical scenario in which they chose between receiving a \$50 voucher and receiving a \$60 delayed voucher from an online store. Participants either chose for themselves, for a friend they had specified at the beginning of the study, or for an abstract and nonspecific customer of the store. Participants were more likely to choose the *SS* option when they were choosing for a specific other person (50.8%), than either for themselves (41.8%) or for the nonspecific other person (37.4%; contrast  $t(549) = 2.5$ ,  $p = .012$ ). In sum, people are more patient in intertemporal choices when choosing for specific others (but not general others) than for themselves.

In Study 3 ( $N = 275$ ), we further tested the role of decision accountability. Our decision model, which incorporates the role of interpersonal feedback on the decision, predicts that other-oriented intertemporal decisions would be less impulsive when decision-makers feel less accountable for the decision outcome, such as when their choice is merely a recommendation to the other person, who would then make a final decision. Consistent with this prediction, participants were more impulsive when making accountable decisions for a specific other person ( $t(224) = 4.41$ ,  $p < .001$ ) or decisions for themselves ( $t(160) = 3.63$ ,  $p = .001$ ).

In Study 4, we tested the impact of feedback timing on relative impatience in other-oriented choices. When interpersonal feedback is delayed for all decision outcomes, our model predicts that other-oriented decisions would be less impulsive. We randomly assigned 350 Mturkers to 2 (choice for a specific other vs. choice for self)  $\times$  2 (no-delay vs. delay in feedback) conditions. Choices in the sooner-feedback conditions replicated out prior finding that other-oriented decisions were more impulsive (61.9% vs. 30.9%,  $F(1,163) = 17.5$ ,  $p < .001$ ,  $\eta_p^2 = .10$ ). This self-other choice difference was attenuated in the delayed-feedback conditions (48.2% vs. 38.4%,  $F(1, 165) = 1.62$ ,  $p = .205$ ; 2-way interaction  $F(1, 328) = 3.96$ ,  $p = .047$ ).

These findings shed light on other-oriented decisions in a realistic consumer context and broaden the scope of research of intertemporal choices. Our results suggest that delegating decisions to others is not an effective strategy to reduce the choice of impulsive options, and may result in more myopic choices than choosing for oneself.

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# Linguistic Insights from Big Data

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

## Paper #1: The Power of Pottymouth in Word-of-Mouth

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## Paper #2: When News Gets Personal: The Evolution of Content in the Successive Retelling of Events

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## Paper #3: The Positivity Problem: Using Mass-Scale Emotionality to Predict Marketplace Success

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## Paper #4: Emotional Volatility and Cultural Success

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## SESSION OVERVIEW

We live in an age of big data. Millions of reviews, posts, and other content provides a wealth of information for researchers to examine. But by itself, all that big data is just that. Data. How can researchers parse all this information to provide insight into consumer behavior?

This session integrates a variety of perspectives to showcase the value of language in understanding consumers. Why are some reviews seen as more useful? How do stories evolve as they are transmitted? When do consumer opinions predict marketplace success? And can language shape what becomes popular? Using a variety of data sources and diverse methods, this session provides insight into these and other questions and sheds light on the role of language in consumer behavior.

First, **Lafreniere, Moore, and Fisher** examine when, how, and why swearwords are effective in word of mouth. They propose that due to increasing acceptance and commonality, swearwords can actually generate a strong positive impact. Using 100,000 Yelp reviews, they demonstrate that consumers judge reviews with more swearwords as more useful. Five experiments show that the advantage of swearwords exists even above other intensifiers (“holy shit” vs. “wow”) and is especially prominent when swearwords provide particularly diagnostic information.

Second, **Melumad, Kim, Meyer, and Nenkova** use a telephone game to examine how language evolves through serial transmission. When passing things on, communicators increasingly inject cantankerous personal opinions which subsequent individuals take as an implicit signal to also supply their own opinions. This evolution occurs across both positive and negative stories and even when the motivation for sharing the stories is accuracy.

Third, **Rocklage, Rucker, and Nordgren** investigate the “positivity problem” whereby the positivity of consumers’ opinions is an untrustworthy predictor of marketplace success. Drawing from theories in the attitudes and affective science literatures, they demonstrate that while traditional surveys and aggregate star ratings are not accurate, the emotionality of consumers’ language is. Consumer lan-

guage predicts the table reservations made at over 1,100 restaurants, the number of brand followers a company accrues after their Super Bowl advertisement, and the revenue made by over 3,700 movies at the box office.

Finally, though some have argued that cultural success is unpredictable, **Berger, Kim, and Meyer** demonstrate that emotional volatility (i.e., quick shifts in emotional tone) can help explain why things catch on. Using automatic sentiment analysis across thousands of movies, they find that more emotionally volatile movies are evaluated more positively. Further, these effects are larger in movies where such volatility is desired (e.g., thrillers). These findings provide insight into popularity and the psychological foundations of culture.

Taken together, these papers highlight how language provides insight into important behavioral and cultural phenomena. Further, each offers a unique perspective on how researchers can use mixed methods and big data to glean psychological insights. The session should be relevant to anyone interested in attitudes, emotions, social influence, word of mouth, and cultural success, as well as those who are interested in using natural language processing and unstructured data sets to answer relevant CB questions.

## The Power of Potty Mouth in Word-of-Mouth

### EXTENDED ABSTRACT

People hear and use swearwords more often than ever before (Jay and Janschewitz 2008; Stapleton 2010), but there has been little research on swearwords in online reviews (Hair and Ozcan 2018). The limited research is perhaps unsurprising given the common view that swearwords are anti-social and offensive (Rassin and Muris 2005). Indeed, swearwords are generally defined as taboo words that suggest a high level of arousal (Andersson and Trudgill 2007; Jay 2009). Yet, swearwords may not always have negative effects. First, people are often not offended by swearwords (e.g., Daly et al. 2004; Henry, Butler, and Brandt 2014). Second, swearwords are losing their original meanings (Fairman 2007; Jay 1992). These changes coincide with the increasing use of swearwords, suggesting that they remain useful. To explore this idea, we conducted a pilot study.

The pilot study used 100,000 reviews randomly drawn from the 2017 Yelp dataset. We used LIWC (Pennebaker et al. 2015) to identify reviews containing at least one swearword (6.3%), and examined the relationship between swearwords and the number of “useful” votes that a review received. Negative binomial regression showed that the presence (vs. absence) of swearwords increased the number of useful votes received for negative, neutral, and positive reviews. Reviews containing two (vs. zero) swearwords evoked the largest positive effect. The effect became insignificant at three swearwords and negative at four swearwords. These results were robust to various model specifications and covariates (e.g., review valence, length, and age). While this dataset demonstrates that swearwords are useful to consumers, it does not explain the underlying process. We consider the meaning of swearwords as a possible explanation.

Currently, it is not clear what meaning swearwords actually convey (Jay and Jay 2015; Potts 2007). We hypothesize that swearwords convey two meanings about: 1) the speaker (i.e., the strength of the reviewer’s feelings about the product) and 2) the reviewed product (e.g., the intensity of a particular attribute). As such, relative to no swearwords and to non-swearword synonyms, when swear-

words qualify desirable [undesirable] product attributes (e.g., the show is damn funny [boring]), they should positively [negatively] affect readers' attitudes towards the reviewed product. These two meanings should function as independent mediators of the relationship between swearwords and product attitudes because they qualify different objects (i.e., the product and the reviewer). We focus on swearwords when they are used as intensifiers, which is their most common usage (Jay 1992; e.g., "fucking awesome," "holy shit!"). Intensifiers convey meaning about a subject by communicating that an attribute holds to a higher degree than average (e.g., this dish is *very* tasty; Gutzmann and Turgay 2012). We test this framework in four studies.

Study 1 was a one-factor (swearword: present vs. absent) between-subjects design. Participants imagined that they wanted to buy a power station, and were shown a seller's webpage with one positive review. The review's title contained the manipulations: "It charged my phone [fucking] fast". As predicted, the swearword conveyed two meanings: it increased the intensity of the product attribute (i.e., charging capability) and the strength of the reviewer's feelings. These two meanings increased product attitudes. A follow-up study demonstrated that a swearword qualifying an undesirable attribute decreased product attitudes.

Study 2 compared a swearword (*damn*) to non-swearword intensifiers (*super*, *insanely*). We hypothesized that, because they are taboo, swearwords would convey meaning more effectively than other intensifiers, particularly about the strength of the reviewer's feelings. Speakers often use swearwords to express strong feelings (Jay 2000), and listeners infer that a speaker who swears has strong feelings because they broke a taboo (Foolen 2015; Jay 2000). This study employed the same scenario as Study 1, except the product was a dishwasher. The review's title contained the manipulations: "The dishwasher is [damn/insanely/super] quiet!" Replicating Study 1, *damn* (vs. *super*) increased the intensity of the product's attribute and the strength of the reviewer's feelings, which both increased product attitudes. Further, *damn* (vs. *insanely*) increased the strength of the reviewer's feelings, which enhanced product attitudes. A follow-up study ruled out arousal, conversational norms, trust, and interpersonal closeness as alternative explanations.

Study 3 tested a boundary condition: swearwords should not affect product attitudes when the meanings they convey are redundant or non-diagnostic. We hypothesized that multiple swearwords in a review would reduce the meaning conveyed about the product's attribute, due to a change in causal attribution. Specifically, consumers should attribute multiple swearwords to characteristics of the reviewer rather than the product (e.g., the reviewer is prone to strong feelings; He and Bond 2015), thereby attenuating the effect on product attitudes. This study was a one-factor design (number of swearwords: zero vs. two vs. five), employing the same scenario as study 1. Replicating prior studies, two (vs. zero) swearwords increased the intensity of the product's attribute and the strength of the reviewer's feelings, which both increased product attitudes. Further, two (vs. five) swearwords increased the intensity of the product's attribute, which increased product attitudes.

Study 4 tested swearword diagnosticity using different product categories. We hypothesized that in reviews for intense experiences (e.g., white water rafting), a swearword would be non-diagnostic because it would not convey additional meaning. Swearing should therefore have no effect on product attitudes. This study was a 2 (intensifier: swearword vs. non-swearword) by 2 (diagnosticity: high vs. low) between-subjects design, employing the same scenario as prior studies except the product was a rafting excursion. The review title contained the manipulation: "[Holy shit/Wow] it was fun". Di-

agnosticity was manipulated in the product description. When diagnosticity was high, the excursion was a class 1 (e.g., "gentle moving water"); since this excursion is ambiguous in terms of fun, swearwords should offer discriminating information. When diagnosticity was low, the excursion was a class 5 (e.g., "adrenaline junkies only"); since this excursion is unambiguously fun, swearwords should be redundant. As predicted, when diagnosticity was high, product attitudes were higher in the swearword (vs. non-swearword) condition. This effect was attenuated when diagnosticity was low.

Overall, using field and experimental data, the current research suggests that marketers—and consumers—may benefit from swearwords in reviews.

## When News Gets Personal: The Evolution of Content in the Successive Retelling of Events

### EXTENDED ABSTRACT

What happens to the fidelity of news when it is retold among people? In recent years this question has drawn increased attention because of the growing role that social media now plays in the transmission of information. Because information carried over social media often takes the form of second-or-third-hand retellings of original source material, it has been widely blamed for the proliferation of misinformation, ranging from biased accounts of events to the creating and spreading of "fake news" and "alt facts" (e.g., Allcott and Gentzkow 2017; Tan, Friggeri, and Adamic 2016). Much like the children's game of "telephone", when social media users hear or read about an original news story and then post about it, the readers of that post are not seeing the original source, but rather a retelling that may reflect an unknown blend of the original facts, the writers' memory of the facts, and their interpretation—a blend that may hold little fidelity compared to the original (e.g., Allport and Prescott 1947; Carlson 2017; Marsh 2007).

In this research we report the results of two large-sample experiments in sequential summarization that offer new insights into how accounts of news events become distorted when they are repeatedly retold by different agents. We emerge with two major findings. The first is that summaries that start as dispassionate accounts of objective events tend to evolve into personalized gist-like accounts laced with injections of personal opinion—with the expression of disapproval being more dominant mode of expression. This *cantankerous personalization* effect is quite robust; it is seen across different kinds of original stories including when participants are given different explicit motivations for retelling. The shift to personalization occurs, for example, even when writers are instructed to be as "accurate as possible" when retelling news stories, and cantankerousness arises even in stories that are originally written with a positive tone.

The second finding is that this evolution appears to be the consequence of a linguistic mimicry process in which injections of opinion by one writer in a chain implicitly signals the next to do the same. Because negative content is typically seen as more salient than positive (the negativity bias; Baumeister et al. 2001), this process privileges the creation and retelling of more negative linguistic elements (e.g., expressions of disagreement over agreement). This increase in personalization, however has a perhaps unintended downstream effect on the appeal of summaries: while they may be more appealing to the writer, they are seen as increasingly less interesting to read by outside judges.

### Study Details

The two studies that utilized the same general methodology. In an initial wave of summarization, M-Turk workers read a news ar-

ticle, and were asked to write a synopsis as they would if they were summarizing it for others over social media. Their summaries were then passed on to a second wave of participants who were given the same task, but this time after reading just on the summary provided by a previous writer. This process was then repeated for a third wave of participants. The two studies manipulated two factors that prior research (e.g., Marsh 2007) had suggest might affect the fidelity of the summaries to the original source: the valence of the original story (Study 1) and the motivation given to the participants for retelling (Study 2). Each study involved the participation of over 1,000 different M-Turk respondents writing summaries across the three waves.

The contents of the summaries were analyzed both by automated text analysis tools and human judges. The automated tools included measures of linguistic specificity and diversity (e.g., Jensen-Shannon divergence), lexical novelty (e.g., the proportion of new words included in a summary) and semantic content (e.g., LIWC measures of affective content and style). Human judgments were provided by a separate pool of M-Turk participants who rated the summaries on each of 14 content dimensions (e.g., how detailed the summary was, how interesting it was to read, how positive or negative it was about the subject matter).

These analyses suggested that as the news events were retold, they underwent three major changes that were robust to the valence of the original story and writer's motivation:

### 1. *A transition from reporting to interpretation.*

With each passing wave the objective reporting of the facts of the events described in the original article increasingly gave way to subjective interpretations of facts, as evidenced by increased usage of subjective words and words suggestive of explanatory reasoning;

### 2. *A rise in cantankerousness.*

Across each summarization wave, judges of the summaries observed an increase in injections of cantankerous personal opinion, as evidenced by more frequent usage of first-person pronouns and more frequent expressions of disagreement; and

### 3. *A rise in uniqueness but a decrease in reader interest.*

Across waves the summaries became increasingly unique in style and content relative to the summaries in the previous waves, which was evidenced by increased overall linguistic divergence, increased novelty of words. That being said, the summaries but were also seen as decreasingly interesting to read by outside judges, as evidenced by decreased assessments of writing quality and interest.

To explain this pattern of results, we modeled the linguistic content of each summary as function of the content of the prior summary on which it was based. This analysis gave strong support for a hypothesized mimicry or style-matching process in which the injection of cantankerous opinions by one writer served as a catalyst that encouraged the next writer to do more of the same. Most importantly, while carry-over was observed for most linguistic features, expressions of opinion appeared to have a uniquely powerful influence on guiding the way the next writer in a chain crafted his or her summary.

We conclude with a discussion of the implications of the work for the prior theoretical research on information distortion that arises through re-transmission, as well as the possible impact of social media may be having on the style and tone of with which news is socially conveyed.

## The Positivity Problem: Using Mass-Scale Emotionality to Predict Marketplace Success

### EXTENDED ABSTRACT

Marketers often place a premium on both the measurement and maximization of consumers' positivity on social media and online reviews. The valence of consumers' reactions has been used to predict everything from purchasing behavior to the spread of word of mouth. Indeed, researchers across both behavioral and computer sciences have begun to measure mass-scale positivity ("sentiment") using online chatter and star ratings to predict movie box office revenue and book sales (Asur and Huberman 2010; Chevalier and Mayzlin 2006). Despite these successes, striking instances exist where positivity has been an inadequate predictor of success. For instance, positivity has shown little relation to a product's overall quality (de Langhe et al. 2016). Moreover, relying on online positivity is problematic as the average Amazon.com star rating is a 4.2 out of 5.0 with well over half of the reviews being 5-star ratings (Woolf 2017; McAuley et al. 2015). Thus, there is a *positivity problem* whereby valence provides a limited signal of consumer sentiment.

Given this positivity problem, how can objects of similar positivity be meaningfully distinguished? Drawing on theories from the attitudes and affective science literatures, we propose that the *emotion* behind consumers' evaluations offers a diagnostic signal. Indeed, research indicates that emotion provides a strong signal both to the individual and to others (Pham et al. 2001; Frijda and Mesquita 1994). We demonstrate this emotionality can be measured on a massive scale via consumers' language as quantified by the Evaluative Lexicon (EL; Rocklage, Rucker, and Nordgren in press; www.evaluativelexicon.com) and used to predict marketplace success across a wide range of items from advertisements to restaurants to movies.

In Study 1, we investigated whether emotionality signaled the future success of restaurants via the average number of daily table reservations made at that restaurant across a two-month period. Specifically, we followed all 1,139 restaurants in Chicago, Illinois that were also on OpenTable.com and recorded the number of reservations made each day ( $n_{\text{reservations}} = 1.30$  million). We also obtained the first 20 reviews for each restaurant on Yelp.com and averaged the positivity and emotionality of their text (results also hold when using 10 or 30 reviews). As a second measure of positivity, we included the average star rating from these reviews.

We found that star ratings were not predictive of table reservations, but that the positivity of the text was. Most importantly, over-and-above these effects we found that greater emotionality of the first 20 reviews predicted more table reservations. These results held controlling for the year when the restaurant first opened as well as the kind of restaurant (e.g., American, Indian).

In Study 2, we predicted the success of Super Bowl advertisements across two Super Bowls (2016 and 2017) via the number of new Facebook followers a company accrued each day in the two weeks following each Super Bowl ( $n_{\text{companies}} = 67$ ;  $n_{\text{commercials}} = 94$ ). To measure positivity and emotionality toward each commercial, we obtained all real-time tweets that occurred on the day of the two separate Super Bowls that mentioned the name of the company, a reference to the Super Bowl or a commercial, and an evaluation of the commercial as indicated by the EL ( $n_{\text{tweets}} = 187,206$ ). We then used the EL to quantify the average positivity and emotionality expressed toward each commercial across the tweets. Given that each company has only a single Facebook page, we analyzed the data at the level of each company by averaging across that company's commercials for each Super Bowl.



To predict the average number of daily new followers (log transformed), we used average positivity and emotionality as predictors. We also used USA Today's Ad Meter survey as a second measure of positivity, which scores each advertisement based on a large sample of respondents (1: poor; 10: excellent). Finally, we controlled for the average daily followers each company accrued in the lead-up to each Super Bowl (log transformed) to ensure that we assessed the *change* in daily followers.

Using a regression model, the USA Today survey did not predict brand followers and the average positivity of the tweets was, if anything, a *negative* predictor. However, over-and-above these effects, the greater the average emotionality of the tweets, the more followers a company accrued over the next two weeks. These results held across both Super Bowls and above-and-beyond the total number of tweets about each commercial as well as the number of positive (vs. negative) tweets.

In Study 3, we predicted movie success based on the final box office revenue a movie made. We obtained all US feature films on IMDb.com that also provided the box office revenue for that movie ( $n = 3,784$ ) and used the first 20 reviews to quantify positivity and emotionality. We found that star ratings were *negatively* predictive of box office revenue (log transformed), but that the positivity of the text was in the positive direction. Most importantly, however, over-and-above these effects, greater emotionality predicted greater box office revenue. These results held controlling for movie budget, release year, movie length, and across genres (e.g., action, romance).

Whereas consumer positivity tended to be a skewed and inconsistent predictor, the emotionality of consumers' language provided a signal of future marketplace success. These results build on theories from the attitudes literature proposing that the *basis* of individuals' evaluations matters (e.g., emotional vs. unemotional) and affective science demonstrating that emotionality provides an impactful signal to both individuals and others. We show that emotionality can be captured on a massive scale via natural language and is an important predictor of future marketplace success.

## Emotional Volatility and Cultural Success

### EXTENDED ABSTRACT

Why do some things catch on? Academics and popular writers alike have long been interested in cultural dynamics, or why some songs, movies, and other cultural items become popular. Some songs become hits while others fail and some movies become blockbusters while others don't. Why?

While some have argued that success is random (Salganik, Dodds, & Watts, 2006), we suggest that individual-level psychological processes can help explain cultural success. Culture shapes psychological process (Markus & Kitayama, 1991), but the reverse is also true: psychological processes shape the norms and practices that make up collective culture (Schaller & Crandall, 2004). Consequently, psychological processes may act as a selection mechanism, determining which cultural items succeed and which fail.

In particular, we suggest that period-to-period shifts in emotional tone—what we term emotional volatility, may shape success. Change creates uncertainty and surprise, which should increase emotional impact. In the context of generally positive experiences like books and movies, this should boost evaluations. Volatility should also provide stimulation and reduce hedonic adaptation, both of which should boost evaluation of positive experiences.

Unfortunately, empirically testing the link between emotional volatility and cultural success has been constrained by the ability to easily quantify volatility at scale. Measuring emotional responses

would usually require having people turn dials to rate their on-line experiences (Ruef & Levenson, 2007). But while possible for a small number of items, applying such methods on the scale needed to truly study culture would be challenging.

To address this issue, we use natural language processing to measure emotional volatility across thousands of films, testing whether more volatile movies are more successful.

First, we collected data on movie scripts. We gathered all English language movies from OpenSubtitles.com, leaving 4118 movies.

Second, we measure the sentiment of words in the script. We rely on prior work (Dodds, et al. 2011) which scored over 10,000 words based on how positive or negative they made people feel on a nine-point scale.

Third, we calculate emotional volatility. We focus on volatility between sizable chunks of a movie, like scenes, or portions of them and measure volatility using the standard deviation of differences in sentiment between adjoining chunks.

Fourth, we collected information on movie success. We recorded user ratings of each movie from IMDb.com.

Finally, OLS regression examines the relationship between emotional volatility and movie success.

Results indicate that more emotionally volatile movies receive higher ratings ( $b = 9.31$ ,  $s.e. = 0.78$ ,  $p < 0.001$ ). A 10.74% increase in volatility, for example, is linked to a 1% increase in ratings.

*Robustness.* While this relationship is supportive, one could argue it is driven by a host of other factors, so we included numerous covariates. We measure movie length, genre, presence of emotion, peaks and ends, complexity, overall positivity, extremeness of emotion, and release year. Even controlling for all these factors, however, the link between emotional volatility and success persists.

Results are also robust to different ways of dividing movies into chunks. Results remain the same in alternative approaches using different number of segments, different segment sizes, or different amount of overlap between segments.

While these relationships are suggestive, to best identify emotional volatility's effect, one would ideally keep all other movie aspects the same, vary emotional volatility, and measure its influence on success. To approximate this, we examine movies with sequels (e.g., Harry Potter). While many focal actors and production team members remain the same, emotional volatility varies across different movies in the series, providing a stricter test of volatility's impact. If among movies in a series, the ones that are more successful are the ones that are more emotionally volatile, this would support the notion that volatility, rather than some other factor, is driving success.

To test this possibility, we analyze the 175 movies that are part of a series (either the original or a sequel) using an analysis approach similar to difference-in-differences. We calculate the emotional volatility of each movie in a given series and compare its success relative to others within that same series.

Underscoring the prior findings, even within a series, more emotionally volatile films are evaluated more favorably ( $p = 0.04$ ). This holds even ignoring originals and just examining later films in a series (i.e., the 2nd vs. 3rd).

Further evidence for the notion that emotional volatility increases ratings comes from examining how the relationship varies across genres. If emotional volatility is truly shaping evaluations, as we suggest, it should have a stronger effect in genres where surprise and stimulation matter more (e.g. thrillers rather than romances). Consistent with this notion, the relationship was strongest in genres like thrillers ( $p < 0.001$ ) and mysteries ( $p < 0.001$ ) and weakest in

genres like music, documentaries, and romance ( $p = 0.46$ ,  $p = 0.13$ , and  $p = 0.05$  respectively).

Taken together, these results suggest that emotional volatility may shape cultural success. More emotional volatile movies are more successful. These findings also have a number of interesting implications. While researchers have studied peaks and ends, there has been less attention to dynamics of emotional experiences. Further, this work contributes to the burgeoning stream on literature on the psychological foundations of culture. When shared across individuals, psychological processes can shape the processing, sharing, and evaluation of cultural items, which in turn, shapes their success.

Finally, this work demonstrates how natural language processing can shed light on why things catch on. Researchers have long been interested in why some things succeed and fail, but measurement has been a key challenge. Natural language processing, however, provides a reliable method of extracting features, and doing so at scale.

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# Can You Trust Yourself? Self-Deception through Self-Signaling

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## **Paper #1: Unobserved Altruism: How Social- And Self-Signaling Motivations Shape Willingness to Donate**

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## **Paper #2: No Self to Spare: How the Cognitive Structure of the Self Influences Moral Behavior**

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## **Paper #3: Cheating Your Self: Diagnostic Self-Deceptive Cheating for Intrinsic Rewards**

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## **Paper #4: How the Unconstructed Identity Relieves Consumers of Identity-Relevant Consumption**

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### SESSION OVERVIEW

*“The greatest deception men suffer is from their own opinions.”*  
— Leonardo da Vinci

Ongoing reports of “fake news” have made us question if we can trust the information we receive from news outlets and social media. Yet, an even more worrisome question is, can we trust ourselves? This symposium investigates various ways in which people deceive themselves to maintain a positive self-concept.

People often use their choices to signal information about themselves to others (Berger and Heath 2007, Escalas and Bettman 2005). Recent work on self-signaling indicates that people also use their choices to signal information to *themselves* about desired traits and values (Gneezy et al. 2012, Savary et al. 2015, Toure-Tillery and Fishbach 2012; 2015). For example, a person might be more willing to donate to charity when doing so will make her feel “generous,” or to choose a piece of fruit (vs. candy) when doing so will make her feel “health-conscious.” People tend to cheat at tasks when they won’t have to label themselves as “dishonest” (Bryan, Adams, and Monin 2013), but toe the line when cheating would force them to question their integrity (Mazar, Amir and Ariely 2008).

However, the diagnostic signal of these choices is arguably merely an illusion: it does not change the objective outcome of the action. Donating \$2 will help others irrespective of how generous the donor feels, and fruit is healthy, whether the choice context encourages a self-attribution of “health-consciousness” or not. Cheating is dishonest, whether the cheat sees herself as dishonest or not. Thus, it seems consumers are readily able to deceive themselves into believing the signal from these strategic behaviors, which in turn influences their choices.

The first two papers in this session explore how consumers deceive themselves by strategically engaging in positive moral behaviors. **Paper #1** finds that consumers donate more when the context allows them to label their action as genuine altruism, which, surprisingly occurs when the donation choice is private. **Paper #2** indicates that when consumers mentally represent their self-concept as high (vs. low) in overlap, they tend to see their actions as more self-di-

agnostic, and hence behave more morally. However, as **Paper #3** shows, consumers can also deceive themselves by engaging in unethical behaviors, using dishonest means to augment the self-concept. Finally, **Paper #4** takes a step back to look at an often overlooked, but critical prerequisite of self-deception through self-signaling: a developed self-schema.

Together these papers explore the provocative possibility that we cannot always trust information, even when that information is a self-signal derived from our own actions. Across papers, we will discuss how consumers often ignore, or perhaps even sacrifice desired outcomes to maximize preferred self-attributions. In addition, these papers identify a range of strategies consumers use, either consciously or not, to allow themselves to make choices inconsistent with their long-term goals. As consumer researchers cast a wide net to investigate when to trust and when to doubt, this session provides a novel perspective on deception, specifically, when the source of deception of information comes from within ourselves.

## **Unobserved Altruism: How Social- And Self-Signaling Motivations Shape Willingness to Donate**

### EXTENDED ABSTRACT

The question of what motivates people to donate to charitable causes has generated a great deal of discussion. In the current research we examine two such motivations; the desire to receive public recognition and reputational benefits, known as a social-signaling motive (Ariely, Bracha, and Meier 2009), and the desire to see oneself as genuinely altruistic, known as a self-signaling motive (Touré-Tillery and Fishbach 2012, 2015; self-diagnostic actions; Savary, Goldsmith, and Dhar 2015). A key factor that distinguishes social- and self-signaling is the intended audience: a social signal conveys information about one’s traits and values to an external audience, whereas a self-signal informs oneself (Bodner and Prelec, 2002) even when the action has no causal impact on these traits and abilities. We discuss some of the odd things that happen when self-signaling is introduced into an otherwise rational conception of action. We employ a signaling game perspective in which the diagnostic signals are an endogenous part of the equilibrium choice. We are interested (1. Often, these motives align, and a choice will signal the same information to either an internal or an external audience. As a result, some researchers have wondered if social-signaling and self-signaling motives are separable (Grossman 2015). In the current article, we attempt to empirically disentangle these motives in the context of charitable giving. We find that the two signaling motives can compete, and even inhibit each other.

Our proposal builds on two related ideas: (1) that the intrinsic motivation to engage in a behavior can be “crowded-out” by extrinsic incentives (Gneezy, Meier, and Rey-Biel, 2011) engagement-contingent, completion-contingent, and performance-contingent rewards significantly undermined free-choice intrinsic motivation ( $d = -0.40, -0.36, \text{ and } -0.28$ , respectively) and (2) recent findings that suggested that people believe a charitable act should be free from the potential taint of self-interest (Barasch, Levine, Berman, and Small, 2014; Berman, Levine, Barasch, and Small, 2015; Lin-Healy and Small, 2012, 2013; Newman and Cain, 2014) or advertise, their good deeds to others. Seven studies investigate how bragging about prosocial behavior affects perceived generosity. The authors propose that



bragging conveys information about an actor's good deeds, leading to an attribution of generosity. However, bragging also signals a self-ish motivation (a desire for credit).

Our main proposition is that that reminding people of potential public recognition can undermine donation rates, because when the social-signaling benefits of donating are made salient, it reduces an individual's ability to infer that their choice to donate is a genuine signal of altruism, and thus dilutes the value of the self-signal. We expect this to occur even though the self-signal of altruism is unrelated to the actual benefit the charities might receive, consistent with the notion of self-deception through self-signaling.

We tested this prediction using real and hypothetical choices. In all studies, some people are asked to donate in a private, unobserved choice. Others read that their donation will be observed, and that they may receive social-signaling benefits for their choice. Consistently, people are more likely to donate in the private conditions (see table 1 for all experimental results). Mediation analysis indicates that this occurs because the public choice is a relatively weaker self-signal than the private choice. The pattern attenuates when (1) the value of the social-signal is enhanced or (2) the overall decision context is non-diagnostic.

In **Study 1a**, participants read about a charity that posts "thank you" badges on their website for a \$5 donation. People were more likely to donate in the private condition (i.e., "Neither you nor anyone else will know which [badge] is yours") than in the public condition (i.e., "The badge will be posted on the website next to your full name"),  $M_{\text{private}} = 4.8$  vs.  $M_{\text{public}} = 4.1$ ,  $p = .011$ . **Study 1b** uses a different charity and scenario to show that the effect replicates when the dependent variable is participants' choice to donate real money,  $P_{\text{private}} = 54\%$  vs.  $P_{\text{public}} = 36\%$ ,  $p = .034$ .

Our proposal is that consumers see a private donation as a stronger self-signal of genuine altruism than a public donation. In **Study 2** we test this by measuring the perceived strength of the self-signal after the donation choice, "The choices I make reflect my inner goals." Again, people are more likely to donate when the choice is private ( $P_{\text{private}} = 41\%$  vs.  $P_{\text{public}} = 33\%$ ,  $p = .039$ ). In addition, people see the private donation as stronger self-signal ( $M_{\text{private}} = 4.0$  vs.  $M_{\text{public}} = 3.7$ ,  $p = .004$ ), which mediates the effect of condition on donation choice ( $b = -.09$  (.04), 95% CI [-.17 to -.02]).

**Study 3** indicates that when the value of the social-signal is high enough (because your boss is the audience, and a big believer in charity), it can offset the loss in self-signaling utility. When we experimentally enhance the value of the social benefits, we observe a reversal,  $P_{\text{enhancedsocialvalue}} = 71.9\%$ ,  $P_{\text{private}} = 40.9\%$ ,  $p < .001$ .

**Study 4** was a 2x2, which showed that when people's choices are non-diagnostic (because they make external attributions about their motives), and thus the self-signaling value of the choice is nullified, the effect attenuates. When the choice was diagnostic, people again donated more often in private vs. public ( $P_{\text{private/diagnostic}} = 64\%$  vs.  $P_{\text{public/diagnostic}} = 35\%$ ). However, when the choice was not diagnostic the pattern marginally reversed  $P_{\text{private}} = 41\%$  vs.  $P_{\text{public}} = 62\%$ , yielding a significant interaction,  $b = -1.02$  (.37),  $p = .006$ .

**Study 5** was also a 2x2, which showed that experimentally increasing the value of the social signal, via a social-threat manipulation, also attenuates the pattern, interaction  $p = .027$ .

These findings demonstrate a novel choice paradigm in which self-signaling benefits and social-signaling benefits not only diverge, but can counteract each other. To our knowledge, we are the first paper to empirically pit these forces against each other and illustrate that self-and social-signaling motives can have opposing effects on the choice to donate.

## No Self to Spare: How the Cognitive Structure of the Self Influences Moral Behavior

### EXTENDED ABSTRACT

It is no secret that people are motivated to maintain a positive self-concept (Gao, Wheeler, and Shiv, 2009; Schlenker, 1985; Steele, 1988; Prelec and Bodner, 2003). In particular, people will do the "right" thing when their actions seem most diagnostic for inferences about the self (i.e., self-diagnostic), but relax their standards otherwise (Touré-Tillery and Fishbach 2015). Many factors can elicit the perception that a choice is not self-diagnostic. For example, Touré-Tillery and Fishbach (2012) found that people were more likely to cheat in the middle (vs. beginning/end) of a sequence of actions, because they perceive the middle (vs. beginning/end) as less diagnostic for self-inferences. Within the same perspective, Bryan, Walton, Rogers, and Dweck (2011) found that when an action was explicitly linked to the undesirable identity of "cheater" ("don't be a cheater" vs. "don't cheat"), participants were less likely to cheat for money.

The present research explores how people's mental representations of their self-concept influences perceptions of self-diagnosticity, and hence moral behavior. Self-overlap refers to the extent to which people perceive their various self-aspects as interconnected (vs. distinct), such that they think of themselves similarly (vs. differently) across these self-aspects. We propose and find in four studies that people high (vs. low) in self-overlap tend to see their actions as self-diagnostic, and hence are more likely to behave morally—e.g., less likely to cheat and more likely to give to charity. Indeed, for a person high (vs. low) in self-overlap, positive or negative thoughts and feelings about one's identity after a good or bad deed will be more likely to spread to other identities.

**Study 1** tested the correlations between self-overlap, self-diagnosticity and moral behavior using a longitudinal design. Our final sample consisted of 165 US-based respondents (85 female,  $M_{\text{age}} = 35.65$ ,  $SD_{\text{age}} = 11.85$ ) recruited online. First, participants completed an established measure of self-overlap (Linville 1985; 1987) and the self-diagnosticity scale (SDS), which we devised to measure of individual differences in people's propensities to see their actions as representative of who they are. Then, several days later, they completed a scenario-based measure of unethical decision-making. We found the predicted a negative relationship between self-overlap and unethical decision-making ( $\beta = -.17$ ,  $t(163) = -2.19$ ,  $p = .030$ ;  $r = .17$ ), and a mediation of this effect by perception of self-diagnosticity ( $a \times b = -.1135$ ; CI = [-.2824, -.0067]).

**Study 2** tested the causal link between self-overlap and moral behavior in a naturalistic context on MTurk. The experiment employed a 2 (self-overlap: high vs. low) between-subjects design. Two hundred ninety-four MTurkers (133 females;  $M_{\text{age}} = 31.27$ ,  $SD_{\text{age}} = 10.39$ ) read that either high or low self-overlap leads to positive life outcomes and attempted to explain why. Based on the notion of motivated reasoning (Kunda and Sanitioso, 1989), participants who read that high (vs. low) overlap is good should be motivated to think of themselves as being high (vs. low) in self-overlap. Next, participants learned about a bonus survey in which they could earn extra money if eligible. Research shows MTurkers sometimes misrepresent their qualifications in order to take part in paid surveys (Chandler and Paolacci, 2017; Sharpe Wessling, Huber, and Netzer, 2017). We capitalized on this tendency by creating a situation in which all participants received direct feedback that they were not eligible for a bonus survey, but due to an ostensible programming error, gained access to the survey anyway. We then gave participants an opportunity to admit they were not eligible for the survey (honesty), or to keep silent in order to earn the bonus pay (dishonesty). We found a larger

proportion of participants in the high self-overlap condition (39.2%) honestly declined the bonus survey than in the low self-overlap condition (27.6%,  $\chi^2(1, 266) = 3.92, p = .048$ ).

In **Study 3** we used a longitudinal paradigm to test the moderating role of identity importance. The study employed a 2 (self-overlap: high vs. low)  $\times$  (identity importance: continuous). In part 1 we measured altruism identity importance. In part 2, several days later, 273 respondents (154 female,  $M_{\text{age}} = 36.23, SD_{\text{age}} = 10.91$ ) completed a manipulation of self-overlap, in which they discussed either the connections or the distinctions between their self-aspects. Then, they unexpectedly saw a charitable appeal soliciting donations from their compensation for the study. We found the predicted interaction of self-overlap by altruism importance on willingness to donate ( $\beta = .39; t(268) = 2.29, p = .023, r = .14$ ), such that at high levels of altruism importance, we replicated our previous findings: participants high (vs. low) in self-overlap donated more.

Finally, **Study 4** tested the moderating role of self-signal strength. The study employed a 2 (self-overlap: high vs. low)  $\times$  2 (self-signal: strong vs. weak) between-subjects design. An online consumer panel of three hundred eighteen US-based participants (170 female;  $M_{\text{age}} = 51.16, SD_{\text{age}} = 14.85$ ) completed the same manipulation of self-overlap as in Study 3 and read a charitable appeal. The wording of the weak-self-signal condition highlighted social-signaling motives for making a donation (or impure altruism), which should result in external attributions: "did it because I wanted people to think I care." By contrast, the strong-self-signal condition highlighted purely altruistic motives for making a donation, which should lead to internal attributions: "I did it because I wanted to help others." The results revealed the predicted interaction of self-overlap by self-signal strength on willingness to donate ( $F(1, 307) = 5.69, p = .018, r = .13$ ). When the self-signal was strong, participants in the high self-overlap condition chose to donate more money ( $M = 10.61, SD = 8.46$ ) than participants in the low self-overlap condition ( $M = 8.12, SD = 7.61; t(153) = -2.04, p = .042; d = .31$ ).

Taken together, these studies show that the mental representation of the self-concept is an important driver of moral behavior, because it influences a person's tendency to view her actions as self-diagnostic—and hence allows them to deceive themselves into maintaining a positive self-concept.

### Cheating Your Self: Diagnostic Self-Deceptive Cheating for Intrinsic Rewards

#### EXTENDED ABSTRACT

It often pays to cheat—better grades, more money—and previous models of cheating have accounted for such extrinsic incentives to cheating (Eide, Rubin, and Shepherd, 2006; Mazar, Amir, and Arieli, 2008). But some cheating acts only carry intrinsic rewards; only positively affecting the self-concept or self-perceptions. For instance, completing a crossword puzzle may increase the extent to which one feels intelligent.

Cheating to gain extrinsic rewards is clearly advantageous. Cheating for intrinsic rewards, however, is more complicated. The very act of cheating should hamper the intrinsic benefits. Any enhanced performance should be attributed to the act of cheating, and not to ability, unless the individual can deceive himself into believing otherwise. Thus, we argue that when only intrinsic benefits are available, consumers attribute their enhanced performance to their own ability as opposed to the agency given to them from the cheating opportunity, a process known as diagnostic self-deception.

Diagnostic self-deception involves drawing an invalid diagnostic inference in favor of a desirable trait (Fernbach, Hagmayer,

and Sloman, 2014; Sloman, Fernbach, and Hagmayer, 2010). This model of diagnostic self-deception assumes that there are two causal paths to any outcome. The first is any outside factor not under willful control, such as personal traits, skills, and physical features. The second is any behavior due to agency that can be willfully manipulated and thus is independent and non-diagnostic of any other underlying causes. Assume, for instance, that a student has the answer key to a test at his disposal and he scores an "A" on the exam. There are two causal paths for his grade. The agency factor is that he used the answers available to him. The outside factor not under his willful control is that he is an exceptionally intelligent individual. If the former is the true causal pathway, but the student adopts or gives more weight to the latter belief, then diagnostic self-deception has occurred.

Diagnostic self-deception occurs when an intervention by an individual leads to an outcome, but the individual does not attribute the outcome to his agency, but rather to a cause not under his willful control. It is therefore a form of self-serving attribution that allows individuals to reap intrinsic benefits of cheating. Moreover, such self-deception also protects my moral self and avoids such intrinsic costs (Mazar et al., 2008). In sum, we expect cheating for intrinsic rewards to result in diagnostic self-deception, resulting in a positive change in self-perceptions.

**Study 1** tests the effect of an intrinsic reward on cheating behavior. We asked participants to measure their resting heart rate and manipulated both their ability to cheat (by varying their control over the task) and the presence of intrinsic rewards (by telling some that lower resting heart rates are correlated with higher levels of fitness). Participants reported lower resting heart rates on average when it was easier for them to cheat at the task, but only when intrinsic rewards were present ( $F(1, 290) = 7.58, p = .0063$ ). When rewards were absent, the task presumably would not influence self-perceptions, and individuals did not cheat ( $F(1, 290) = .01, p = .91$ ).

Diagnostic self-deception can be thought of as a self-serving bias: when people perform well, they tend to attribute it to their own ability, but when they perform poorly, they are more likely to attribute their performance to external factors (Campbell and Sedikides, 1999). Given this, in study 2 we manipulated participants' ability to cheat on a task measuring intelligence (solving anagrams) and measured how prone participants were to self-serving bias (Nagin and Pogarsky, 2003). We found that self-serving bias moderated the effect of a cheating opportunity on performance ( $F(1, 286) = 5.11, p = .025$ ); cheating was more likely among those prone to self-serving bias ( $b = .22, t(286) = 2.17, p = .031$ ).

In **Study 3** we manipulated undergraduate business students' ability to cheat on a test indicative of their business knowledge. They then indicated their interest in an on-campus workshop about succeeding in business courses. Participants in the cheating condition performed better ( $F(1, 135) = 7.90, p = .0057$ ) and reported less interest in the workshop than those in the control condition ( $F(1, 134) = 7.90, p = .023$ ). Moreover, test scores mediated the effect of cheating condition on workshop interest ( $b = .11, SE = .069; 95\% CI = .0082 \text{ to } .2868$ ), providing indirect evidence of diagnostic self-deception.

**Study 4** used the anagram task from study 2, but also included measures of attributions and task legitimacy, both of which have been used in the self-serving bias literature (Campbell and Sedikides, 1999). Participants in the cheating condition performed better ( $F(1, 189) = 12.68, p = .0005$ ), made more internal attributions for their enhanced performance ( $F(1, 189) = 5.48, p = .020$ ), and were more likely to believe that the anagram task is an accurate test of intelligence ( $F(1, 189) = 6.39, p = .012$ ). We combined attributions and

legitimacy perceptions to create a self-attribution index, and, consistent with our theory, this index was driven by performance on the anagram task ( $b = .38$ ,  $SE = .12$ ; 95%  $CI = .1720$  to  $.6410$ ).

**Study 5** tests our full theoretical model using a cheating paradigm purportedly designed to measure fitness. We also measured performance attributions and self-perceptions. Compared to the control condition, those in the cheating condition performed better ( $F(1, 140) = 4.58$ ,  $p = .034$ ) and made more internal attributions ( $F(1, 140) = 4.76$ ,  $p = .031$ ). The indirect effect of cheating on healthiness self-perceptions, through the two mediators of performance and attributions, was significant ( $b = .018$ ,  $SE = .012$ ; 95%  $CI = .0028$  to  $.0540$ ).

Examining cheating in the presence of intrinsic rewards, we provide evidence of a dishonest means to augment the self-concept. We have all heard the adage, “when you cheat, you are only cheating yourself.” This appears to be especially true when cheating offers intrinsic incentives.

## How the Unconstructed Identity Relieves Consumers of Identity-Relevant Consumption

### EXTENDED ABSTRACT

Though consumers often have identity schemas to guide their behavior, there are times when consumers, either willingly (e.g., when they conceal identity relevant information; DePaulo 2004) or unwillingly (e.g., travel to an unfamiliar location), may not have an identity-schema to guide them. Temporary identity salience and chronically-held identities often result in identity relevant consumption (e.g., Bolton and Reed 2004; Forehand, Deshpandé, and Reed 2002), as identity irrelevant consumption is typically threatening (e.g., Ward and Broniarczyk 2011; see Berger and Heath 2008 for an exception). While identity salience is often seen as positive, this current research examines a potential downside of identity salience.

To date, research has explored how consumers behave when an identity that has been established in the semantic network is salient (e.g., Coleman and Williams 2015). To understand potential downsides of identity salience, we explore the *unconstructed identity*, or an identity that has not yet been developed semantically in the consumer’s mind. We argue that unconstructed identities can occur when an identity is novel to one’s self-concept or when a context is unfamiliar. A pilot test revealed that fifty five percent of consumers admitted to using a false identity in the marketplace, suggesting that consumers may, at times, prefer not to have an identity-schema to guide their behavior. We propose and test that when the consumer’s identity is salient and identity schemas are absent (vs. present), consumers are less likely to make identity relevant choices.

**Study 1.** Participants took part in a two level (identity schema: absent vs. present) between subjects design. Participants in the identity schema absent (present) condition were instructed to give a fake (real) name when asked in the survey (see Anthony and Cowley 2012 for similar manipulation). Participants were then asked for their name followed by “Hi [*fake/real name*]...” They then read details about the fundraiser, which discussed the university, making university identity salient and one of three cupcakes (two cupcakes were identity irrelevant and one was relevant). Choices were coded dichotomously for our dependent measure. Additional items (e.g., manipulation checks and demographics) were completed (in studies 1-4). Results reveal that when identity schemas were absent (vs. present), participants were less likely to choose a cupcake that was identity relevant ( $M_{identity\_schema\_absent} = .40$  vs.  $M_{identity\_schema\_present} = .20$ ;  $p = .04$ ).

**Study 2.** Participants took part in a 2 (identity salient: yes, no) X 2 (identity schema: present vs. absent) randomized between

subject design. We manipulated identity salience in this study since identity relevant consumption should not differ by identity schema presence when the relevant identity is not salient. Those in the prime condition were asked to write about why being a member of [university] was important to them (Chugani, Irwin, and Redden 2015). The control condition did not complete this task.

Participants then read either the present or absent identity schema manipulation from study 1. Next, on a “form” along with their real or fake name, participants were asked to choose one of three chip-clips (two were identity irrelevant). This dependent measure was calculated dichotomously. Results revealed a significant interaction ( $p = .04$ ). Contrasts revealed that when identity was salient, there was a marginal difference ( $P_{identity\_schema\_absent} = .83$  vs.  $P_{identity\_schema\_present} = .94$ ,  $p = .06$ ). When university identity was not salient, identity schema presence did not impact choice ( $P_{identity\_schema\_absent} = .86$  and  $P_{identity\_schema\_present} = .80$ ,  $p > .30$ ). In the identity schema present condition, participants were more likely to choose an identity relevant chip-clip when identity was salient ( $P_{prime} = .94$  vs.  $P_{control} = .80$ ,  $p = .02$ ). However, participants in the identity schema absent condition were less likely to consume relevant to their identity regardless of prime ( $P_{prime} = .83$  vs.  $P_{control} = .86$ ,  $p > .50$ ).

**Study 3.** Participants took part in a two level (identity schema: absent vs. present) between subjects design. Participants completed the identity schema manipulation from study 1 and then were asked to imagine that they were at a sandwich shop. They were presented with a menu (Bagchi and Block 2011) and asked for their order and name, where they either gave a fake or their real name. Likelihood to tip served as the dependent variable (on a 7-point scale), followed by a reliable measure of spending identity (i.e., tightwad-spendthrift scale; Rick, Dryder, and Loewenstein 2007). Results reveal a significant interaction ( $p < .01$ ) such that when identity schema was absent (vs. present), tightwads (Spending identity  $\leq -1.17$ ) were more likely to tip, while spendthrifts (Spending identity  $\geq 7.49$ ) were less likely to tip. These results indicate that consumers behave opposite to their chronically held spending identity when their identity schema is absent (vs. present).

**Study 4.** Participants took part in a two level (identity schema: present vs. absent) between subjects design. For generalizability, we used a different manipulation of identity schema in this study. Participants in the identity schema absent (present) condition were told to imagine they were out of town (in town) and staying at a hotel (at home) and that they went out to grab a beverage at a coffee shop they have never visited before (visit often).

Participants ordered from a menu and were informed of the coffee shop’s green initiative, for which they were selling reusable coffee cups. Participants indicated how likely they would be to purchase a reusable cup on a 7-point scale and completed a reliable measure of green identity (Haws, Winterich, and Naylor 2014). Results reveal a significant interaction ( $p = .02$ ). Higher green identities (Green Identity  $\geq .69$ ) were less likely to purchase the reusable cup when their identity schema was absent (vs. present), while those with lower green identities was not impacted as a function of identity schema.

In conclusion, these studies provide evidence that consumers, at times, pursue unconstructed identities. As a result, consumers can make less identity relevant choices as well as engage in less identity relevant behaviors. These findings have important theoretical and marketplace implications.



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# Extended Consumption Experiences

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## **Paper #1: Schooling as an Enduring Consumption Experience**

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## **Paper #2: Family Consumption Experiences Across Generations**

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## **Paper #3: Pursue Your Passions: Cultural Discourses about Consumer's Heroic Wilderness Adventures**

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## **Paper #4: Running Through Time: How Life Rhythms Foster Identity Permanence**

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### SESSION OVERVIEW

Consumption experiences are a vital area of consumer research and have been studied from a variety of different perspectives as they pertain to various consumption phenomena (Akaka and Nar-dini 2017). For example, service researchers explore how customers' cognitive, emotional, behavioral, sensorial, and social responses to a firm's offerings (Lemon and Verhoef 2016) while CCT scholars examine how consumption experiences help consumers construct and represent reality, as part of both collective (Moscovici 1988) and individualistic pursuits (Richardson 1999). This research views the consumer experience as "a personal occurrence, often [but not necessarily] with important emotional significance, founded on the interaction with stimuli which are the products or services consumed" (Carú and Cova, 2003, p. 270).

Although prior CCT research has examined everyday and ordinary consumption experiences (Thompson, Locander and Pollio 1990; Carú and Cova 2003) and volitional reconsumption (Russell and Levy 2012), most research tends to examine experiences that are extreme, intensive, and spatially or temporally bounded (Arnould and Price 1995; see also Lindghard and Oostergaard 2015). Moreover, this stream of research often focuses on the individual outcomes of experiences, that is, to center on consumers who live the experience as subjects. Finally, with the recent exception of Scott, Cayla and Cova's (2017) work on painful experiences, we lack research on how consumers endure experiences that are not necessarily pleasant, easy, or leisurely.

This session aims at addressing these gaps by looking at consumption experiences that last over several years, often producing ambivalent and systemic outcomes. The four papers in this session explore extended consumption experiences, their cycles, rhythms and their outcomes over time. The first paper theorizes enduring consumption experiences as those that span through several years and are transformational at the individual, familial, and societal levels. Researching the context of schooling, the authors argue that enduring consumption experiences are not ordinary or extraordinary, and

neither purely pleasant nor painful, but present elements of all these types of consumption experiences.

The second paper investigates the temporal dynamics of a family identity, embedded in a family consumption experience (playing soccer) that spans multiple generations. The authors document the lifecycle of the identity, highlighting periods of dormancy, rekindling, growth, and decline and note the role of identity guardians in sustaining the consumption experience across these phases.

The third paper examines pursuit of passions through extended wilderness consumption experiences. They investigate 'dirtbags' who prioritize long-term wilderness adventures such as climbing, river and mountain sports. Diverse data collected over a two-year period reveal hero and trickster archetypal journeys of "heroic passion," fueled and celebrated by outdoor brands and media. Complexities of navigating passions and social norms can leave 'dirtbag' consumers perpetually caught between society and the wild.

Finally, while studying third-age runners, the last paper develops the Rhythmic Experiences Framework. Inspired by Lefebvre's (2004) theory, the authors describe how consumption practices' properties of place, time, and energy foster life rhythm experiences (of eurhythmia and arrhythmia), which, through time and repetition, and in linear and cyclical processes, may reinforce identity projects.

### Schooling as an Enduring Consumption Experience

#### EXTENDED ABSTRACT

*"I had to endure a highly transient lifestyle and attended seven different schools from Kindergarten through 8th grade...This was difficult. Very difficult. I was secure in my abilities and my potential in life, and at a young age, I knew the importance of education, but it was still very challenging...Some days will be extremely tougher than others and some days those accomplishments will glow, but giving up is not an option... It should make one stronger. It should make one want to reflect on how to beat all the odds. It should foster one's thinking that current challenges have been designed to build upon one's strength, not tear one down. That one's long-term goal can be fulfilled." (Dubiel 2015)*

Education is a fundamental human right (UN 1948) and a highly institutionalized practice. Schooling practices spill over other consumption spheres such as housing, workplace, celebrations and sports (Rojas Gaviria et al, 2018), converting it into one of the pillars of socialization (Doucet 2011). Hence, in addition to the cognitive engagement that is at the core of schooling, these interactions are frequently long-lasting, affect and emotion-laden, having physical and social implications for those involved in them and for society as a whole.

During schooling, various interdependent market actors (i.e. government, schools, consumers -parents, children, therapists, physicians, baby-sitters, tutors, etc.) engage in a myriad of interactions and negotiations that have little to do with teaching and learning. Our study describes the complexity involved in these interactions and shows that schooling is strikingly in contrast with the possibilities for escape and regeneration provided by extraordinary con-

sumption experiences. In fact, students and their families frequently experience schooling as entrapment and find the routine and rituals entailed by schooling and the numerous tasks needed to support it taxing and stressful, yet inevitable (see O'Reilly 2016; Doucet 2011, McLaren 1999). Nevertheless, school attendance and affiliation has been shown to significantly shape one's social and professional network, as well as future opportunities in life (Zimmermann 2016). Thus, given its all-encompassing nature and long-term transformative impact, schooling cannot be considered an ordinary experience as theorized by Carú and Cova (2003).

Moreover, schooling presents elements of pleasurable experiences, as in celebrations, prizes, gatherings and achievements, yet, over the course of the 12 years of basic education, and particularly in markets where performance is closely measured and high standards are required of students (Rojas-Gaviria et al., Forthcoming), it often resembles the painful experiences studied by Scott, Cayla and Cova (2017). We sustain that schooling cannot be seen as either ordinary or extraordinary, and neither purely pleasant nor painful, as it presents elements of all those types of consumption experiences. We thus propose that schooling is an enduring consumption experience. We theorize enduring consumption experiences as those that span through several years and are transformational at the individual, familial, and societal levels. In this study, we examine how Chilean families endure the experience of schooling by immersing ourselves on the private school market.

Primary data collection consists of in-depth interviews with families, service providers and school representatives as well as personal reflections about the schooling experience collected among recent high-school graduates using art as an elicitation technique (Tarr et al. 2017). This main dataset was complemented with media archives and online data collected from parenting blogs, blogs on education and online communities centered on schooling and education. Data analysis involved iterative reading and manual coding of the dataset by all three researchers, searching for patterns (Thompson et al. 1994).

Our findings illustrate how enduring consumption experiences differ from volitional reconsumption (Russell and Levy 2012), and ordinary (Carú and Cova 2003) and extraordinary consumption experiences (Arnould and Price 1995, Scott, Cayla and Cova 2017) in their characteristics, development, and outcomes. We sustain that other types of consumer experiences such as child or elderly care (Huff and Cote 2010; 2011; Barnhardt and Peñaloza 2013), chronic health conditions or disability (see for instance Pavia and Mason 2012) or migration (see Luedicke 2011; 2015) show similar characteristics and could also be considered enduring consumption experiences.

Through reflecting on enduring consumption experiences, we develop a framework that can assist consumer researchers in understanding several under-researched aspects of consumption such as its compulsory, routine, non-agentive (Askegaard and Linnet 2011) nature. Our findings also allow for a reconsideration of temporality and the ways in which different understandings and perceptions of time continuously shape consumption. Finally, this conceptualization opens avenues for additional research on the systemic aspects of enduring consumption experiences, such as their impact on family well-being and identity.

## Family Consumption Experiences Across Generations

### EXTENDED ABSTRACT

This research investigates how consumption experiences linked to a family identity evolve over time. Family identity is the set of

attributes and qualities that make a family unique and differentiate it from other families (Epp and Price 2008). This identity is shaped by, reflected in, and reinforced by a family's consumption practices (e.g., Barnhart, Huff, and Cotte 2014; Cross and Gilly 2014; Curasi, Price, and Arnould 2004; Epp and Price 2008; Epp and Price 2010, 2011; Moisio, Arnould, and Price 2004). Work exploring family identity has clearly articulated the role of consumption experiences in family identity and acknowledges that family identity, and the associated consumption experiences, are dynamic and have unique trajectories (Epp, Schau, and Price 2014; Reckwitz 2002; Warde 2005). However, we still know relatively little about these trajectories, how a family's identity related consumption experiences change over time, or how families grow into and out of particular consumption related identities. To redress this gap, we explore the following research questions: (1) How does a family identity evolve over time? and (2) How do consumption experiences and practices associated with a family identity transfer across generations? To inform our understanding of these issues, we appropriate theories related to the resurrection of collective identities in communities and organizations as a theoretical lens (Howard-Grenville, Metzger, and Meyer 2013). These theories articulate how collective identities are resurrected after experiencing a period of decline, noting the important role that experiences, emotion, and identity guardians (i.e., leaders who leverage community emotion and experiences to support an identity) play in reviving identities. This work also highlights the professional nature of identities, noting that they ebb and flow in and out of favor over time as communities and organizations evolve.

To address our research questions, we explored how a particular consumption experience—playing soccer—enters into families as a practice, collects into an identity, and evolves over time. The focal activity of “playing soccer” is an ideal context for this research as this consumption experience often reflects a lifetime of engagement and is frequently integral to family identity (e.g., “soccer family”) with multiple family members (children and parents) gathered into the practice as players, supporters, or volunteers. Given our interest in how family identity evolves over time and across generations, we adopted a novel methodological approach that allowed us to observe some of the dynamics of identity evolution within an empirically reasonable timeframe. In phase 1 of data collection, we conducted interviews with 66 parents and children from 22 U.S. families at different stages of adopting a soccer family identity (some families were in their first year of participation and other families noted 20 years of involvement with youth soccer). Here, our focus was on how children become socialized into the soccer experience and how their engagement with the activity impacts family identity. In phase 2, we conducted an in-depth analysis of a single, multi-generational family whose family identity includes playing soccer. The family consists of two parents, four adult children (2 male, 2 female) and their spouses, and nine grandchildren ranging in age from one to eight years old. All the adult children played soccer in their youth, with one of the adult children being heavily engaged with the activity as a child and remains so in his adult life. Interviews were conducted with all the adult members of this family and explored their recalled accounts of being a soccer family in the past as well as their current experiences as the newest generation of children enters into the world of organized sports. The focus in phase 2 was to explore issues related to the intergenerational transfer of consumption experiences and family identity.

Our findings show how key family consumption experiences and practices evolve over a long temporal period. We document how adult members of families act as identity guardians who protect and nurture the soccer family identity, sometimes through years of dor-

mancy but then rekindle the identity as the next generation of children age into the activity. Rekindling the identity may involve something seemingly innocuous like registering a child in a recreational soccer league and while also foregrounding positive elements of the experience in narratives, emphasizing benefits that accrue from engaging with soccer (e.g., exercise, fun, team-building skills). This introduction is embedded in a series of other influences that elevate it from a simple ‘registration’ to an important act of rekindling that sets the stage for practice evolution where the practice gathers force within a family.

Next, families take on increasing commitment to the practice and identity. At this point, other assemblages in which soccer is embedded may break into the consumption experience with competition and performance expectations penetrating the family’s identity. This can threaten the practice as engagement incites tensions between conflicting discourses, identities, and other practices. The survival of the practice at this stage is once again dependent on identity guardians who work to unify family members around the positive elements of the consumption experience. Families grapple with questions related to their feared and desired selves and try to determine what kind of family they want to be and what kind of people they want their children to be. Here, identity guardians forecast into the future and strategically think about how to pursue the family identity. Once determined, families continue enacting the soccer identity until the next phase of dormancy begins (often associated with children going to college and no longer playing soccer). During the dormancy phase, the soccer identity takes on a nostalgic quality, supported by related materialities curated by identity guardians (e.g., soccer themed baby clothes) that prepare the identity for eventual rekindling.

In summary, we explore the temporal dynamics of a family identity, embedded in a consumption experience that spans multiple generations. We document the lifecycle of the identity, highlight periods of dormancy, rekindling, growth, and decline and note the role of identity guardians in sustaining the identity during all four phases. Overall, this work enhances understandings of how family identity and consumption practices evolve over time.

### **Pursue Your Passions: Cultural Discourses about Consumer’s Heroic Wilderness Adventures**

#### **EXTENDED ABSTRACT**

Cultural discourses shape brand meanings and how consumers’ navigate market and social structures (Arnould and Thompson 2005; Bunderson and Thompson 2009; Chouinard 2006; Coskuner-Balli and Thompson 2013; Coulter, Price, and Feick 2003; Holt 2004; Holt and Cameron 2010; Holt and Thompson 2004; Luedicke, Thompson, and Giesler 2010; Thompson 2004; Thompson and Haytko 1997). Our research examines cultural discourses that encourage individuals to pursue their passions, especially how consumers integrate the pursuit of passion into their navigation of market and social structures. Consumers are urged to “pursue your passions” or “chase your dreams.” Similar to Campbell’s (1973) description of the Hero’s Journey, stories of successful athletes, artists, spiritual seekers, entrepreneurs and outdoor adventurers describe individuals who pursued a passion, overcame great difficulties, and were subsequently celebrated for their accomplishments.

Our research examines the pursuit of passions through extended consumption experiences in the wilderness. The wilderness, viewed as outside human control, is celebrated in ancient myths, American culture, and as places that challenge those who venture into them and for their transformative power (Arnould and Price

1993; Arnould, Price, and Tierney 1998a; Belk and Costa 1998; Celsi, Rose, and Leigh 1993; Hawes 2008; Kozinets 2002; Miller 1991; Thoreau 2006; Tumbat and Belk 2011; Turner 1969). Further, the wilderness may allow individuals to pursue their passions uninhibited by the strictures of society (Arnould, Price, and Tierney 1998b; Belk and Costa 1998; Canniford and Shankar 2013; Hyde 2010; Radin, Jung, and Kerényi 1972; Rickly-Boyd 2012; Rickly 2016, 2017; Schouten and McAlexander 1995).

Despite rich scholarship on transformative consumption and extraordinary consumption, relatively little is known about wilderness consumers’ temporally enduring pursuit of passions. For example, little is known about the role of brands in shaping and perpetuating passion driven journeys into the wilderness. Products such as the GoPro Hero personal camera, and brands such as Patagonia and North Face exemplify this discourse (Holt and Cameron 2010). Our research asks: (1) How do consumers draw on cultural discourses to inform wilderness brand and consumption choices; and (2) How do long-term wilderness adventurers integrate pursuit of their passions with market and social structures?

To inform our understanding of consumers who pursue their passions in the wilderness, we rely on trickster (Hyde 2010; Radin et al. 1972) and hero (Campbell 1973; Segal 1990) archetypes as enabling theories. Tricksters live morally ambiguous lives pursuing their passions on the boundaries of society. They are celebrated and condemned for their cunning ability to defy and survive outside of societal norms. The Trickster’s disruption of social order may infuse society with new vitality, or it may introduce destructive chaos (Babcock-Abrahams 1975). Heroes leave society, conquer evil forces, experience personal growth, then return to improve society.

To address our research questions, we focus on individuals who prioritize their passion for wilderness adventure over socially normative and expected priorities, such as shelter and financial well-being. These consumers refer to themselves as ‘dirtbags,’ and exist in a wide variety of outdoor pursuits, especially climbing, river sports and mountain sports (Rickly 2017). Dirtbags, sometimes referred to as “core users” by outdoor brands, are connected to the branding, product development and entrepreneurial creation of many outdoor service and retail businesses (Chouinard 2006; Harrison and Corley 2011; Holt and Cameron 2010; Taylor 2010). Dirtbags offer an ideal subject group for researching heroic wilderness pursuit of passions.

Our findings incorporate diverse sources of primary and secondary data. Data collection was concentrated over a two-year time span. Informants described experiences retrospectively, prospectively and as they were living them. Primary data was collected during participant observation at wilderness site visits, climbing competitions, and screenings of dirtbag movie memoirs resulting in field notes and photographs. Further, snowball sampling led to 17 semi-structured in-depth interviews of participants ranging from age 20–46, and included selective follow up interviews and communications. Secondary data included branded content, dirtbag themed documentaries sponsored by outdoor brands, memoirs, and approximately 30 hours of *The Dirtbag Diaries* podcasts. Further, Dirtbag themed blogs, newspaper content and dirtbag titled social media provided insight into how dirtbags portray themselves to others.

Our findings adopt an extended temporal perspective on consumption and show how the heroic pursuit of passions cultural discourse informs brand and consumer practices. We find that brands depict ‘heroic’ wilderness struggles and conquests, with the brand helping to launch the hero’s journey into the wilderness. Outdoor brands also occasionally integrate tricksteresque messages celebrating the edge-dwelling, norms-challenging aspects of passion pursuits in the wilderness. Popular and social media accounts similarly



describe wilderness adventures as heroic conquests with tricksteresque undercurrents. Media targeting in-group audiences, such as a blog post titled “The Sophisticated Dirtbag,” delve more thoroughly into morally questionable techniques dirtbags use to extend passionate wilderness pursuits, such as dumpster diving and illegal camping.

Our informants describe self-transformative, passion-driven wilderness conquests. However, they also highlight socially ambivalent themes, offering the promise of transcending social structures and reconfiguring consumption patterns, while simultaneously threatening to contaminate and undermine systems of order. Consumers who follow their passions for extended adventures into the wilderness enter a shapeshifting space defined by paradox and tension. Our informants sacrifice comfort, income, security, family relationships, old friendships, intimate relationships and health in pursuit of ‘essentially pointless’ conquests. These sacrifices lead to diverse internal tensions and tensions with society. Navigating tensions between the individual’s pursuits of passion and the social norms that inherently constrain them is a perpetual challenge for these consumers. Through their celebration of dirt, both literally and in the figurative sense of dirt as a rejected by-product of creating order (Hyde 2010), our informants highlight the paradoxical natures of meaningful consumption, work, relationships, autonomy and security. We find that pursuits of passion are characterized by tricksteresque ambivalence and may end heroically, tragically or as prolonged journeys into futility and irrelevance.

In summary, we explore the practices and lives of consumers who pursue their passions in the wilderness. Using data from diverse sources, we reveal the tricksteresque and sometimes heroic nature of passion pursuits, which differentially informs and influences outdoor brands, media and consumption practices. This work has implications for the broader cultural discourse of the pursuit of passion in many domains, including consumers who pursue their passions for video games, art, spirituality, entrepreneurship and athletics.

### **Running Through Time: How Life Rhythms Foster Identity Permanence**

#### **EXTENDED ABSTRACT**

Time experience is crucial for human emotion, motivation, action (Carstensen et al., 1999), and well-being (Gabrian et al., 2017) and it is a constitutional part of what individuals have when engaged in social activities and practices. Social practices induce a specific pattern of experienced temporality in those performing them (Woermann & Rokka, 2015) because personal time is embedded in interactional structures in which individuals synchronize their time with others (Brodowsky, 2008) in physical and social contexts (Cotte & Ratneshwar, 1999). Also, the lived-time experience is mediated through the body, derived by the sensory-motor experiences in each activity (Toyoki et al., 2013).

Recently, Woermann and Rokka (2015) developed the concept of timeflow in consumption practices, which is the ability of social practices to evoke experienced temporality. From their study, we know that consumption practices embed a specific temporal experience and that this experience is a quality of a practice given its bodily, material, situational and teleoaffective influences. We also know that consumption practices shape identities and lifestyles (Celsi et al., 1993; Goulding et al., 2009; Schau, Gilly & Wolfenbarger, 2009) and that the extended and continuous performance of consumption practices vest individuals with symbolic, cultural and social capital that feed their identity projects (Arsel & Thompson, 2011).

Nevertheless, the literature on consumer culture still lacks a proper understanding of the way temporal experiences embedded

in consumption practices (Warde, 2005) shape, reinforce or challenge identity projects, especially when consumption practices are performed over extended periods. In this research we ask, how does consumption practices temporal experience influence identity projects of individuals who engage in consumption practices for extended periods? We explore this research question in the context of third age individuals in Brazil who are engaged in the consumption practice of running, a context that represents many other consumption practices such as yoga, swimming, or jogging.

Running is a social practice with many adherents among third age in Brazil. According to Krutman (2018), third age runners account for between 8,5% and 12% of the individuals registered for street runs in Brazil (a reasonable number, given that 12% of the population in the country belong to the third age group).

We adopted the semi structured interview method (Kvale, 2007), starting with general open questions about the evolution of running practice throughout their life and evolving to their running routines, the feelings, benefits and meanings of running, whether and how running has changed their lives, the development of social ties through running, how they imagine they are perceived by their social groups, and their main identity projects. The first author interviewed twelve runners ranging from 60 to 78 years of age, all residents in the state of São Paulo, Brazil. The second author listened and read to all the interviews, which were recorded and transcribed. We recruited some of the participants during a six-month observation of two online communities of interest related to running and the others we recruited through snowball technique. For all the participants, in our judgment, running has been a crucial part of their lives. Analytically, we adopt the theory of rhythm analysis of Lefebvre (2004), which next, we explain in its main elements.

Through the use of rhythm - biological, psychological and social - as a tool for analysis, Lefebvre (2004) interrelates space, time and energy in the comprehension of the quotidian. Rhythm is a way to understand time and experience, with the body playing a central role in the theory. Repetition (of movements, actions, situations and differences), the interference of linear (originated from social elements) or cyclical (originated from nature) processes, comparison (to our own’ and to others’ rhythms), and cycles of birth, growth, peak, decline, and end are important analytical elements in his theory. We also borrow the concepts of eurhythmia (and arrhythmia), in which the various rhythms in life sequentially unite in accordance (and discordance) producing order (and disorder).

Inspired by Lefebvre’s theory we developed the Rhythmic Experiences Framework, which describes how consumption practices’ properties of place, time, and energy foster life rhythm experiences (of eurhythmia and arrhythmia), which through time and repetition, in linear and cyclical processes, may often reinforce identity projects. We find a process in which the elements of running consumption practice - physical commitment, self-monitoring, socialization, attendance, and personal transformation - all of them with specific properties of time, energy and place, foster rhythm experiences. These experiences are recurrent, linear and cyclical, of a eurhythmic nature that reinforces the identity project of being a runner, or of an arrhythmic nature - events that break with the routine or gradually changes it, such as injuries or slow decay - challenging the same identity project.

We complement prior studies on the role of temporal experiences in consumption practices (Goulding et al., 2009; Canniford and Shankar, 2013; Woermann and Rokka, 2015) and we extend this line of research in adding the role of rhythm in extended temporal experiences of consumption practices in fostering enduring identity projects of old age individuals.

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# The Value of Voice

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## Paper #1: How the Voice Persuades

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## Paper #2: Sincere Persuasion: Cues in Language Used to Assess and Convey Sincerity

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Jonathan Berman, London Business School, UK  
Deborah Small, Wharton School of Business, USA

## Paper #3: Expressing Dissent: How Communication Medium Shapes Dehumanization and Attitude Change

Juliana Schroeder, Haas School of Business, USA

## Paper #4: It's Surprisingly Nice to Hear You: Misunderstanding the Value of Talking (vs. Typing)

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### SESSION OVERVIEW

People communicate through a variety of channels. They talk face-to-face, call on the phone, text, and post on social media. But while people often give little thought to the channel through which they communicate, might it actually have an important impact on social interaction?

This session integrates different perspectives to examine the value of voice. Listeners often react against persuasive appeals, but might shifting subtle paralinguistic, or vocal features of communication increase persuasion? Do charitable appeals seem more sincere when they are conveyed through voice rather than text? Can debating by voice rather than text increase attitude change by making people less likely to dehumanize their opponent? And might people prefer interacting by text (because they think it is less awkward), even though interacting via voice would actually bolster social connection? This session addresses these, and other questions, as it deepens understanding of how the voice shapes social interaction.

First, **Van Zant and Berger** examines paralinguistic persuasion, or the effectiveness of persuasion attempts executed through nonverbal properties of communicators' voice. While persuasion attempts often backfire, and fail to work, they demonstrates that paralinguistic attempts actually enhance persuasion because they make speakers seem more confident. People trying to persuade paralinguistically speak louder, and with greater variance in volume, which increases perceived confidence and thus persuasion.

Second, **Barasch et al.** examine how voice shapes sincerity. By dissecting charity appeals into separate parts (e.g., silent video, transcript, audio, etc.) they disentangle the unique value of each set of language cues (semantic, auditory, and visual cues). They find that hearing—but not seeing speakers—increases perceived sincerity.

Third, while people tend to dehumanize people with whom they disagree, **Schroeder** finds that voice can mitigate this effect. People who have a spoken (vs. typed) conversation are less likely to dehumanize their opponent and report greater attitude change. Further, rather than being driven by a different message people communicate, results reveal this is driven by voice more strongly conveying a person's intellect to the listener.

Finally, **Kumar and Epley** examine how the voice shapes social connection. When interacting for the first time, or reconnecting with old friends or, people tend to prefer text because they think voice-based interactions will be more awkward. They're incorrect. There are actually no differences in awkwardness between communication media, but anticipated awkwardness drives people to use text-based media to interact, decreasing social connection.

Taken together, these papers provide convergent evidence for the value of voice. Technology has changed how people communicate. More and more people now used text-based media (i.e., text, email, or social media) rather than talking on the phone or face-to-face. But as these four papers show, there are a number of important benefits to voice (e.g., confidence, sincerity, humanization, and connection) that help voice increase persuasion, attitude change, and social bonding.

This session should be of interest to a range of consumer behavior researchers, from those that study social influence and persuasion to those interested in prosocial behavior, social interaction, political discourse, and well-being

### How the Voice Persuades

#### EXTENDED ABSTRACT

Persuading others can be challenging. When people diagnose others' intent to persuade, they often defend themselves by ignoring or counter arguing against the message (Friestad & Wright, 1994). Consumers can diagnose common persuasion tactics like positively valenced statements (e.g., "exceeds your needs" versus "meets your needs"), for example, or rhetorical questions (e.g., "Mizuno shoes are beneficial for you, aren't they?"), which causes communicators' persuasion efforts to backfire (Campbell & Kirmani, 2000).

When studying persuasion, however, the literature have often examined written messages. It has looked at manipulating written arguments (Tormala & Petty, 2002), print advertisements (Kirmani & Zhu, 2007), and text-based hypothetical vignettes (Campbell & Kirmani, 2000).

In contrast, little work has examined persuasion attempts executed through *paralinguistic* channels, or nonverbal properties of communicators' voice. Communicators can deliver the same message with in different ways, varying acoustic properties like their pitch, volume, and speech rate. Might such shifts actually make communicators more persuasive?

We argue that, although communicators may struggle to persuade others through *what* they say (linguistic persuasion attempts), they may be relatively effective at persuading others through *how* they say it (paralinguistic persuasion attempts).

If paralinguistic persuasion attempts are effective, there are two possible reasons why. The first is that listeners fail to detect them, which may make them harder to resist. Whereas linguistic attempts are fairly easy for listeners to identify (and thus ignore or react against), paralinguistic persuasion cues may be more difficult to diagnose. Alternatively, paralinguistic persuasion attempts may increase persuasion through signaling confidence. Confidence is a credibility cue that enhances persuasion (Karmarkar & Tormala, 2009). If speakers sound more confident when they are trying to persuade, this may boost persuasion regardless of whether their attempts are detected.

Across three experiments, we examine (1) whether paralinguistic persuasion attempts enhance persuasion and (2) the mechanisms underlying this effect.

*Experiment 1-3.* First, we generated stimulus materials by recording a sample of speakers ( $N = 49$ ) reading a review of a TV aloud twice (randomized order): once when incentivized to persuade a future research participant (paralinguistic attempt condition) and once when not given such an incentive (control condition).

Second, using a (paralanguage: control, persuasion)  $\times$  2 (disclosure statement: no, yes) between-subjects design, we presented a separate sample ( $N = 713$ ) with a randomly selected recording from the stimulus materials. To test whether paralinguistic persuasion attempts work because they are less likely to be detected, we also manipulated whether listeners received information about speakers' intent to persuade (i.e., the presence or absence of a disclosed monetary incentive to persuade).

Finally, we measured whether participants were persuaded (4 items; e.g., "I would like to purchase this TV") and perceived the speaker as confident (2 items: confident, certain).

As predicted, paralinguistic attempts enhanced persuasion ( $p = .049$ ). This was not moderated by linguistic information about communicators' intent to persuade, however, indicating that even when persuasion was detected, paralinguistic attempts still enhanced persuasion. Instead, results are more consistent with a confidence account. Paralinguistic attempts made speakers appear more confident ( $p = .003$ ), which mediated the effect of paralinguistic attempts on persuasion.

While one could argue that the results of Experiment 1 are somehow driven by communicators' intent to persuade not being clear enough, Experiment 2 ( $N = 1,104$ ) finds the same effects on persuasion ( $p = .003$ ) and confidence ( $p < .001$ ), including mediation by confidence, even when communicators directly acknowledge their intent to persuade (i.e., "I would like to convince you to purchase this TV").

In Experiment 3, we allowed speakers ( $N = 45$ ) to craft both the verbal and nonverbal aspects of their appeals. We manipulated linguistic persuasion attempts by randomly assigning half just to compose a review (control condition) and asking the other half to compose a persuasive review (linguistic attempt condition). Then, as in the first two experiments, they read their review aloud twice, once while making a paralinguistic persuasion attempt.

Next, we presented a randomly selected recording from the stimulus materials to a separate sample of research participants ( $N = 1,086$ ) and assessed persuasion and confidence. Finally, to provide a stronger test of detectability, we directly assessed the extent to which participants could diagnose communicators' intent to persuade ("I thought it was pretty obvious that the speaker was trying to persuade me").

As predicted, paralinguistic attempts again enhanced persuasion ( $p < .001$ ). This occurred even through listeners accurately perceived speakers' greater persuasive intent ( $p < .001$ ), providing further evidence against detectability. Instead, the results again support the confidence account. Paralinguistic attempts made speakers appear more confident ( $p < .001$ ), which mediated the effect of paralinguistic attempts on persuasion.

In contrast, linguistic persuasion attempts slightly harmed persuasion (*ns*) and did not make speakers appear more confident despite being similarly detectable to paralinguistic attempts ( $p = .037$ ). This suggests that although participants could detect them, paralinguistic attempts were more effective than linguistic attempts because they signaled confidence.

*Exploratory Analysis of Speakers' Paralinguistic Cues.* To better understand *how* speakers' paralinguistic attempts enhanced persuasion, we also analyzed the recordings used in each experiment to explore *which* nonverbal vocal cues influenced the persuasion process. We extracted objective phonetic measures using the Praat program (Boersma & Weenik, 2017). Relative to the control condition, speakers increased their volume ( $p < .001$ ) and varied their volume to a greater extent ( $p = .014$ ) when attempting to persuade. Each of these cues enhanced their perceived confidence and, in turn, the extent to which they were persuasive.

*Conclusion.* Taken together, these findings suggest that because they signal confidence, paralinguistic persuasion attempts are effective even when they are diagnosed. Beyond *what* to say, focusing on *how* to say it can increase influence.

### Sincere Persuasion:

#### Cues in Language Used to Assess and Convey Sincerity

#### EXTENDED ABSTRACT

Sincerity is a valued aspect of personality (Anderson, 1968), emotional displays (Grandey, Fisk, Mattila, Jansen, & Sideman, 2005), and communication (Barasch, Berman, & Small, 2016). Sincerity can be persuasive because it assuages any concern about ulterior motive (Campbell & Kirmani, 2000). Furthermore, sincerity is a key input into many consumer decisions, such as whether to take a recommender's advice about purchasing a product (Tuk, Verlegh, Smidts, & Wigboldus, 2009).

But what determines whether persuaders are deemed sincere? The current research examines the language cues that people use to judge others' sincerity.

In particular, we focus on three primary sets of language cues that could be used to evaluate sincerity: semantic cues (i.e., the message content or actual words expressed), auditory cues (i.e., characteristics of the communicator's voice, such as tone or volume), and visual cues (i.e., characteristics of the communicator's visual appearance, such as facial expression). While previous research suggests that each of these cues affects judgments of a message (semantic: Packard & Berger, 2017; auditory: Schroeder, Kardas, & Epley, 2017; visual: De Waele & Claeys, 2017), it is unclear how important each cue is for assessing sincerity specifically, and how these cues interact to influence perceptions of a communicator. Our work tests this question in the context of persuasive charity appeals.

First, to examine consumers' lay beliefs about which cues best convey sincerity, we conducted an online survey ( $n = 104$ ) asking participants how effective different communication cues are for "convincing you [others] to support a cause." They evaluated three sets of cues: hearing a communicator's appeal (auditory cues), reading a communicator's appeal (semantic cues), or watching a communicator's appeal (visual cues). Participants believed auditory cues would be the most effective ( $ps < .002$ ), and that semantic and visual cues would be equally less effective ( $p = .757$ ). The same pattern of results emerged for ratings of how useful each medium would be for determining sincerity in others and expressing sincerity to others.

Next, we test whether lay people are correct by conducting three experiments. In each experiment, we used real charity appeals (videotaped;  $n = 36$  in Study 1;  $n = 93$  in Study 2;  $n = 76$  in Study 3; see Barasch et al, 2017 for a prior analysis of donations using these video appeals). We then manipulated the communication medium that observers evaluated. In Study 1 ( $n = 678$ ), we randomly assigned observers to 1) watch only the silent video (visual condition), 2) listen to only the audio (audio condition), 3) read only the content of the appeal (text condition), or 4) watch the video and audio (full

## Expressing Dissent: How Communication Medium Shapes Dehumanization and Attitude Change

### EXTENDED ABSTRACT

Disagreement often begets incivility. When one person disagrees with another, they tend to infer not only that the other person has deficient opinions but also deficient mental capacities (Kennedy & Pronin, 2008; Pronin, Lin, & Ross, 2002). In such a way, people tend to *dehumanize* those with whom they disagree: believing that their intellectual faculties are weaker, with mental capacity more like a thoughtless animal than a thoughtful human (Epley & Waytz, 2010). Some advocates for civil discourse, therefore, have suggested trying to “humanize” interactions between ideological opponents, for example by having opponents exchange opinions in person instead of online. Can changing the communication medium by which dissenting opinions are exchanged affect dehumanization, thereby influencing attitude polarization?

Prior research suggests at least two ways in which the interaction medium could affect dehumanization. First, the medium can affect a person’s message—that is, the words he or she selects to use in the conversation. Communicators may express more antagonistic and aggressive opinions online, because online interactions increase disinhibition in part because they create emotional distance (e.g., Suler, 2004). However, writing may provide communicators with more time to carefully compose their thoughts than speaking; communicators may write more eloquently than they speak (Hayes, 1988).

Second, beyond affecting how a message is generated, the medium affects how a message is consumed. For example, hearing a person’s opinions compared to reading the same opinions makes him or her seem more mentally sophisticated and is hence humanizing, in part because cues in a person’s voice such as tone and pauses convey their intellect (Schroeder & Epley, 2015, 2016; Schroeder, Kardas, & Epley, 2017).

To test how communication medium affects humanization and attitude change, Experiment 1 recruited 396 political opponents to exchange opinions for eight minutes in a pre-registered experiment. Participants first completed a pre-survey measuring their opinions on three pre-tested contentious political and social topics (e.g., the use of GMOs), were then paired based on disagreement, and finally randomly assigned to either have a spoken or written conversation. After meeting their partner, speaking-condition pairs went to a private room to have their conversation (which we recorded) whereas writing-condition pairs went to a computer lab and had their conversation online.

When the conversations were complete, participants completed a post-survey evaluating their partner (measuring humanization using a pre-validated scale; Bastian & Haslam, 2010) and the conversation and reporting their updated attitudes. Results revealed an effect of communication medium on humanization: opponents humanized each other more when speaking ( $M=5.21$  on 7-point scale) than when writing ( $M=5.67$ ),  $F=16.38$ ,  $p<.001$ ,  $\eta_p^2=.078$ . Moreover, they reported feeling more understood by their partner, enjoyed the conversation more, and reported more attitude change,  $F=24.82$ ,  $p<.001$ ,  $\eta_p^2=.113$ . The effect of speaking vs. writing on attitude change was mediated by humanization. But they experienced no different levels of conflict during the conversation,  $p>.250$  (i.e., ratings of how emotional, heated, contentious, and conflicted was the conversation).

The effect of interaction medium on humanization could be driven either by different types of messages being created in each medium or by differences in how the messages are consumed. In Experiment 1, the “creation medium” and “consumption medium”

condition). Each observer evaluated only one condition from one speaker, and subsequently assessed the speaker’s sincerity on six pre-validated items ( $\alpha = .94$ ). Participants’ mean-level assessments of speakers’ sincerity were highest in the full and audio conditions compared to the other conditions. Additionally, a follow-up analysis revealed that observers’ sincerity ratings in the full condition were predicted most strongly by observers’ ratings in the audio condition ( $\beta = .63$ ,  $p < .001$ ), followed by the text condition ( $\beta = .53$ ,  $p < .001$ ), and least strongly in the visual condition ( $\beta = .16$ ,  $p = .35$ ).

The results from Study 1 show that hearing someone’s voice signals sincerity significantly above reading their words or seeing them deliver an appeal. However, the comparison between auditory and visual cues in Study 1 contains a confound: a person’s voice contains both semantic and auditory cues whereas a silent video contains only visual cues without semantic information. To determine whether people also attend to visual information when semantic content is present, Studies 2 ( $n = 1,376$ ) and 3 ( $n = 2,262$ , pre-registered at <http://aspredicted.org/blind.php?x=fr88n2>) added a fifth experimental condition: watching video with subtitles (“subtitled video” condition). Results from both studies showed that subtitled videos added significantly more predictive validity above silent videos alone (Study 2:  $p = .006$ ; Study 3:  $p < .001$ ) and text alone (Study 2:  $p = .01$ ; Study 3:  $p = .001$ ). These studies also replicated Study 1’s finding that audio ratings predict full ratings above and beyond text ratings (Study 2:  $p = .04$ ; Study 3:  $p = .02$ ).

To better understand the pattern of results across all three studies, we conducted an analysis with all participants ( $n = 4,316$ ) controlling for study. This analysis revealed three key findings. First, observers attributed the greatest sincerity to persuaders in the audio condition compared to persuaders in the text and subtitled video conditions, and the least sincerity to the silent video condition. That is, hearing speakers—but not seeing speakers—meaningfully increased observers’ evaluations of people’s sincerity. This might suggest that auditory cues convey greater sincerity—or less insincerity—than visual cues, or that people naturally tend to use their voice to express sincerity more than their face or body.

Second, observers relied most strongly on semantic content and auditory cues to assess sincerity; they relied relatively less strongly on visual cues. This suggests that a sincere voice may be more powerful for conveying sincerity than a sincere face.

Third, semantic content combined with non-semantic cues, either auditory or visual, predicted sincerity judgments better than semantic content alone. One implication of this finding is that the words people use are significantly limited in conveying sincerity in the absence of vocal or visual cues. Rather, it is the combination of semantic and paralinguistic cues that make one’s words seem sincere.

In conclusion, four experiments demonstrate that auditory cues may be particularly important for judging others’ sincerity, and visual cues relatively less important. While lay people recognize the significance of auditory cues, they overestimate the significance of visual cues. This research has implications for many marketing contexts where successful persuasion depends on perceptions of sincerity, from salespeople convincing customers that clothing looks good on them, to celebrities convincing the public they are sorry for a transgression, to doctors convincing patients to take certain medications. If sincere, persuaders should prioritize being heard over being seen.



were conflated, making it impossible to disentangle which aspects of the medium affected humanization. To test between the effect of the creation and consumption medium, we created transcriptions of the spoken conversations and asked research assistants matched on gender to read aloud the written conversations (recorded). In Experiment 2, online observers ( $n=994$ ) either listened or read one of the conversations and evaluated the mental capacities of each interactant on the same humanization scale that the original participants used. Observers also reported their own opinions on the topics. Therefore, Experiment 2 used a 2 (creation medium: speaking vs. writing)  $\times$  2 (consumption medium: hearing vs. reading) design: Observers either heard or read an originally spoken or written conversation.

Two main effects emerged (no interaction). First, regardless of how the conversation was created, observers humanized communicators more when they heard the conversation than when they read it,  $F=4.41$ ,  $p=.036$ ,  $\eta_p^2=.004$ , suggesting that a person's intellect is more apparent when their voice is heard than when their words are read.

But second, the effect of the creation medium indicated that written statements humanized the communicator more than spoken statements: Observers rated the communicators who wrote their opinions as being more intelligent and consequently more uniquely human than the communicators who spoke their opinions,  $F=10.25$ ,  $p<.001$ ,  $\eta_p^2=.01$ . This suggests that, at least in this context, communicators were better able to convey their intellect by writing than by speaking.

To further test whether communicators exchanged less antagonistic or contentious messages when speaking than writing, we restricted our observer sample to only those who disagreed with communicators' opinions. Again, observers humanized the communicators who wrote (vs. spoke) marginally more highly,  $F=2.87$ ,  $p=.090$ ,  $\eta_p^2=.003$ , suggesting that communicators did not create more antagonistic messages when typing.

Overall, these results suggest that how a message is consumed may matter more for evaluations of an opponent than how it was created.

In summary, how people interact influences humanization, which in turn shapes attitude change. Opponents humanized each other more during in-person (spoken) interactions than online (written) interactions and consequently reported more change in attitudes. There was no empirical evidence that individuals create more intelligent or less divisive messages when they speak (vs. write) to each other. Instead, consistent with prior research (e.g., Schroeder et al., 2017), the cues in a person's voice may convey their intellect more clearly than do their words alone. In other words, how a person's opinions are consumed (heard or read) may be even more important for humanization than how the opinions are generated (via speaking or writing).

These findings have important implications for how technology may shape discourse. People who disagree can easily interact via online forums (e.g., Reddit, Facebook), which may discourage them from conversing in-person. This work suggests that these online interactions may subtly enhance dehumanization. Disagreement is born not just from harsh words exchanged but from the structure of the interaction itself.

### **It's Surprisingly Nice to Hear You: Misunderstanding the Value of Talking (vs. Typing)**

#### **EXTENDED ABSTRACT**

Social connections improve consumer welfare (e.g., Kahneman & Deaton, 2010). Technological advances offer many different ways of connecting with others across different communication media.

But do consumers choose the medium through which they connect wisely?

We predicted that people would feel a stronger bond with another person when they talked than when they typed, because interactions involving the human voice contain cues not present in text-based media (Kruger, et al., 2005; Schroeder & Epley, 2015), cues that may affect connectedness and that must be anticipated if consumers are to choose media for engagement optimally. We further predicted that people may not recognize the value of voice-based media for promoting connection, and that preferences for communication media would instead be guided by the expected awkwardness of an interaction.

To test these predictions, we ran an initial study with 300 participants who completed questionnaires on the Friday before New Year's Eve and the following Monday. At both points, participants rated how lonely they felt (Russell, 1996). In the follow-up survey, participants reported how much time they spent interacting with others in voice-based exchanges (face-to-face, phone, video chat) and in text-based exchanges (email, texting, social media). The more time spent in voice-based interactions, the less lonely participants felt after the weekend compared to before,  $p < .01$ . The amount of time spent on text-based communication was not related to changes in loneliness.

Experiment 1 asked participants to reconnect with an old friend they were once close to, but with whom they had fallen out of touch. Participants predicted how connected and awkward they would feel if they reconnected in two ways: over the telephone (using their voice) and over email (using text). They also indicated which option they preferred. Rather than give participants their chosen medium, we randomly assigned them to either reconnect over the phone or email.

Participants expected they would feel like they had formed a stronger bond with their friend over the phone than over email, and also anticipated that they would feel like they had "really connected" more strongly over the phone,  $ps < .0001$ . However, participants also expected that they would feel more awkward over the phone,  $p < .0001$ . Sixty-seven percent of participants indicated that they would prefer to interact over email than over the phone,  $\chi^2(N=200) = 23.12$ ,  $p < .0001$ . A regression predicting choice of communication media from expected connection and awkwardness revealed the strongest effect of expected awkwardness ( $p < .0001$ ).

When they actually reconnected, however, participants reported feeling a stronger bond when assigned to reconnect with an old friend over the phone than over email,  $p < .05$ , and also reported a stronger feeling that they "really connected" over the phone,  $p = .06$ . In contrast, participants did not feel any more awkward when they connected over the phone,  $p > .7$ .

Although the results of this naturalistic field experiment suggest that the presence of voice could be producing these effects, to more cleanly test our predictions, we designed a laboratory experiment that ensured perfect response rates, constrained topics of discussion, and more carefully controlled the media through which participants interacted. In Experiment 2 ( $N=302$ ), participants engaged in a modified "fast friends" procedure (Aron, et al., 1997) and chatted with a stranger on Skype, either over video, voice, or text. The video condition allowed us to test whether providing visual cues would increase connection compared to voice alone, or whether the voice uniquely provides a sense of social connection. Before interacting, participants predicted how connected they would feel to their partner and how awkward they expected the interaction to be. Unlike Experiment 1, in which participants predicted their experience in both the voice-based and text-based conditions, predictions here were made



between-subjects. Participants in this experiment predicted no differences across communication media in either connection or awkwardness (all  $ps > .1$ ).

Participants, however, again felt more connected when they communicated in a voice-based medium than when they only used text. Adding additional cues beyond voice in the video condition did not increase connection compared to the audio condition, suggesting that it is not simply the addition of more interpersonal cues that increases the sense of connection between consumers. We also observed no differences in experienced awkwardness between communication media conditions ( $ps > .2$ ). Because we collected predicted and actual ratings from participants for only the between-subjects condition to which they were assigned, we can directly compare predicted and actual experiences. Participants across all conditions significantly overestimated how awkward their interaction would be,  $p < .001$ , and underestimated how connected they would feel,  $p < .001$ . Moreover, the difference between predicted and actual ratings of connection was greater in the voice and video conditions than in the text condition,  $ps < .05$ . Note, though, that the gap between expected and experienced connection did not differ between the voice and video conditions,  $p > .8$ . These results suggest that connecting over voice-based media creates an especially surprising bond with another person.

A final experiment ( $N=50$ ) examined whether predictions of connection or awkwardness are more likely to guide decisions in daily life by having consumers consider a variety of scenarios. For each situation, participants indicated how connected they would feel and how awkward it would be to interact over the phone and over email. They then indicated the extent to which they would rather communicate by talking or typing. Preferences were better predicted by expectations of awkwardness than connectedness. Recall, however, that our prior experiments revealed no differences in actual awkwardness across communication media.

How a consumer decides to interact with another person has important consequences for how he or she feels towards that person. These results suggest that miscalibrated expectations of awkwardness could lead people to choose communication media that may not optimize their own wellbeing. This research sheds light on how consumers choose to interact with each other and the consequences of their choices. Understanding these consequences is necessary in order to choose effectively. Voice-based media increase connection without the expected costs of awkwardness.

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# Money Minding in an Era of Declining Trust

Chairs: Russ Nelson, Northwestern University, USA

Hope Jensen Schau, University of Arizona, USA

## **Paper #1: Silencing the Call of the Sirens**

Janet Schwartz, Tulane University, USA

## **Paper #2: Institutional Influence on Indebted Consumers' Understanding of Wants and Needs**

Mary Celsi, California State University Long Beach, USA

Stephanie Dellande, Menlo College, USA

Mary Gilly, University of California Irvine, USA

Russ Nelson, Northwestern University, USA

## **Paper #3: Beyond Needs and Wants: How Networked Hyper-rational Economic Actors "Win" the Deal but "Lose" the Shopping Trip**

Colin Campbell, University of San Diego, USA

Hope Jensen Schau, University of Arizona, USA

## **Paper #4: Trading Crypto Currency: The Ideological Shaping of Consumer Financial Decision Making**

Burçak Ertimur, Fairleigh Dickinson University, USA

Ela Veresiu, York University, Canada

Markus Giesler, York University, Canada

### **SESSION OVERVIEW**

The world is a tumultuous place. The value of currency fluctuates constantly: by the day and the hour. Consumers struggle to mind their money through fiscally responsible decisions in the midst of chronic volatility and future uncertainty (Joireman et al. 2005; Sato 2011). In addition, the Edelman Trust Barometer shows there is declining trust in government and business (Harrington 2017). To cope with financial ambiguity, consumers adopt strategies including personal budgeting (Wagoner 2011), willful cognitive disengagement, rational ignorance (Caplan 2001), and boycotting traditional markets (Yosupov 2015). With varying levels of financial literacy, consumers navigate financial decision-making using a combination of prescribed and folk/lay semantics (Baroni et al. 2011), and utilizing and foregoing institutional advice, assistance, and programming.

This session tightly ties to the ACR 2018 conference theme, "Trust in Doubt? Consuming in a Post Trust World," addressing the issue of consumer financial decision-making in a low trust context. Two questions guide this session: 1) how do consumers orient to institutions when seeking fiscal responsibility in low trust contexts and 2) how do consumers operationalize semantics to make sound financial decisions. The first paper examines consumers' efforts to use pre-commitment programs to inspire healthy habits. The author shows that consumers sign up for a pre-commitment program through their health insurance provider and voluntarily risk guaranteed financial resources to incentivize themselves to engage in healthier eating. This provider-designed program motivates compliance by linking financial and healthful decisions. The second paper investigates how indebted consumers utilize debt management programs to strategize repayment, avoid future debt obligations, and enhance financial literacy. In this study, consumers engage in semantic manipulation to distinguish needs from wants and legitimize the purchase of certain wants in well-planned purposeful ways. The third paper illustrates how consumers collaborate to stretch their financial resources by actively opposing established market institutions. The authors reveal how consumer collectives adopt an antagonistic stance toward corporations, creating deals by bundling promotions across manufacturers, retailers and third-party payers. The final paper examines

the consumption of bitcoin, a new technology-enabled peer-to-peer currency, which allows consumers to opt out of traditional institutions. The authors show how cryptocurrency enhances financial decision-making by recording and tracking financial flows. With bitcoin, financial arrangements become transparent, as exchanges are catalogued and traced. This transactional transparency subverts established institutions, creating a new standard for financial responsibility, and new semantics to convey the standards.

Taken together, these papers show an array of ways consumers act fiscally responsible in low trust contexts: institutional reliance, institutional resistance, and institutional abandonment. The first two papers show consumers relying on traditional health insurance and financial institutions to assist their money minding while the last two papers show consumers turning their backs on institutions and creating and promoting peer-to-peer systems to enhance financial decision-making. All four papers demonstrate consumers engaging in active semantic manipulation to evaluate and implement fiscal responsibility. We expect the session to generate substantive discussion from researchers interested in consumer financial decision-making, Fintech, cryptocurrencies, and peer-to-peer collaboration.

### **Silencing the Call of the Sirens**

#### **EXTENDED ABSTRACT**

One of the most important lessons from the social and behavioral sciences is that people's surroundings influence their behavior, and to a much larger degree than people realize. Of course, some people and institutions care about an individual's long-term interests: their spouses and families, perhaps their religious organizations or maybe even retirement savings and life insurance companies—but these entities are not part of their moment-to-moment environment. The environment they live in is largely made up of entities that want them (us) to be impulsive and live in the right here, right now. Facebook updates, Google alerts and Gilt flash sales are their ammunition; and by making consumers feel good in the moment, they become too focused on satisfying short-term goals at the expense of long term well-being. In essence, those who bank on how easily people will give in to temptation increasingly shape consumer behavior.

Although it may seem that technology driven temptation can only be cured by better technological innovation, our analysis will draw on ancient literature for some modern day marketplace advice. In particular, we can look to the story of Ulysses and his sophisticated approach to avoiding the sirens. As the story goes, Ulysses knew he would be tempted by the call of the sirens and tied himself to the mast of his ship so that he could hear their enchanting song, but was physically restrained from acting on his impulse to leap overboard. Similarly, he instructed his crew to go below deck before they entered the treacherous waters, so they would not even hear the sirens and be tempted to their fates. In today's world, consumers navigate a sea of sirens that constantly tempts them with deals and alerts that slowly siphon their savings and leave them drowning in a sea of debt.

In this paper, I explore how commitment devices help people make better in the moment decisions by reminding them to exercise a little bit of self-control before the temptation to over-consume becomes too difficult. Commitment devices can range from simple strategies that encourage consumers to temporarily turn off certain apps or to automatically divert a small amount of their weekly coffee spend-

ing to a savings account. Research suggests that people welcome these strategies because they do not require major lifestyle changes, but rather focus on making smaller changes to behaviors that have inadvertently become bad habits. This inquiry focuses on identifying the behaviors that are most likely to benefit from commitment devices and what factors lead to their ultimate success or failure.

To investigate my questions about the appetite and success of commitment devices we examined the results of a broad range of studies that focus on health behaviors, education, and financial decision making. These seemingly disparate topics share self-control, or a lack of self-control, as the key problem underlying poor decision making. For example, our preliminary analysis suggests that commitment devices help people make a one-time decision (such as enrolling automatic payroll contributions to retirement) because they circumvent the need for ongoing self-control. Once consumers commit to saving a portion of their paycheck, they never have to think about the choice again. I also find that commitment devices can be particularly effective at helping people make better repeated decisions – related to everyday saving and spending – which require the ongoing and persistent self-control that psychologists warn can be depleting. Finally, I also find that there are situations in which commitment devices fail – not because consumers did not want them, but because the temptation to consume was still too great. These studies highlight some important boundaries of this approach.

To supplement our empirical inquiry, my data collection and analysis also focuses on the commercially available commitment devices in the marketplace. Once again these products exist in all forms – ranging from apps (e.g., Beeminder; Stickk.com) that offer financial incentives for better self-control (exercise, weight-loss, savings, and even language learning) to smart phone controls that block access to and from certain sites. Demand for these products and services are important to understand from a cultural perspective. Although consumers welcome and embrace much of the technology that makes it easier for them to gain access to almost anything in the marketplace, they are also becoming increasingly more aware of the downsides of frictionless marketplace. As I explore their appetite for devices that help them limit their access to temptation, I learn something very important about their tolerance for an all-access and unfiltered marketplace. Based on these results, I present an informed set of policy recommendations.

### **Institutional Influence on Indebted Consumers’ Understanding of Wants and Needs**

#### **EXTENDED ABSTRACT**

In this paper, we investigate consumers’ rhetoric of want and need by examining the lived experience of indebted consumers coping with deprivation. Consumers participating in a debt management program (DMP) are living on a reduced budget as they attempt to pay off their debts. Anything that a consumer considers buying that is not clearly definable as a “need” becomes a contested decision. When tempted, we find DMP participants cleanse wants by turning them into needs; ignore constraints, at the moment of purchase and blame impulsiveness; invoke deprivation and cumulative deprivation; and actively subvert the moral norm of prioritizing “needs” over “wants.” When wanting is contested, our results indicate that consumers fluidly employ rhetorical devices and subvert budgeting practices to escape moral arguments against acquiring wanted products.

Wants and needs are foundational concepts and categories in economics and marketing. To date, consumer research has explored consumer desire qualitatively as a unique construct (Belk et al. 2003) while giving less attention to consumer experiences of wanting and

needing. Wants are typically conceptualized as being less legitimate than needs, with economists arguing that wants are artificially created by advertising. While economists generally define needs as anything urgent and necessary for survival (Galbraith 1998), marketing scholars are more likely to conceptualize needs as those goods society would deem to be “decencies” or “social necessities,” which are items needed to preserve a certain level of decency (Berry 1994; Belk 1999; Buttle 1989). Given the ever-increasing selection of goods, the broadening of status and lifestyle games in modern economies (Holt 2004; Thompson and Haytko 1998), and the ability of marketers to make luxuries seem to be basic life necessities (Hamilton and Dennis 2005), it is not surprising that consumers themselves often struggle to categorize wants and needs. The socially prescribed bundle of necessary consumer goods has increased over time in parallel with expanding credit card usage (Bernthal et al. 2005; Beaune et al. 2016; Peñaloza and Barnhart 2011), further blurring the distinction between wants and needs.

We began our study with a focus group of nine counselors at a Consumer Credit Counseling Service (CCCS) in Southern CA where the discussion centered on who succeeds in a debt management program (DMP) and why, as well as the educational approach taken with clients. The purpose of the focus group data collection was to broaden our understanding of theories applied in the field by experienced employees.

CCCS identified clients in their DMP who have email addresses. The President of CCCS sent an initial email explaining the study; we provided a link to enroll in the study and accepted participants until the sample size reached 100. Participants who completed the initial questionnaire were emailed a questionnaire link once each week for the next 11 weeks.

Participants were from a wide range of backgrounds: 73% are female, 46% are married, and 43% have children 18 or younger. Almost half were White (48%), with the remaining participants Hispanic (29%), Asian (11%), African-American (4%), Other (1%), or “decline to state” (7%). Household income is diverse, with the average falling somewhere between \$70,000 and \$79,999. Compared to the population of 71,754 individuals who visited CCCS during 2006 to 2010, our sample contains more women (73% vs. 60%), is a little younger (median age is 31-40 while the median for the larger sample is 47), and has comparable ethnicity.

Questions regarding temptation were included in each week’s survey to provide insight into participants’ thinking about wants and needs. Data were collected once per week over 12 consecutive weeks, where the questionnaire contained weekly reflections and experiences over an extended time period. By asking about recent experiences, participants’ memories were more likely to be fresh and vivid.

We also asked open-ended questions about why participants had gotten into debt, and their goals for entering the DMP. We originally believed that a client’s reason for debt (self/circumstances/mixed) would be related to success in the program, with participants who had suffered from challenging external circumstances (e.g., job loss, medical problems) being better able to cope financially in a DMP.

Consumers often draw upon mainstream discourses of want and need, that suggest wants are hedonic and unnecessary, while needs are utilitarian and urgent. In particular, because budgets are tight, participants frequently invoke the difference between wants and needs to help them prioritize expenditures. The experience of wanting appears in the narratives as a wish. Consumers are inventive when it comes to legitimating a want. We learned that participants struggled to separate wants and needs. By convincing themselves they had more discretionary income and fewer financial constraints, DMP members could then rationalize purchasing wanted products.



## Beyond Needs and Wants: How Networked Hyper-rational Economic Actors “Win” the Deal but “Lose” the Shopping Trip

### EXTENDED ABSTRACT

Traditional economic theory postulates a prevailing assumption of an actor that is both economic and rational (Persky 1995). Known as the “rational man” (Leibenstein 1976) this actor seeks to maximize value in exchange, paying little or no attention to use value and hedonic experience (Camerer and Fehr 2006). The rational economic actor is assumed to be independent, having nearly perfect market information (Hayer 1945) and the ability to accurately calculate the price of alternative market offerings (Sen 1977). We examine a specific case of rational consumer behavior where independent rational actors embedded in a technology-enabled network collaborate to construct elaborate combinations of marketing promotions, which they term “deals” (Yih et al. 2004). Combining, or “stacking” promotions that emanate from various links along the value chain (manufacturer, retailer, aggregator and third party payers), these actors collaboratively construct “deals” that maximize unintended value (Sela, Simonson, and Kivetz 2013; Thompson et al. 2015), that is realizing value grossly beyond that anticipated by the value chain partners. Consumers are also shown to perceive promotions that are unintended for them as more valuable. In contrast to what would be expected from a purely rational perspective, such savings surprisingly can inspire irrational over purchase that goes beyond any possible need or want.

Using a comprehensive netnography of the two largest “deal” forums in the United States, our data include naturalistic and participant observation, as well as interviews with both forum members and site administrators. The observational data allow us to access and catalogue ongoing behaviors and the practices they scaffold. Interviews provide members’ rationales for their behaviors, allowing us to understand the meanings behind the behaviors and the norms and order the practices enable. Forum threads are longitudinal and archived, providing a record of how the forum operates over time. Together, the observation, interviews and archived content form a robust corpus of data for our netnography (Kozinets 2002).

We find that while consumers engaged in this technological system likely have traits such as deal proneness and value consciousness (Lichtenstein et al. 1990; Lichtenstein, Netemeyer, and Burton 1995), it is the collaborative technological system that enables the identification and construction of their complex “deals.” Members of the technological system are diverse on a variety of dimensions including geography, market expertise, and experiences. Our data demonstrates that entire consumer collectives exist solely for the purpose of co-producing promotional value perceived as unintended by firms. We highlight that pursuing unintended value often requires broad knowledge and experience, factors that make online collectives particularly fertile environments for the identification and refinement of such deals. The technological system of the online forum allows such diversity to combine, resulting in the networked collective identifying promotional information to much greater degree than any one individual acting alone. The collaborative environment also enables division of labor to occur in co-production (Fuller 2010; Nambisan 2002; Muniz and Schau 2007), distributing responsibility for deal improvement among a large number of consumers, and enabling more complex deals to be developed.

We demonstrate that this collaborative environment encourages and supports enhanced economic rationality, or hyper-rationality. This is reflected by members’ extreme focus on the economic aspects of a deal (value-in-exchange), often at the expense of other consid-

erations such as time, effort, storage, redistribution, necessity, etc. A hyper-rational focus on the economic angle is understandably beneficial when identifying, constructing, and vetting deal opportunities. However, such a hyper-rational focus on the economic value of a deal can backfire, leading consumers to irrationally purchase items because they are empirically “good deals.” This includes over purchase as well as the purchase of superfluous items, either of which can result in stockpiling, gifting, and resale. Purchasing leading to such outcomes is irrational but is a byproduct of an extreme focus on rational decision-making. This suggests that the exploitation of unintended value possibly shifts consumers to focus on unintended value regardless of any need or want.

Focus on purchase rather than use is apparent in how participants often do not use the goods and services they purchase themselves. While some may sell items, such sale is typically a means of disposal and not a motivator for purchasing a deal. Instead gifting deal items to others, or engage in stockpiling for eventual, but perhaps unrealized, use is commonplace. While members do not seem to be deriving value from using their purchases, they get tremendous value from co-producing with the collective deals that provide unintended value. The processes involved in identifying and capturing such unintended value are often time-consuming and effortful, and often offer returns to a consumer that are simply not worth the time cost involved. In fact, in some cases executing such deals may be a burden to a consumer, making capturing unintended value the *only* motivator for a consumer to purchase an item. Unlike existing research identifying how communities and collectives help consumers realize value from using their purchases (Muñiz and Schau 2011), deal collectives are focused on realizing value almost solely through purchase and the unintended value that such purchase provides.

Our analysis makes several important theoretical contributions to literatures on networked economic rationality (hyper-rationality), unintended value, and promotion co-production. Through examining a consumer network that is both brand-agnostic and principally focused on finding and acquiring deals, we show that hyper-rational consumers act in concert to “win” – realizing maximal value that is unintended by marketers. This finding suggests that perceptions of winning against the marketer are a powerful motivator for consumers and one that goes above and beyond the typical affective reactions provided by a simple bargain. However, we show that “winning” in an economic sense often comes at the expense of “losing” in other arenas such as time, effort, and even money. We show that consumer co-production of elaborate, non-intuitive deals is a key driver of participation. We argue this unique form of knowledge is strengthened through networked collaboration, identifying opportunities to realize unintended value which are almost unattainable by independent actors.

## Trading Crypto Currency: The Ideological Shaping of Consumer Financial Decision Making

### EXTENDED ABSTRACT

*“A mysterious new technology emerges, seemingly out of nowhere... Political idealists project visions of liberation and revolution onto it; establishment elites heap contempt and scorn on it... technologists – nerds – are transfixed by it. They see within it enormous potential and spend their nights and weekends tinkering with it. Eventually mainstream products, companies and industries emerge to commercialize it; its effects become profound; and later, many people wonder why its powerful promise wasn’t more obvious from the start. What technology am I talking about? Personal computers in 1975, the Internet in 1993, and – I believe – Bitcoin*



in 2014.” (Marc Andreessen, Co-founder of Netscape, quoted in “Why Bitcoin Matters,” *NYTimes*, 2014)

As illustrated in the above quote, technology markets, especially those involving radically new innovations like crypto currency, are highly contested terrains, causing consumer financial decision making to be a confusing and convoluted activity. Indeed, technology consumption itself is “a complex affair, laden with history, imbued with ideologies, driven by institutions, [and] supported by society” (Kozinets 2008, 878). Yet, by privileging the experiences of (financial) technology consumers, previous consumer researchers presume that (financial) technological innovations are naturally objects of consumption (e.g., Belk 2013; Bernthal et al. 2005; Epp et al. 2014; Giesler 2008; Mick and Fournier 1998; Penaloza and Barnhart 2011; Schau and Gilly 2003; Tian et al. 2014).

In this paper we challenge this precept by adopting an institutional perspective. Specifically, we explore the role of influential public and private institutions such as governments, universities, corporations and banks in the creation of a consumable financial technology. Building on the sociology of financialization (Epstein 2005, 3), defined as “the increasing role of financial motives, financial markets, financial actors and financial institutions in the operation of domestic and international economies,” we unpack the institutional process by which new technologies (with anarchist or otherwise disruptive meanings) are transformed into objects of consumer investment and financial speculation.

Our context of inquiry is the digital crypto currency of bitcoin. Bitcoin was originally envisioned as a decentralized infrastructure that operates outside the control of centralized financial and state institutions by relying on cryptographic technologies to process electronic payments (Nakamoto 2009). Today, however, bitcoin is equated with blockchain, which is “a vast, global distributed ledger or database running on millions of devices and open to anyone, where not just information but anything of value — money, but also titles, deeds, identities, even votes — can be moved, stored and managed securely and privately” (Tapscott and Tapscott 2016b). With the recent emergence of new blockchain platforms (e.g., Ethereum) and applications (e.g., smart contracts, crowd funding), interest in cryptographic technologies has moved beyond tech-minded political activists like cyberpunks to global corporations like IBM and Microsoft, as well as to governments, regulators, and consumers around the world (Mougayar 2016).

Our data collection efforts began with a four-month immersion into the blockchain technology space in Toronto, Canada, which is known as “the global blockchain hub” (Tapscott and Tapscott 2016a). We attended bitcoin/blockchain events and conducted ten in-depth interviews with blockchain entrepreneurs, technologists, and digital strategists. To better understand the overall context of cryptographic technologies, we then expanded our data collection efforts to include bitcoin/blockchain related books, newspaper articles, as well as industry, government, and company reports published in and beyond Canada. We complemented this archival dataset with a netnography of bitcoin/blockchain blogs, discussion forums, and podcasts.

Our analysis identifies the ideological struggles between techno-libertarian and techno-collectivist interests in transforming blockchain from a radical to a market-compatible technology. Techno-libertarians prioritize the individual and freedom of choice, while attempting to minimize the scope of state coercion in solving social and economic problems. Conversely, techno-collectivists believe that cyber-choices should be guided by the State according to public interest (Dahlberg 2010; Winner 1997). We find that transforming a radical innovation, such as blockchain, into a technology consump-

tion system requires the depoliticization and translation of techno-collectivist expectations and demands into consumption and market-compatible technology definitions. This is achieved by adopting the Californian ideology (Barbrook and Cameron 1995), which is defined as “a bizarre mish-mash of hippie anarchism and economic liberalism beefed up with lots of technological determinism.” Specifically, we have identified an institutional process that consists of three strategies: imagineering, through which disruptive technology visions are depoliticized and turned into market-compatible visions; validating, where the new market-compatible technology vision is verified by techno-visionary experts; and reconfiguring, where the new market-compatible technology vision is materially instantiated in the form of use-studies, hackathons, crowd-funding platforms, etc.

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# Coping with Uncertain Outcomes: How Consumers Judge and Get Affected by Probabilities of the World

Chairs: Jennifer Seokhwa Hong, New York University, USA  
Mansur Khamitov, Nanyang Technological University, Singapore

## **Paper #1: How Numeric Roundness Influences Probability Perceptions**

Julio Sevilla, University of Georgia, USA  
Rajesh Bagchi, Virginia Tech, USA

## **Paper #2: Thou Shalt Not Look! When Processing the Odds Visually Biases Gambling Behavior**

Rod Duclos, Ivey Business School, Western University, Canada  
Mansur Khamitov, Nanyang Technological University, Singapore

## **Paper #3: Proximity Bias: Interactive Effects of Event Valence and Event Nearness on Probability Estimates**

Jennifer Seokhwa Hong, New York University, USA  
Chiara Longoni, Boston University, USA  
Vicki Morwitz, New York University, USA

## **Paper #4: The Pleasure of Being Right (Even When the World Is Bad)**

Carey K. Morewedge, Boston University, USA  
Janna Russmann, University of Cologne, Germany  
Danica Mijovic-Prelec, Massachusetts Institute of Technology, USA  
Drazen Prelec, Massachusetts Institute of Technology, USA

### **SESSION OVERVIEW**

People constantly make probability judgments, and believe those judgments to be strong predictors of actual outcomes (Lieberman and Tversky 1993; Reyna and Brainerd 1994; Ronis and Yates 1987). In the last few years, however, we have witnessed mishaps of inaccurate estimations of probabilities yielding unexpected outcomes all around the world. For instance, vast majority of media predicted a significantly high chance of U.K. voting against Brexit as well as Clinton winning the 2016 U.S. presidential election. Yet the actual outcomes left the world with one less country in the E.U. and President Trump. These incidents allude to the possibility that people are not as accurate as they expect themselves to be when it comes to estimating probabilities (Tversky and Kahneman 1974). If that indeed is the case, what factors bias people to inaccurately make probability judgments? And if these inaccurate judgments are so prevalent, do people derive satisfaction from accurately making these judgments? In this session, four papers answer these questions by examining various aspects of probability estimates.

The first two papers explore the impact of contextual factors related to numeric and visual cues on probability perceptions. Specifically, Sevilla and Bagchi investigate the effect of numeric roundness on probability perception. They show consumers perceive predictions that end with non-round numbers (e.g., 29%) as more likely to occur than with round numbers (e.g., 30%) because consumers perceive non-round numbers as more concrete and easier to materialize.

Relatedly, Duclos and Khamitov examine how different visual representations of the same numeric information influence gamblers' perceived probability of winning. They show that manipulating the visual representation enhances the ease of processing probability, which then artificially inflates gambling behavior.

The next two papers look at how motivational factors affect antecedents and consequences of making probability judgments. Hong, Longoni, and Morwitz provide an alternative, motivational account in explaining the effect of physical distance on the probability estimates. Because people have self-enhancing motives to keep positive elements close and push negative ones away, the authors document that people predict positive events to be more likely to occur if they are physically close (vs. far), whereas negative events are seen as less likely if physically close (vs. far).

Finally, Morewedge, Russman, Mijovic-Prelec, and Prelec examine how two conflicting motives – self-enhancement and self-verification – jointly affect consumers' satisfaction from being accurate. In five experiments, people made guesses about facts and outcomes that each had 50% chance of being correct. The findings indicate that people derive pleasure when they correctly guess the answers even when the answers imply misfortunes to themselves and the world.

We now live in a dynamic and unpredictable world in which the news media are not always trusted but are rather doubted. At times like this, people inevitably rely on heuristics which can easily bias their perceptions of the world (Tversky and Kahneman 1974). The four papers in this session unearth contextual and motivational factors that influence one of the most prevalently made judgments: probabilities. In so doing, they document new biases consumers should be aware of.

## **How Numeric Roundness Influences Probability Perceptions**

### **EXTENDED ABSTRACT**

Consumers routinely make choices associated to their preferences for particular numbers (e.g. Boyd 1985; King and Janiszewski 2011; Pavia and Costa 1993). These choices involve preferences for alphanumeric brand names (e.g. Boyd 1985; King and Janiszewski 2011; Pavia and Costa 1993), the selection of PIN numbers or passwords, sports jerseys' numbers or even gambling or lottery tickets. This last type of numeric choice differs slightly from the rest. While all of them involve the choice of number related items based on their preferences for them, in the case of lotteries the selection is closely associated to the perceived probability that the chosen number may be randomly drawn. Similarly, consumers often need to make purchase decisions based on other forms of probabilistic assessments based on numbers. For example, they need to decide what type of insurance to buy or what medical procedures to get based on probabilities expressed with numbers or percentages.

The current paper tackles the question of what type of numeric formats consumers prefer and find more likely to materialize in this type of contexts. Specifically, we study how the roundness of a number affects probability perceptions and preferences associated to it. In contrast with past work on numeric fluency and roundness, which demonstrates that consumers have a preference for round numbers (e.g. Dehaene and Mehler 1992; King and Janiszewski 2011; Kirby and Schindler 1997), we show that in lottery and other probability related contexts, people have a preference for non-round numbers, as they believe these have higher probabilities of occurrence. We propose that this occurs because odd numbers are usually perceived as being more concrete or real, while round numbers are often seen



as more abstract or general, as people often use them to round out numeric information (e.g. Dehaene and Mehler 1992).

The effect presented in this work focuses on the contexts of lotteries and the evaluation of probabilistic information expressed in percentages. We conducted four experiments to provide evidence for the effect of numeric roundness on probability perceptions and preference. In our experiments, round numbers were operationalized as those ending on “0” or “5” (Dehaene and Mehler 1992). Experiment 1 tested the ecological validity of the effect and employed real life data from the Mega Millions lottery. We looked at the randomly drawn winning numbers of this lottery during a span of more than 13 years and found that while overall randomly drawn winning numbers were not more or less likely than chance to be round ( $z = 1.01, p = .31$ ), this was not the case for randomly drawn winning numbers that were claimed, as these were less likely than chance to be round ( $z = 2.26, p = .02$ ). This finding is consistent with our prediction, which proposes that people are less likely to buy round ticket numbers as they are perceived as being less likely to be drawn as winners.

Experiment 2A was a computer based study where participants were told that they would be participating in a lottery in which they could pick one ticket number among four potential two-digit options. Two of these numbers were round (“10” and “50”) and the other two were not (“37” and “89”). Participants were told that if the number they selected matched the last two digits of the winning number of the upcoming Mega Millions lottery, they would be receiving a \$20 prize. As expected, we found that non-round numbers were selected at a rate more likely than chance ( $z = 5.77, p < .01$ ). Experiment 2B was a similar design and offered the same incentive as Experiment 1A but differed from this in that participants were allowed to select any number from 0 to 99 as their winning number. Again, we found that non-round numbers were chosen at a rate that was more likely than chance ( $z = 12.41, p < .01$ ). This design constituted a more robust showing for the effect as past research has shown that round numbers are more likely to be generated (Dehaene and Mehler 1992) and that was not the case in a context involving probabilistic assessments.

Experiment 3 extended the effect to the domain of selecting insurance policies. In this case we provided participants with probability information associated to a natural disaster and found that those who were exposed to probabilities expressed with non-round numbers expressed a higher likelihood of buying insurance than those exposed to probabilities expressed with round numbers, even if these numbers were slightly higher ( $\beta = .65, Wald = 4.61; p = .03$ ). Furthermore, this study showed that the effect was mediated by how concrete the target numbers were perceived to be ( $\beta = .24, 95\% CI: [.07, .56]$ ).

Together, this set of studies demonstrates that non-round numbers may be preferred in contexts involving probabilistic assessments, as these are associated to higher likelihood of occurrence. We show that the effect is mediated by non-round numbers being perceived to be more concrete than round numbers.

### **Thou Shalt Not Look! When Processing the Odds Visually Biases Gambling Behavior**

#### **EXTENDED ABSTRACT**

Scant research has examined directly and experimentally how consumers absorb visually and process quantitative information to, in turn, make financial decisions (Raghubir and Das 2010; Duclos 2015). Aiming to contribute to this literature, the present work investigates how visual biases in data-interpretation influence gamblers’

perceptions of their probability of winning and, consequently, the amount of money they bet.

Breaking ground in this area, Raghubir and Das (2010) initiated a line of work dedicated to how visual displays of quantitative information bias risk-perceptions. When reviewing financial performance on a graph, investors do not consider every datapoint equally. Rather, they sample the local minima and maxima to infer variation around a trend line and, in turn, estimate risk. Accordingly, the higher the *run-length* (i.e., the greater the number of consecutive movements in the same non-horizontal direction), the further apart are the local minima and maxima. And as the distance between minima and maxima increases, so do perceptions of the underlying asset’s riskiness.

Building on this work, Duclos (2015) examined how visual biases in data-interpretation impact actual risk-taking. Lo and behold, the author finds that investors attend disproportionately (and unduly) to the last trading days of a stock. Graphs depicting a stock-price closing upward (downward) foster upward (downward) forecasts for tomorrow and, accordingly, more (less) investing in the present. Coined *end-anchoring*, this bias occurs even when stock-price distributions are generated randomly (i.e., when no upward/downward trend can be identified in the data).

The present work extends the above research stream by examining (i) another form of visual aid, (ii) another form of quantitative information, and (iii) another form of financial decision. Namely, drawing on fluency theory, four experiments examine how gamblers visually process quantitative information (i.e., their odds), forecast their chance of winning, and bet.

Using variants of roulette wheels as experimental paradigm, study 1 shows that manipulating the visual (i.e., graphic) representation of probabilities (not probabilities themselves) can artificially increase gambling. That is, wheels depicting odds in large (small) blocks led gamblers to bet more (less) even though the statistical likelihood of winning remained identical across conditions. Study 2 replicates these results using a between-subjects design and a consequential dependent variable.

Study 3 replicates these findings while shedding light on the underlying process. Namely, increasing processing fluency by lumping together (i.e., in large blocks) the odds of winning on a roulette wheel inflates the perception one has of his likelihood to win, which in turn escalates the amount of money bet. However, encouraging gamblers to process their odds numerically (rather than visually/graphically) helps lessen this bias.

Providing converging evidence, this time in a simulated-casino setting, study 4 brought people to the lab to play a real-world game of roulette. We find again that manipulating the visual presentation of probabilities can sway gambling behavior predictably and substantially.

Methodologically, three of the four studies place participants in situations to actually win and lose money. In terms of populations surveyed, experiments 2 and 3 recruited M-Turk volunteers whereas experiments 1 and 4 relied on university students. Regardless of methods or samples, the four studies produce convergent evidence testifying to the robustness of the phenomenon and lending credence to our theorizing.

Most of the extant literature on gambling has revolved around either the psychopathology of betting behavior (Cyders and Smith 2008; Rodda et al. 2013) or the economics of gambling (Grinols and Mustard 2001; Littlewood 2011). To date, however, relatively little is known about the context effects of gambling (e.g., how *the environment at the time of gambling* manipulates bets). To this end, the present article focused on the biasing effects of the visual representation of odds. Our findings are important because they (i) document a bias



not yet accounted by the judgement and decision-making literature, and (ii) shed much-needed light on how humans absorb and process quantitative information (Duclos 2015; Raghubir and Das 2010).

These findings also contribute to the perception literature by documenting a novel pathway via which perceptions influence cognitions and behavior. Specifically, by documenting when and how the encoding of visual stimuli (e.g., seeing small vs. large blocks) can shape betting decisions, this article unearths and explains a context-effect not yet accounted by the literature. So doing, our work echoes and extends that of Deng et al. (2016) who also invoke processing fluency to explain why seeing products assorted horizontally (rather than vertically) is usually preferred.

Lastly, our findings contribute to the anchoring literature. Anchoring research revolves around the notion that seemingly-innocuous pieces of data encountered at time 1 have unanticipated consequences on judgement and decision-making at time 2 (Tversky and Kahneman 1974). Our results suggest that a different form of anchoring operates on decision making. This anchoring is just as spontaneous and automatic as the one described before us but its nature is more *perceptual* than cognitive. Indeed, in our paradigm, we did not rely on any heavy-handed manipulations (e.g., fixating respondents' attention on a specific number) to produce our results. Rather, we merely (dis)aggregated the visual representation of statistical data (i.e., increased or decreased the size of landing slots in roulette wheels) in order to sway processing fluency. Accordingly, our findings extend recent research by Raghubir and Das (2010) and Duclos (2015) by establishing perceptual anchoring as powerful influence on financial risk-taking, a phenomenon not yet accounted by the literature. We conclude by hoping this work will help spur interest in how people process quantitative information.

### Proximity Bias: Interactive Effects of Event Valence and Event Nearness on Probability Estimates

#### EXTENDED ABSTRACT

Probability judgments are ubiquitous—from estimating the chance of landing a job, to predicting the movements of the stock market—and typically plagued by numerous errors and biases (Kahneman and Tversky 1973). We add to this stream of research by identifying a novel *proximity bias* in probability judgments, whereby event valence and event nearness systematically interact in determining probability estimates.

When it comes to the relationship between event valence and probability estimates, a robust finding is people's tendency to predict that they are less likely than others to experience negative events, and more likely than others to experience positive events (Perloff and Fetzer 1986). This optimistic bias is so pervasive that some consider it an adaptive regulatory function for protecting the self (Taylor and Brown 1988).

We extend this research by uncovering a novel bias: That proximity of an event moderates people's optimistic bias in probability judgments. Specifically, we theorize that the physical nearness of an event accentuates self-enhancing tendencies when predicting positive events, and self-protective tendencies when predicting negative events. Across five studies we manipulate (a) the valence of an event (i.e., whether the outcome of an event is positive or negative) and (b) the physical proximity of this event (i.e., whether the event takes place in a location that is nearby or far away), and then measure people's probability estimates. We consistently find interactive effects of event valence and nearness, such that near, positive events are predicted to be more likely than near, distant events. On the contrary, near, negative events are predicted to be less likely than distant,

negative events. Boundary conditions underscore the motivational underpinnings of this bias.

In study 1 ( $n = 284$ ), participants read a lottery scenario. Participants in the positive condition were told there was a 60% chance of winning a lottery for a laptop. In the negative condition, we told them there was a 60% chance of losing the lottery and the \$20 they had paid to participate. We manipulated proximity by describing the lottery draw taking place in a location that was nearby or far away. We measured probability estimates as the likelihood of winning (positive condition) or losing (negative condition) the lottery. Significant valence vs. proximity interaction ( $p < .01$ ) revealed that winning the lottery seemed more probable when the draw took place nearby than far ( $p = .03$ ). Conversely, losing the lottery seemed less probable when the draw occurred nearby than far ( $p = .05$ ). In study 2 ( $n = 295$ ), we replicated the same findings with two different events where positive event is not the opposite of negative event.

In study 3 ( $n = 485$ ), we directly examined the hypothesized motivational nature of this bias. We hypothesized that the proximity bias is due to a tendency to be self-enhancing with respect to positive outcomes and self-protecting with respect to negative outcomes. If this is indeed the case, it follows that this bias should emerge for probability estimates made for a self-relevant outcome, but not for a self-irrelevant outcome. In a job-offer scenario, participants read that a hiring decision would take place in either a close or far location. Participants estimated the probability of either getting an offer (positive-condition) or not getting an offer (negative-condition), for either themselves (self-relevant-outcome) or another similarly qualified candidate (self-irrelevant-outcome). Results revealed significant three-way valence x proximity x relevance ( $p = .01$ ) and two-way valence x proximity interactions for the self ( $p < .01$ ) but not for other ( $p = .43$ ). As predicted, participants estimated they were more likely to get an offer when the event was close than far ( $p = .04$ ), and less likely to lose an offer when the event was close than far ( $p = .04$ ), but this effect did not emerge when estimating likelihood for another individual.

Providing converging evidence for the motivational account, in the next two studies, we manipulated (un)desirability of an outcome while keeping outcome valence constant. We expected to replicate our previous results in case of a highly (un)desirable outcome. However, we expected an attenuation of the proximity bias in case of a less (un)desirable outcome. In study 4A ( $n = 607$ ), participants estimated the likelihood of highly undesirable and moderately undesirable outcomes. Participants read that they were experiencing symptoms that could indicate either a severe disease or a mildly severe disease. They were further told that their blood sample was being tested at a hospital located 2 miles or 200 miles from where they were. Participants then estimated the likelihood of testing positive for the disease. When considering a highly undesirable outcome, participants predicted that they were less likely to contract the severe disease when the hospital was located nearby ( $M = 37.78\%$ ) than far ( $M = 45.62\%$ ;  $p = .006$ ). When estimating the likelihood of contracting the mild disease, however, that difference disappeared ( $M_{close} = 46.34\%$ ,  $M_{far} = 45.90\%$ ;  $p = .88$ )

In study 4B ( $n = 385$ ), we used positive outcomes only. Using a simulation of an online-dating app, participants viewed the profiles of two potential dates who were either nearby or far away (between-subjects), and whose attractiveness varied (within-subjects). Participants estimated their probability of getting successfully matched with both dates. As expected, when considering a highly desirable date, participants predicted that they were more likely to be successfully matched if the potential date was nearby ( $M = 58.69\%$ ) than faraway ( $M = 50.91\%$ ;  $p < .001$ ). However, the difference was weak-

er when considering a moderately desirable date ( $M_{close} = 48.97\%$ ,  $M_{far} = 46.37\%$ ;  $p = .34$ ).

In summary, we extend prior research on biases in probability judgments by documenting a novel proximity bias. Importantly, by corroborating the motivated nature of the effect, we demonstrate our findings cannot be accounted for by existing theories explaining how people make probability judgments, such as construal level theory (Wakslak and Trope 2009; Wakslak 2012), which is agnostic to motivated reasoning effects on predictions. In so doing, this research extends prior work on biases in judgments and decision making.

### The Pleasure of Being Right (Even When the World Is Bad)

#### EXTENDED ABSTRACT

Conflicting motivations are at work in the resolution of uncertainty. On the one hand, people have a positivity bias. When people are not 100% sure about particular outcomes, they anticipate and want such uncertainty to be resolved in favor of themselves and their world (e.g., Batson 2014; Bentham 1789; Kunda 1990; Taylor and Brown 1988). People even explicitly wish that they were more optimistic about future outcomes than they already are (Armor, Massey and Sackett 2008). On the other hand, people have a motivation to be accurate. They seek feedback that confirms they have a valid perception of themselves and their world (e.g., Swann, Pelham, and Krull 1989).

We examine how these conflicting motivations influence responses to the resolution of uncertainty. When events do not guarantee either better or worse resolutions, which motives influence how people feel about those resolutions? Are people uniformly happier when there is a high probability of world turning out to be good than bad? Or do people take some pleasure in being accurate, even when it means that the world is bad? Across five experiments, we show that people derive pleasure from predicting outcomes that are uncertain, regardless of the valence of those events.

In our first experiment, we asked participants ( $N = 123$ ) to guess the lifespan of a series of animals (e.g., dolphins, cats, penguins). For each question about an animal, participants had a 50% chance of guessing the correct answer. Specifically, they were shown two values—a shorter and a longer lifespan—and then guessed which was the correct lifespan. The values were counterbalanced across participants so that for some, the correct answer was higher and for some it was lower. After each guess, the correct answer was revealed and participants reported how they felt about the answer on a 100-point scale with endpoints, 0 “Terrible” and 100 “Wonderful.”

In a “bad news” condition, for instance, participants saw a picture of an indoor cat and two values of lifespan, 28 years and 14 years, and then guessed which of the two is the correct lifespan. In a “good news” condition, the two options were 14 and 7 years. All participants then learned that the real lifespan of an indoor cat is 14 years, and reported how they felt about that fact.

Not surprisingly, participants were happier when the resolution of uncertainty was good (14 rather than 7) than bad (14 rather than 28). More important, participants were happier when they learned that they correctly guessed the answer than when they did not, regardless of the resolution. In other words, participants were also happier in the “bad news” condition when they correctly guessed the shorter lifespan.

We replicated and extended the first study in a second experiment in which participants ( $N = 111$ ) made three kinds of guesses in a similar paradigm: the lifespan of people living in different countries, the lifespan of different species of animals, and the lifespan

of species of plants. We found the same pattern of results across for all three targets (humans, animals, and plants). Participants again were generally happier when the resolutions were good than bad, but were happier with bad news when they had correctly predicted that people, animals, and plants lived the shorter lifespan.

To address the possibility that taking pleasure in foreseen misfortunes is due to the fact that accuracy about “bad” facts provides valuable diagnostic information about the self (e.g., that one possesses valuable information about the world), we tested this effect in two additional experiments in which participants predicted random probabilistic good and bad outcomes: Participants guessed whether a coin would land heads or tails.

In Experiment 3 ( $N = 169$ ), participants estimated the outcome of another person’s misfortune. If the coin landed heads, another person would win the money equivalent in value to coin. If it landed tails, that person would lose its equivalent value. Participants again exhibited pleasure in foreseeing misfortune. In fact, participants were happier when they correctly guessed that the person would lose money than when they incorrectly guessed that the person would win.

In Experiment 4 ( $N = 100$ ), the person who won and lost money was the participant herself. Even in this case, participants were happier when they accurately predicted their own misfortune than when they inaccurately forecasted their fortune.

A fifth experiment ( $N = 109$ ) ruled out an alternative account that surprise may underlie these effects. Accurate participants were insensitive to whether another person won or lost money, but were happier when their guess was right than wrong, whether the odds of good and bad outcomes were 10%:90%, 50%:50%, or 90%:10%, respectively.

Our findings illustrate how optimism and accuracy motivations influence a new facet of uncertainty resolution—its hedonic impact. All things equal, people are happier to discover that the world is good than bad. However, people do see a silver lining and take pleasure in predicting the accurate outcomes in the first place, even if those outcomes imply that the world is bad.

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# Money Matters: New Insights on the Cognition and Management of Money

Chairs: Yanping Tu, University of Florida, USA

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## **Paper #1: The Ex-Money Effect: When and Why People Feel Connected to Outcomes that Involve Money They Previously Had**

Charis Li, University of Florida, USA

Yanping Tu, University of Florida, USA

## **Paper #2: Money and Psychological Distance**

Evan Polman, University of Wisconsin-Madison, USA

Sam J. Maglio, University of Toronto Scarborough, Canada

## **Paper #3: Personal Budgeting: Does It Work?**

Christina Kan, Texas A&M University, USA

Philip Fernbach, University of Colorado, Boulder, USA

John G. Lynch, University of Colorado, Boulder, USA

## **Paper #4: Can Making Family Salient Improve Retirement Contributions? Evidence from Field Experiments in Mexico**

Avni Shah, University of Toronto, Canada

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## **SESSION OVERVIEW**

Decisions about money are among the most consequential ones for consumers, influencing not only their financial well-being, but also happiness, relationships, and other aspects of life. However, do consumers think of money in the way that is assumed by economic principles? Moreover, how can consumers achieve long-term financial success? A deeper understanding of the consumer psychology around money, and financial decision-making more broadly, can inform recommendations, and this session provides new insights.

The first two papers offer new views on the cognition of money. Money is a *value symbol* that serves as a *fungible medium of exchange* (Furnham and Lewis 1986). However, consumers' cognition of money does not always align with this normative definition. For example, research on mental accounting (Thaler and Johnson 1990) challenges the fungibility aspect of money -- and the first two papers continue this pursuit. Specifically, Paper 1 (Li and Tu) proposes that consumers view money as if it is a (non-fungible) material object, rather than a fungible medium of transaction. As a result, consumers feel a lingering sense of connection to the money they previously possessed (i.e., their ex-money) after money exchange, and thus feel further connected to the outcome associated with their ex-money. The authors dub this effect the 'ex-money effect,' and explore its behavioral implications and boundary conditions. While money is often used as an objective measure of the value for objects and resources, Paper 2 (Polman and Maglio) investigates whether people's valuation of money itself can be subjective. Building on the literature of psychological distance, the authors propose and document that people believe the same amount of money has more purchasing power when it is perceived to be closer, and discuss its implications on the science of spending and saving.

The latter two papers present new evidence on the effectiveness of different money management strategies. Paper 3 (Kan, Fernbach, and Lynch) focuses on budgeting and argues that, although budgeting mitigates overspending in the current period, it (1) makes spending less enjoyable and (2) gives people license, both resulting in an in-

crease in spending in the next period. Across three field experiments and one longitudinal dataset, the authors demonstrate that the impact of budgeting on long-term financial success is limited. Finally, although saving for retirement is usually deemed as a personal financial activity, through a large-scale field experiment, Paper 4 (Shah et al.) identifies that securing one's family's financial future might be more motivating in making people save for retirement. Compared to more typical individualistic appeals, a family appeal exerted a long-term effect (6 months after the prompt) and was most effective for a middle-aged group.

Through multiple angles and various scopes, the four papers in this session offer new insights on the interrelated cognition (papers 1 and 2) and management (papers 3 and 4) of money that together influence consumers' financial well-being. This session will appeal to a wide audience interested in financial decision-making, judgment and decision making, and transformational consumer researchers who aim to impact societal well-being and public policy.

## **The Ex-Money Effect: When and Why People Feel Connected to Outcomes that Involve Money They Previously Had**

### **EXTENDED ABSTRACT**

Money is the most common medium of exchange which frequently changes hands. Normatively, after consumers exchange money for resources of equivalent value, where their previously held money goes next and what it generates should be personally irrelevant. For example, suppose a friend helped you break a \$10 bill (you gave her a \$10 bill and she gave you \$10 worth of change) and later donated the \$10 bill she received to UNICEF or spent it on lottery tickets. Since you (the previous holder of that \$10 bill) no longer own that \$10 bill after the exchange (it's your "ex-money") and did not make the donation/purchase decision, neither UNICEF nor the lottery outcome would become more personally relevant. However, this paper documents the "ex-money effect"—that people feel connected to outcomes of their previously held money—and explore its mechanism, boundary condition, and downstream consequences.

We propose that, although money is a fungible medium of exchange that only symbolizes value, people (1) perceive money possessed by different individuals as non-fungible (Polman, Effron, and Thomas 2018; "my \$10 bill is different from your \$10 bill") and (2) treat money as a material good whose concrete physical features (e.g., bills, coins), not just its abstract value, matter (Mishra, Mishra, and Nayakankuppam 2006; Raghurir and Srivastava 2009). Because people feel lingering ownership of (non-fungible) material goods after transaction (Brough and Isaac 2012), to the extent they conceptualize money as a non-fungible material good, they should feel the same for money that left their possession. Consequently, people feel concerned with the outcomes of their ex-money. Further, because the physical features of money matter, we predict that the ex-money effect should attenuate when ex-money changes form. Next we report 4 studies that demonstrate the ex-money effect and its downstream consequences.

Study 1 established the main effect. Participants imagined lending a friend a \$10 bill and getting another \$10 back later. They further imagined that their friend bought some lottery tickets using the \$10 bill borrowed from them (vs. a \$10 bill from his/her own



wallet) and a CD using a \$10 bill from his/her own wallet (vs. the \$10 bill from them); the lottery purchase resulted in a \$1,000 prize one month later. Supporting our hypothesis, participants reported a greater personal connection to their friend's lottery winning when the friend (incidentally) spent their ex-money on lottery (vs. CD) (4.41 vs. 2.81;  $t(64) = 3.31, p = .002$ ). Consequently, they felt more deserving to share the lottery prize (3.16 vs. 2.06,  $t(64) = 2.64, p = .010$ ) and claimed a larger amount (\$127.81 vs. \$36.18;  $t(64) = 2.80, p = .007$ ) in the former condition. A set of follow-up studies replicated these effects when participants assumed the role of the money borrower or a third-party observer, suggesting that the ex-money effect stems from a shared conceptualization of money that is independent of one's role or interest. We also replicated these effects when presenting these two scenarios in a within-participants manner, suggesting that people do not consider the ex-money effect irrational (albeit it is counter-normative).

Study 2 replicated the ex-money effect using a behavioral proxy. University students learned that their university spent income from tuition and fees in the previous fiscal year (i.e., their ex-money) on private equity investment (PEI) or another project and could choose to learn more about the investment. Although participants had exchanged tuition for education and access to university facilities and we made it clear that reading the information was not obligatory, those who learned that their ex-money went in PEI were more likely to seek information about it (16%, 14/88 vs. 4%, 4/89;  $\chi^2(1) = 6.31, p = .012$ ), which suggests a greater sustained connection.

Study 3 tested the proposed boundary condition—a change of the physical form of one's ex-money, using a 2 (ex-money usage: lottery vs. CD)  $\times$  2 (ex-money form: unchanged vs. changed) between-participants design. We used a lottery-purchase scenario similar to that in study 1, except that in the form-changed conditions the friend changed the \$10 bill into coins and subsequently used the coins to buy the lottery tickets or the CD. A 2  $\times$  2 ANOVA yielded the predicted interaction effect on perceived connection to the money used in lottery purchase ( $F(1, 216) = 4.96, p = .027$ ) and perceived deservingness of some prize ( $F(1, 216) = 3.38, p = .068$ ); the ex-money effect replicates when the format stayed unchanged (3.23 vs. 1.96;  $F(1, 216) = 18.65, p < .001$ ) but attenuated following a format change (2.28 vs. 1.76; ns).

Study 4 explored the potential of using the ex-money effect as a minimalistic nudge to promote desired behavior – increasing support for a seemingly unattractive yet important charity: UNICEF. We asked participants to bring a \$10 bill to the lab for a cover study titled “bills in circulation.” After participants completed a related questionnaire, we collected their \$10 bill and gave them a different \$10 bill in return. We told participants that after the completion of the cover study, we would donate these bills to UNICEF (pretested to be unattractive) and WWF (pretested to be attractive); critically, the money collected in the lab session they attend would go to “UNICEF,” or “WWF,” or “UNICEF and WWF” (baseline). On their way out, participants could choose to wear either a UNICEF or WWF sticker to show their support. Learning that one's ex-money would go to UNICEF increased choice of wearing the UNICEF sticker compared with the baseline (59.6% vs. 25.9%;  $\chi^2(1) = 12.31, p < .001$ ) (whereas the WWF condition shows a ceiling effect compared with the baseline (81.1% vs. 74.1%; ns)).

Taken together, this paper makes three related contributions. First, we document a counter-normative effect. Second, we provide a novel theoretical account—the ex-money effect stems from people conceptualizing money as a non-fungible material good. Third, because private and public organizations transact with consumers daily, we suggest that ex-money effect can be utilized as a minimalistic

and low-friction nudge to promote desired behaviors following such transactions.

## Money and Psychological DiStance

### EXTENDED ABSTRACT

How “far” can money go? Economists operationalize the purchasing power of money as the amount of a given good or service that can be purchased for a fixed sum of money. Thus, when people estimate how far their money can go, they are guessing how much they can buy with a certain monetary sum. In the current research, we propose that people act as if money can go farther when it is felt as psychologically closer. Traditional economic theory has not considered whether purchasing power of money varies according to whether money is subjectively close or far, yet should this factor exert a substantial influence on money's worth, it could result in making adjustments to traditional economic analyses, which are thought to depend heavily on perceptions (Bernanke 2007).

Addressing the question, “how far can money go?” requires defining the perceived value of money. At first blush, it might seem peculiar to generate a prediction about the value of money, because value is money's most fundamental and essential quality, and value is often defined in monetary terms. For instance, in studies on the endowment effect (Morewedge and Giblin 2015), it is typical to ask participants how much they value something – from mugs to the environment – in monetary terms. Yet research has found that people value money differently, and that the same amount of money can seem like a subjectively higher or lower amount (as though it is more or less valuable), depending on the situation (for a review, see Bijleveld and Aarts 2014).

Despite research conducted so far on the subjective value of money, the notion that psychological distance could affect money's perceived purchasing power remains an open but important question for marketing, especially as an increasingly globalized and dynamically changeable economy makes distance more ubiquitously salient in everyday monetary transactions. Here, a critical question is what may determine the subjective value of close money in relation to distant money – and likewise what it means when people judge money as “close” or “distant.” The unique perspective offered by recent conceptualizations of psychological distance (Lieberman and Trope 2014) proposes a framework through which to investigate how far money can feel, and how far money can go. When people think about how close or distant something feels, they can think about it along a number of distinct dimensions: along temporal distance, geographical space, social space, and likelihood (Trope, Liberman, and Wakslak 2007). For each of these dimensions, money can be psychologically distant when it is set apart from one's direct experience. Which is to say that money is respectively close or distant when it, for example, encompasses current versus future earnings (temporal distance); is tracked in one's own versus foreign countries' stock markets (spatial distance); belongs to one's spouse versus an acquaintance (social distance); or furnishes the prize of a relatively high-chance versus low-chance lottery (hypothetical distance).

Of most relevance to the current context of money, research comparing decisions about people, places, events, or things that are proximate to the self (versus more distant) has provided evidence consistent with the idea that distance can have a “shrinking effect” (Maglio, Trope, and Liberman 2013). For example, study participants reported that a 3-month period starting in 12 months felt shorter than a 3-month period starting in the present (Zauberman, Kim, Malkoc, and Bettman 2009). Likewise, the number of calories comprising a food item was estimated to be lower among participants primed

with greater (versus proximate) distance (Williams and Bargh 2008). Building on and extending this research, we predict that, when thinking of money, people will think that money is smaller when imagined at a greater psychological distance.

In three studies, we asked 1403 participants to rate the perceived purchasing power of money in conditions in which the money was made to feel close or distant. Extending earlier work on psychological distance, we used new manipulations of psychological distance (studies 1 and 2) as well as a previously-used manipulation (study 3). Throughout, the results showed that holding the sum of money constant, people believed they could buy more products with a subjectively close (versus distant) amount of money.

In study 1 ( $N = 500$ ), we manipulated how close money feels by changing its unit of measurement from a whole amount (\$100) to an equivalent amount of money that is framed in smaller parts. Based on previous work on the unit-scaling effect, which describes that distance appears closer when measured in fewer-larger units than in many-smaller units (Maglio and Trope 2011), we found that money framed in fewer-larger units was felt as closer, and had more purchasing power,  $d = 0.27$ .

In study 2, we shed more light on psychological distance by manipulating whether 263 participants thought about an increasing or decreasing amount of money. Consistent with recent research on psychological distance (Maglio and Polman 2014, 2016), participants responded to increases and decreases of their money in a predictable way, believing that when money increased, they could buy more with it than when it decreased (despite the sum of money being the same after each change),  $d = 0.31$ .

Finally, in study 3, we examined how much 672 participants contract money when money is perceived from afar, by having participants specify the perceived value that corresponds to the length of a line. Because we predicted that psychological distance subjectively contracts (“shrinks”) the value of money, people should perceive the line to cover a smaller segment of a money’s sum, which we found to be the case,  $d = 0.16$ . Furthermore, we found that when it is included as a separate variable in a regression model, it absorbs a significant part of the variance between money’s distance and its perceived purchasing power (consistent with a mediation model).

In closing, our research informs the science of spending and saving. By linking the work on psychological distance with money, our research shows how psychological distance influences a fundamental perception on which almost all choices that people make rest: what consumers think they can acquire in exchange for their money.

### Personal Budgeting: Does It Work?

#### EXTENDED ABSTRACT

Budgeting is a commonly recommended financial activity, and about half of Americans report keeping a budget (FINRA, 2016). Despite its prevalence however, there is little systematic evidence on whether budgeting actually helps people achieve their financial goals over the long term. Research in mental budgeting and mental accounting has explored the potential benefits and unintended side effects that can arise while budgeting (Zhang and Sussman, 2017), but much of this work has focused on short time frames. Survey evidence has concentrated primarily on propensity to engage in budgeting and its correlates (FINRA 2016, CFPB 2015), such as demographic factors and financial outcome measures, but it is difficult to draw causal conclusions. The present work aims to fill this gap.

We explore the effects of budgeting in both the short run and the long run. Aspects of budgeting, such as setting and tracking, increase the clarity with which people understand their own personal finan-

cial situation, but this clarity can have both positive and negative consequences.

In the short run, setting a budget can help to translate abstract goals into clear standards (Krishnamurthy and Prokopec 2010), which are an important part of successful self-regulation (Baumeister 2002). Thus we suggest that setting a clear budget should help people to mitigate overspending. We test this in study 1. Participants from mTurk completed a two-phase study over the Black Friday shopping weekend. Prior to Black Friday, participants were randomly assigned to budget for their Black Friday gift shopping in a manner such that their total spending limit was either clear (budgeted gift recipients were listed on one page, with the total spending limit summed up and provided back to the participant), or ambiguous (each gift recipient was listed on a separate page, without an explicit summation of the total cost). After Black Friday, participants reported on their total spending. All participants overspent their original budgets, but the magnitude of overspending was lower for participants whose total gift spending budgets were clear (Interaction:  $F(1, 251) = 5.87, p = .016$ ).

While financial clarity can be helpful in mitigating overspending, it can also be unpleasant. Tracking a budget may reduce the enjoyment associated with spending by increasing pain of paying through a tightened link between costs and benefits (Gourville and Soman 1998; Soman and Gourville 2001), and by increasing awareness of opportunity costs through higher perceived constraint (Spiller 2011). This should be especially acute for those facing higher financial constraint, as it increases the likelihood that people are spending from the bottom dollar in their budget (Soster et al., 2014). Study 2 explores this effect, and subsequent intentions to continue budgeting. A different group of mTurk participants completed a two-phase study over the Black Friday shopping weekend. Prior to Black Friday, participants were randomly assigned to track either their Black Friday shopping or their regular shopping. We also measured financial constraint (1=low constraint, 11=high constraint). After Black Friday, participants rated how much they enjoyed spending on each expense category, and whether they intended to continue tracking their budgets. A floodlight analysis revealed that for people facing high financial constraint (JN point = 8.67), tracking expenses decreased the enjoyment they derived from spending money on those expenses (Interaction:  $F(1, 328) = 4.89, p = .028$ ). Decreased spending enjoyment was in turn related to lower intentions to continue tracking expenses in the future.

In the long run, budgeting can also have dual consequences. Financial clarity helps people know when they’ve spent too much money, and they need to reduce their spending. However, it also informs people when they’ve done well managing their money. People may use the perceived progress as an excuse to take a break (Fishbach and Dhar 2005) and may splurge a little more during the next period. If people correct in both directions, there may be little net benefit. Such a pattern would mirror effects found in dieting research; diets tend to work well in the short run, but in long run, dieters exhibit weight cycling and do not often maintain their weight loss (Mann et al. 2007).

Study 3 investigated how budget tracking impacts period-to-period spending adjustments in the long run. At the beginning of the semester, undergraduate students set a financial goal, and created a budget for the next 10 weeks that would help them realize that goal. Half were randomly assigned to track their budgets, while the other half did not. At the end of 10 weeks, all students reported on their expenses and income. We ran a multi-level spline model to explore how net income in one period changed as a function of net income in a prior period, budget tracking condition, and their interaction.

The spline allowed us to separately observe reactions after periods of overspending, and reactions after periods of underspending. When people overspent their budgets in one week, they corrected by spending less the following week. This correction was stronger for those who tracked their budgets ( $z = 5.18, p < .01$ ). However, when people spent *less* than they budgeted in a particular week, they reacted by spending *more* the following week. This reaction was also stronger for those who tracked their budgets ( $z = 4.20, p < .01$ ). The net effect was that budget trackers were no more likely to attain their financial goals than those who did not track their budgets ( $ps > .20$ ).

In study 4, we observe period-to-period spending adjustments over the long run using a longitudinal dataset from a popular budgeting app. We observe a similar pattern of behavior as in study 3. People who tracked their budgets more exhibited stronger corrective action after periods of above average spending ( $z = 10.42, p < .01$ ). However, people who tracked their budgets more were also more apt to splurge after periods of fiscal restraint ( $z = 3.48, p < .01$ ). This suggests that budget tracking tightened the link between period-to-period financial behavior, but not necessarily in a manner that was beneficial in the long run.

### Can Making Family Salient Improve Retirement Contributions? Evidence from Field Experiments in Mexico

#### EXTENDED ABSTRACT

Despite good intentions, consumers regularly struggle to reach their retirement savings goals. There are small barriers and obstacles that prevent individuals from forgoing consumption today in order to secure a better financial pathway for the future. However, these decisions may not be solely based on the individual alone. Could nudges focusing on the benefits of saving for other people, such as the individual's family members, influence the motivation to save for the future?

Individuals may make decisions in order to improve their family's welfare in addition to their own utility. However, the decision for an individual to choose to save for their own future consumption may be perceived to be in potential conflict with the value of consuming with one's family in the present. Individuals may avoid putting money into savings because they view that savings decision to be more self-focused and individualistic and thus, would instead prefer to have the money easily accessible for their family today. Consistent with previous research which finds that future-minded reward responding may not be an exercise in delay of gratification, but rather may reflect a proficiency in episodic future thinking (Peters and Büchel, 2010) as well as research on the improving sequence hypothesis (Loewenstein and Prelec 1993; Magen et al. 2008), individuals may see saving for their own retirement as being in direct opposition to their family's utility for consumption in the present. Thus, we argue that an appeal that focuses on framing that savings decision as a means of having more money to help their family in the future will be particularly effective relative to other more individualistic appeals. More specifically, we propose that family oriented appeals may effectively reduce these perceived tradeoffs by highlighting that saving for one retirement can also improve their family's future utility and welfare by creating a more direct comparison between enjoying a small reward for one's family in the present or enjoying a larger reward for one's family in the future.

To test this, we use a large-scale field experiment ( $N = 97,149$ ), partnering with a retirement company in Mexico. We sent out five different types of SMS text messages to a randomized sampling of their client base in order to encourage individuals to save for their

retirement and compared these treatments against a control group who did not receive a message ( $n = 13,902$ ) as well as measured the effectiveness of the messages against each other. The messages were a gain frame ( $n = 13,859$ ), a message emphasizing a pennies-a-day approach ( $n = 13,877$ ), a fresh start for savings message ( $n = 13,882$ ) message, a message emphasizing securing one's own financial future ( $n = 13,901$ ), and finally a message emphasizing securing one's family's financial future ( $n = 13,853$ ). As compared to a contribution rate of 0.48% in the control group, only the family message generated a statistically significant increase in the proportion of individuals making a retirement contribution (44% increase over control,  $p = 0.018$ ) and was significantly different as compared to the other treatment groups ( $p < 0.05$ ).

To further dig into the potential behavioral mechanism underlying the family message, we estimated our regression specifications on three different age brackets: individuals less than 27 years of age, those between 28 and 42, and individuals older than 42. The average age of marriage in Mexico is 27 years old, and married individuals are likely to have children in the house until the child is a teenager. Hence, age could be a moderator of our effects, as we would expect the impact of the family message to be largest for the middle group of people. The impact of the treatment on contribution incidence, both immediately after the intervention and three months later, is positive and significant for the middle age bracket, as expected ( $p < .05$  in all comparisons). Interestingly and consistent with our theory, the effect on the younger age group is negative ( $p = 0.04$ ). In other words, family appeals can potentially backfire for those whom family is not as strong or an immediate priority. Encouragingly we also look at the long-term effectiveness of our effects and find that the family-oriented appeal also significantly improves contribution rates even six months after the experiment (34% over control,  $p = 0.032$ ).

In order to more definitively determine the mechanism driving our results, we ran a hypothetical laboratory experiment using Amazon's Mechanical Turk ( $N = 200$ ). We randomized participants into two conditions: the hidden zero condition and the explicit zero condition (Magen et al. 2008). In the hidden zero condition, we framed the retirement contribution choice as a way to secure one's future, while in the explicit zero condition, similarly to our field experiment, we framed the retirement contribution choice as a way to secure their family's future. Consistent with our prediction, highlighting the explicit zero and one's family's future led individuals to significantly save more for the future than the hidden zero condition ( $p = .02$ ). Interestingly, and consistent with our field results, this result was moderated by whether participants had a family themselves. Single individuals were as a result less likely to save for the future when given the explicit zero condition ( $p < .01$ ).

The results from the field experiment and the lab experiment shed light on a novel potential approach to improve financial decisions related to retirement. We demonstrate that family messaging prompts significantly improve voluntary contribution rates in comparison to the control condition and in relation to other treatments in comparison to the control condition, both in the short term (over a three-month period) and in the following period (six months later). Designing messages and frames geared to increase the salience of family significantly improves consumers' ability to make positive financial choices (i.e., retirement contributions) in the long-run, even potentially over traditional nudges.

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# Can Money (and Time) Buy Happiness?

## A Resource Approach to Understanding Consumer Happiness

Chair: Jacqueline R. Rifkin, Duke University, USA

### Paper #1: The Effects of Being Time Poor and Time Rich on Happiness

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Cassie Mogilner, University of California Los Angeles, USA  
Hal E. Hershfield, University of California Los Angeles, USA

### Paper #2: Finding Happiness in Meaning and Meaning in Happiness: Where, When, and For Whom Happiness and Meaning Converge

Rhia Catapano, Stanford University, USA  
Jordi Quoidbach, ESADE Business School, Spain  
Cassie Mogilner, University of California Los Angeles, USA  
Jennifer Aaker, Stanford University, USA

### Paper #3: Making Sense of Spontaneity: In-The-Moment Decisions Promote More Meaningful Experiences

Jacqueline R. Rifkin, Duke University, USA  
Keisha M. Cutright, Duke University, USA

### Paper #4: Guilt Undermines Consumer Willingness to Buy More Meaningful Time

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Elizabeth W. Dunn, University of British Columbia, Canada

## SESSION OVERVIEW

For centuries, scholars have wondered where and how people find happiness. More recently, researchers have started to examine the role of consumption in driving happiness. In particular, articles on gift-giving (Belk and Coon 1993; Joy 2001), consumer experiences (Bhattacharjee and Mogilner 2013), and variety-seeking (Etkin and Mogilner 2016) have illustrated how diverse aspects of consumption can influence consumers' levels of happiness and well-being.

One key factor of consumption that has been unearthed in driving consumer happiness is consumers' resources (e.g., time and money). Prior work has explored how different allocations of resources can influence happiness (Aknin et al. 2011; Dunn, Aknin, and Norton 2008, 2014; Mogilner and Norton 2016), how thinking about different resources (time vs. money) can influence happiness (Liu and Aaker 2008; Mogilner 2010; Quoidbach et al. 2010), and how our conceptualization of happiness itself can depend on how much time or money we think we have (Mogilner, Kamvar, and Aaker 2011). While this work clearly establishes an important link between consumers' resources and their happiness, there are still many open questions: What are the optimal levels of time and money in order to be happiest? Once we have "enough" (time and money), how should we allocate them to maximize happiness? When resources are scarce, where do we turn for happiness?

Contributing answers to these questions and adding to this area of research, this session presents four novel perspectives on the role of resources—in particular, their availability and allocation—in driving consumer happiness and well-being. The first two papers explore how the availability of resources impacts consumer happiness. Paper 1 (Sharif, Mogilner, and Hershfield) illustrates a curvilinear relationship between discretionary time and life satisfaction: while too little free time negatively affects life satisfaction, too much free time does not necessarily enhance it (and may even reduce it). Paper 2 (Catapano, Quoidbach, Mogilner, and Aaker) reveals that the two forms of

well-being (meaning and happiness) converge to a greater extent in populations where resources (e.g., income) are scarce.

Papers 3 and 4 examine how different allocations of resources can impact consumer happiness. Paper 3 (Rifkin and Cutright) shows that allocating time during an experience to make spur-of-the-moment decisions (vs. making those decisions in advance) can enhance that experience's meaning and increase well-being over time. Finally, Paper 4 (Whillans and Dunn) explores how feelings of guilt prevent consumers from allocating their money towards time-saving purchases (e.g., hiring house cleaners), thereby reducing satisfaction and well-being.

These four papers explore how the availability and allocation of resources like time and money influence consumer well-being. The papers approach this issue by examining diverse contexts spanning multiple countries, by testing predictions across experiments and large-scale datasets, and by looking at both local (i.e., single experience) and global (i.e., life in general) evaluations of happiness. This session will have broad appeal to scholars interested in consumer well-being, resource-based processes, and mixed-method research.

## The Effects of Being Time Poor and Time Rich on Happiness

### EXTENDED ABSTRACT

Between their myriad obligations, people today feel like they don't have enough time and yearn for more. This time famine reaches across the globe (Hamermesh and Lee 2007) and is particularly acute amongst Americans, who report feeling more time constrained than ever before (Carroll 2008; Roxburgh 2004). Though both prioritizing time over money and spending money to buy more free time have been empirically linked to greater happiness (Hershfield, Mogilner, and Barnea 2016; Whillans et al., 2017; Whillans, Weidman, and Dunn 2016), would *actually* having more time make people better off? Across two largescale datasets, we examine the relationship between the amount of discretionary time people have and their satisfaction in life.

The likely harm of having too little time is straightforward. People who work longer hours and have a greater proportion of their schedules consumed by obligations have less control over their lives and less time to undertake desired activities. Less discretionary time means less time socializing and engaging in active leisure—two ways of spending time that are linked to happiness (Kahneman et al. 2004; Lathia et al. 2017; Mogilner 2010). While a negative effect of being temporally impoverished seems likely, what is the effect of time abundance? Is it possible to have too much discretionary time? Emerging work tangentially suggests so. People dread being idle and are happier when busy, even if this busyness is externally compelled (Hsee, Yang, and Wang 2010). In fact, busyness has become a status symbol, signaling competence, ambition, and being in high demand (Belezza, Paharia, and Keinan 2016). Further, with too much discretionary time, people may infer lack of purpose or meaning (Csikszentmihalyi 2000)—thus feeling less satisfied in their life.

Even though many people in modern society feel time-stressed and want more time, we hypothesized that actually having more discretionary time would not always be associated with greater happiness. More specifically, we predicted a negative quadratic relationship between discretionary time and life satisfaction, such that

beyond a certain amount of discretionary time, more time would not just fail to further increase happiness, but may actually be associated with *less* happiness. Drawing on prior research (Holbrook and Lehmann 1981), we define discretionary time as the amount of “time spent on leisure activities or on other non-routine pursuits—where the primary function is the use of time for pleasure or some other intrinsically worthwhile purpose.” Therefore, discretionary time is not simply whatever time is leftover outside of paid work; it is instead the portion of people’s waking hours spent doing what they want.

In Study 1, we analyzed the data of 13,639 working Americans who participated in the National Study of the Changing Workforce (NSCW) between 1992 and 2008. Participants reported the amount of discretionary time they had (“On average, on days when you’re working, about how many hours [minutes] do you spend on your own free-time activities?”) and their life satisfaction (“All things considered, how do you feel about your life these days?”).

Consistent with our prediction, we found a significant negative quadratic relationship between people’s amount of discretionary time and their life satisfaction ( $N = 13,639$ ;  $\beta = -.003$ ,  $P < .001$ ) This relationship held when controlling for gender, age, parental status, marital status, race, education, and respondent income ( $N = 11,649$ ;  $\beta = -.003$ ,  $P < .001$ ). Lastly, using Simonsohn’s two-lines approach (Simonsohn 2017), we find that life satisfaction increases with more discretionary time up to approximately 2 hours; after that point, more discretionary time does not predict greater life satisfaction.

Study 2 sought to test whether this negative quadratic relationship replicates in a different dataset that includes individuals who are in the labor force as well as those who are out of the labor force, and uses different measures for discretionary time and life satisfaction. Here, we analyzed the data of 21,736 working and nonworking Americans who participated in the American Time Use Survey between 2012 and 2013. In answering the American Time Use Survey, respondents provide a detailed account of the activities that filled their prior 24 hours—indicating the time period and duration of each activity. We assessed discretionary time by calculating the amount of time people spent on discretionary activities in a day.

Because there is no standard definition for which specific activities count as discretionary, we used a crowd-sourcing platform (Amazon’s Mechanical Turk) to determine the activities that most people (i.e., over 90%) consider to be discretionary time. Applying this crowd-sourced metric for determining which activities count as discretionary, we calculated the total amount of time each American Time Use Survey respondent spent engaging in these discretionary activities over the previous 24 hours. Replicating the results from Study 1, we again found a significant negative quadratic relationship between the amount of discretionary time people have and their life satisfaction ( $N = 21,736$ ;  $\beta = -.004$ ,  $P < .001$ ). This effect held controlling for gender, age, parental status, marital status, race, education, respondent income, and employment status ( $N = 20,275$ ;  $\beta = -.004$ ,  $P < .001$ ). Lastly, using Simonsohn’s two-lines procedure, we demonstrate that life satisfaction increases with more discretionary time up to certain point (approximately 3.42 hours), but after that point, life satisfaction *decreases* with more discretionary time.

In two largescale datasets representing both fully-employed Americans as well as those outside of the labor force, we tested the relationship between life satisfaction and the objective amount of discretionary time people have in their daily lives. Our results empirically substantiate the emotional burden of *feeling* time-constrained (Hamermesh and Lee 2007; Kasser and Sheldon 2009) by revealing that having a dearth of discretionary hours in one’s day is indeed linked to lowered life satisfaction. However, although too little time is bad, we importantly show that having more time is not always bet-

ter. Though so many people in modern society yearn for more time in their days to do what they want, they really only need a few hours to enjoy optimal satisfaction in life.

## Finding Happiness in Meaning and Meaning in Happiness: Where, When, and For Whom Happiness and Meaning Converge

### EXTENDED ABSTRACT

“What makes for a good life?” is a central human question that scholars of philosophy, religion, political science, and psychology strive to answer. Indeed, for millennia, thinkers have grappled with the relative roles of happiness versus meaning in cultivating a well-lived life, going back to Aristotle who articulated the distinction between these pursuits as *hedonia*, which involves feeling pleasure and enjoyment, and *eudaimonia*, which is rooted in a sense of purpose and fulfillment (Aristotle, trans. 1985; Ryan and Deci 2001; Ryff et al. 2006). Whereas some have proposed that the ultimate goal in life is to pursue happiness (Kahneman et al. 1999) others have argued for the more virtuous pursuit of meaning (Waterman 1993). But beyond theoretical debates and divergent prescriptions for ways to live, how truly different is the experience of happiness and meaning in most people’s lives?

To address this fundamental question, we conducted the largest research program to date examining the relationship between happiness and meaning worldwide. This investigation assessed the correlation between happiness and meaning for over 800,000 individuals across 151 countries. Relying on three large data-sets in the U.S. (Study 1), France (Study 2), and worldwide (Study 3), we compared correlations between population segments. To identify *when* happiness and meaning converge, we compared the correlations across the lifespan. To identify *for whom* happiness and meaning converge, we compared the correlations for people at different levels of income and education. To identify *where* happiness and meaning converge, we assessed correlations across countries and cultures.

Study 1 ( $N=524,673$ ) used the Gallup U.S. Daily Data to investigate the convergence of happiness and meaning across segments. Overall, happiness and meaning were related: individuals who experienced more meaning also tended to experience more happiness ( $r=.40$ , 95%CI[.39, .40]). However, the level of convergence depended on when and for whom. Happiness and meaning converged more as people got older, such that the correlation between happiness and meaning was higher for older individuals than younger individuals ( $r_{\text{under}25}=.29$ ,  $r_{25-34}=.32$ ,  $r_{35-44}=.36$ ,  $r_{45-54}=.42$ ,  $r_{55+}=.43$ ,  $\chi^2=1698$ ,  $p<.001$ ). We also found higher convergence for both lower income levels and lower education levels. That is, individuals in poorer income brackets exhibited higher correlations between happiness and meaning than did wealthier individuals ( $r_{\text{low}}=.45$ ,  $r_{\text{mid}}=.38$ ,  $r_{\text{high}}=.32$ ,  $\chi^2=1181$ ,  $p<.001$ ). Further, individuals with less education exhibited higher correlations than more educated individuals ( $r_{\text{primary}}=.44$ ,  $r_{\text{secondary}}=.41$ ,  $r_{\text{some-college}}=.41$ ,  $r_{\text{technical-school}}=.41$ ,  $r_{\text{college}}=.36$ ,  $r_{\text{postgrad}}=.36$ ,  $\chi^2=338$ ,  $p<.001$ ). Together, these results suggest that in the U.S., happiness and meaning are more linked among people who are old, poor, and uneducated. However, what remains unclear is whether these trends are specific to the U.S. or represent something more fundamentally human.

Therefore, in Study 2 ( $N=35,964$ ) we turn to a different country (France), and replicate our findings. Overall, happiness and meaning were related ( $r=.61$ , 95% CI [.60, .62]), but the magnitude of correlation differed across age, income and education. Older people displayed greater convergence than younger people ( $r_{\text{under}25}=.57$ ,  $r_{25-34}=.59$ ,  $r_{35-44}=.63$ ,  $r_{45-54}=.64$ ,  $r_{55+}=.62$ ,  $\chi^2=46.03$ ,  $p<.001$ ), poorer people

showed greater convergence than richer people ( $r_{\text{low}}=.62$ ,  $r_{\text{mid}}=.59$ ,  $r_{\text{high}}=.56$ ,  $\chi^2=33.86$ ,  $p<.001$ ) and less educated people showed greater convergence than more educated people ( $r_{\text{technical-highschool}}=.64$ ,  $r_{\text{regular high school}}=.62$ ,  $r_{\text{some-college}}=.61$ ,  $r_{\text{college}}=.61$ ,  $r_{\text{postgrad}}=.58$ ,  $\chi^2=25.01$ ,  $p<.001$ ).

However, France and the U.S. have a number of characteristics in common, including the use of WEIRD (Western, educated, industrialized, rich, and democratic) samples (Jones 2010). Given that culture may influence experienced happiness (Diener and Suh 2000) and meaning (Baumeister et al. 2013), we sought a broader view beyond these two country's samples. Therefore, in Study 3, we relied on the Gallup World Poll data, collected from 151 countries to assess the prevalence of these patterns around the globe ( $N=260,401$ ).

Around the world, meaning and happiness were related ( $r=.14$ , 95% CI [.13, .14]). More precisely, in 129 out of the 132 countries, the relationship between meaning and happiness was positive, with 112 of these countries showing significant relationships, suggesting that the relationship between meaning and happiness is highly consistent across cultures. Further, as in Studies 1 and 2, the correlation between happiness and meaning increased with age ( $r_{\text{under25}}=.07$ ,  $r_{25-34}=.09$ ,  $r_{35-44}=.10$ ,  $r_{45-54}=.13$ ,  $r_{55+}=.19$ ,  $\chi^2=470$ ,  $p<.001$ ), for those who were poor vs. wealthy ( $r_{\text{low}}=.16$ ,  $r_{\text{mid}}=.16$ ,  $r_{\text{high}}=.10$ ,  $\chi^2=11.3$ ,  $P=0.003$ ), and for those who are less educated vs. more educated ( $r_{\text{primary}}=.16$ ,  $r_{\text{secondary}}=.14$ ,  $r_{\text{tertiary}}=.13$ ,  $\chi^2=21.5$ ,  $p<.001$ ).

In Study 4, we directly manipulated subjective financial scarcity in order to obtain initial causal evidence for this account. Participants ( $N=783$ ) were instructed either to write about the factors that constrain their finances or a matched writing task (Tully, Hershfield, and Meyvis 2015). Then, they were asked to report either a recent happy experience or a recent meaningful experience and then rate how happy and meaningful it was. Regardless of whether participants wrote about a happy or meaningful experience, participants in the constrained condition showed greater convergence between happiness and meaning than those in the control condition ( $r_{\text{happy/constrained}}=.71$ ,  $r_{\text{happy/control}}=.54$ ,  $\chi^2=7.75$ ,  $P=.005$ ;  $r_{\text{meaning/constrained}}=.57$ ,  $r_{\text{meaning/control}}=.37$ ,  $\chi^2=6.44$ ,  $p=.01$ ). This finding suggests that there is a causal relationship between scarcity and the convergence of happiness and meaning. In addition, the consistency of this effect both for happy and meaningful experiences suggests that it is bidirectional in nature, such that happiness contributes to meaning and meaning contributes to happiness in these circumstances.

These results highlight that despite being distinct constructs, meaning and happiness are related around the world. Furthermore, in addressing the questions of when and for whom they converge, we find evidence for the “wisdom in scarcity” principle—that the degree of convergence relates to people's access to external sources of happiness (i.e., age, money, education). This finding builds on emerging research which suggests that meaning and happiness can indeed serve as inputs to the other (Kashdan et al. 2008; King et al. 2006; Sheldon 2013). Given the motivating power of scarcity (Shah, Mulainathan, and Shafir 2012), as well as people's tendency to manufacture their own happiness in the face of dire circumstances (Gilbert 2006; Quoidbach and Dunn 2010), this research suggests another way that those who suffer from conditions of scarcity may boost their own happiness and well-being, by deriving meaning from happiness and happiness from meaning.

### Making Sense of Spontaneity: In-The-Moment Decisions Promote More Meaningful Experiences

#### EXTENDED ABSTRACT

Whether spending free time with friends or celebrating a milestone anniversary, many consumers are increasingly spending their

discretionary dollars on experiences. As such, recent research has focused on understanding what drives happiness from consumer experiences (Bhattacharjee and Mogilner 2014; Tonietto and Mal-koc 2016; Van Boven and Gilovich 2003). One prevailing notion for maximizing happiness is to allow consumers ample opportunities to co-create, or make decisions about, their experience (Pralhalad and Ramaswamy 2004). While this strategy can confer experiential benefits (e.g., Norton, Mochon, and Ariely 2012), one open question surrounds *when* such experience-relevant decisions should be made: in advance of the experience, or in the spur of the moment?

We suggest that the timing of experience-relevant decisions will affect how meaningful an experience feels. Our theory stems from prior work examining when and why people desire to understand their experiences. Prior work shows that people are driven by a fundamental need to understand their environment (Camus 1942/2000; Dweck 2017; Frankl 1963/1984). As such, after people undergo experiences that do not conform to their pre-existing frameworks (e.g., a trauma or simple expectancy violation; Bruner and Postman 1949; Joseph and Linley 2005; Janoff-Bulman 2010) or when they undergo experiences for which they have no framework, they are motivated to engage in sense-making processing to restore understanding.

Building on this work, we suggest that the decisions consumers make for their experiences (e.g., the courses one orders at a dinner, the excursions one books for a vacation) can serve as the framework that guides an experience. As such, when experience-relevant decisions are made *in the moment*, consumers enter into their experiences without a pre-existing framework; instead, they construct that framework as the experience unfolds. As a result, we theorize that in-the-moment decisions will increase the likelihood that consumers engage in sense-making processes after the experience (Park 2010). By contrast, when experience-relevant decisions are made in advance, the experience *is* guided by a pre-existing framework. As such, in-advance decisions should be less likely to spark sense-making processes.

Given prior work establishing the link between sense-making processes and the meaning derived from experiences (Park 2010), we predict that, compared to in-advance decisions, in-the-moment decisions will be more likely to spark a sense-making mindset, resulting in greater meaning evaluations.

Study 1 provides initial support for our predictions using participants' real experiences. We surveyed engaged women ( $N = 149$ ) about their expectations regarding wedding decisions, timing, and meaning, and we surveyed recently-married women ( $N = 54$ ) about the most meaningful moments from their wedding day (and how planned or spontaneous they were). While engaged participants believed that spur-of-the-moment decisions would undermine their wedding's meaning ( $M_{\text{agreement}} = 4.96$  on 1-7 agreement scale), 65% of married participants listed moments involving spontaneous decisions. Thus, memories of spur-of-the-moment decisions emerged as unexpected, important sources of meaning.

Study 2 causally tests the effect of decision timing on meaning and the underlying role of sense-making. Participants ( $N = 204$ ) who celebrated New Year's Eve wrote about their celebrations, and we varied whether they described decisions they made in the moment or in advance. As expected, compared to those who focused on in-advance decisions ( $M = 5.08$ ), those encouraged to focus on in-the-moment decisions appraised their New Year's Eve experience as more meaningful ( $M = 5.43$ ,  $p = .050$ ). Supporting the underlying role of sense-making, compared to the in-advance condition ( $M = 2.69$ ), the writings of those who focused on in-the-moment decisions were judged (by independent coders) to be more like a coherent narrative ( $M = 3.26$ ;  $p = .001$ ), indicating greater levels of sense-making



(Hinchman and Hinchman 1997). Thus, study 2 demonstrates that focusing attention on in-the-moment decisions from a prior experience increased the degree of sense-making that occurred after the fact (as evidenced by the storied nature of their writings), which enhanced the experience's meaning ( $ab = -.08$ , 95% CI [-.20, -.005]).

Study 3 further tests our theory using a process-by-moderation design. If the effects of decision timing are indeed driven by sense-making processes, then the effects should be attenuated when sense-making is disallowed. To test this reasoning, study 3 manipulated both decision timing (in advance vs. in the moment) and whether participants had the opportunity to engage in sense-making (i.e., they either wrote about their experience prior to evaluating it, as in study 2; or, they were not allowed this opportunity). The significant 2 (Decision Timing)  $\times$  2 (Sense-Making) interaction on meaning ( $p = .026$ ) supported our predictions: When participants had the opportunity to engage in sense-making, experiences containing in-the-moment decisions were more meaningful than those containing in-advance decisions ( $M_{\text{In-The-Moment}} = 5.11$  vs.  $M_{\text{In-Advance}} = 4.40$ ;  $p = .004$ ). However, when sense-making was disallowed, these effects disappeared ( $M_{\text{In-The-Moment}} = 4.85$  vs.  $M_{\text{In-Advance}} = 4.87$ ; *NS*).

In study 4, we created a consumer experience in the laboratory and tested whether the predicted effects extend to marketing-relevant outcomes. Participants ( $N = 285$ ) tested an ostensibly new educational app by reading three brief articles of their choosing. We varied whether participants chose their articles during (vs. in advance of) the app-testing experience. After measuring how meaningful their experience was, we measured how likely they would be to purchase the app, provide a positive review, and "like" it on social media (collapsed to a form a "behavioral intentions" index;  $\alpha = .85$ ). Compared to those who made decisions in advance, those who made decisions in the moment rated their experience as more meaningful ( $M_{\text{In-The-Moment}} = 3.78$  vs.  $M_{\text{In-Advance}} = 3.32$ ;  $p = .017$ ), and had stronger intentions to engage in the future ( $M_{\text{In-The-Moment}} = .13$  vs.  $M_{\text{In-Advance}} = -.13$ ;  $p = .005$ ). Underscoring the managerial importance of these effects, in-the-moment decision-making enhanced how meaningful the experience was, which drove greater future engagement intentions ( $ab = -.16$ , 95% CI [-.28, -.03]).

Four studies demonstrate that making in-the-moment (vs. in-advance) decisions is more likely to spark sense-making processes, thereby increasing meaning. This research has practical implications for marketers and consumers of experiential consumption, and contributes to the literatures on experiential consumption, choice and well-being, and sense-making.

### Guilt Undermines Consumer Willingness to Buy More Meaningful Time

#### EXTENDED ABSTRACT

Trying to keep up with the demands of daily life, such as shopping and doing laundry, can chip away at the time we might otherwise spend engaging in the kinds of activities that endow life with meaning. Indeed, people find activities such as volunteering, meditating, and spending time with their children more worthwhile and meaningful than tasks such as shopping and housework (White and Dolan 2009). Outsourcing mundane tasks may provide a pathway to purpose by endowing people with the time they need to engage in purposeful pursuits. Despite this possibility, the vast majority of consumers fail to spend money in ways that would enable them to have more meaningful time—even when they can afford to do so (Whillans et al., 2017).

Building on this research, we propose a previously unexplored barrier to making time-saving purchases: feelings of guilt. Qualita-

tive research points to the role of guilt in couples' decisions about whether to outsource childcare (Epp and Velagaleti 2014). Building on this research, we propose that time-saving purchases are likely to promote guilt because these purchases often involve burdening other people with our own disliked tasks. Feelings of guilt are a painful affective experience encompassing remorse, self-blame, and regret (Mosher 1980). Thus, we predicted that feelings of guilt that can arise from outsourcing would suppress the satisfaction that consumers experience and their likelihood of making these purchases in the first place. Specifically, we predicted that when time-saving purchases involve the salient effort of other people ("effort-visible time-saving purchases"; e.g., housecleaning), consumers would be especially likely to experience guilt, undermining their satisfaction and purchase intentions.

First, to examine the role of guilt in predicting consumers' satisfaction and their intentions to make time-saving purchases, we conducted two large-scale survey studies, including a nationally representative sample of Americans (Study 1a&b). In these studies, respondents were asked to think about a task that they disliked doing, and to describe in 1-2 sentences how they would arrange to buy themselves out of this task. Then, respondents reported how much guilt they felt when thinking about buying themselves out of this task, and their purchase intentions. Lastly, respondents were asked whether they spontaneously considered a time-saving purchase that involved another person (an effort-visible purchase) or not.

Reporting the results from the nationally representative sample of Americans (for illustrative purposes), respondents who thought about the person or people who would have to complete the disliked task on their behalf (effort-visible) reported greater guilt as compared to respondents who did not think about the person who would have to complete the disliked task on their behalf,  $B=13.60$  (3.68),  $\beta=0.21$ ,  $p<0.001$ , 95%CI[6.36, 20.84]. These results held controlling for age, gender, whether respondents spent money on time-saving purchases in a typical month, marital status, number of kids living at home, and personal income),  $B=11.87$  (3.82),  $\beta=0.18$ ,  $p<0.001$ , 95%CI[4.35, 13.38]. Respondents who considered effort-visible purchases experienced greater guilt, which in turn undermined their intentions to buy themselves out of this disliked task in future, *indirect effect* = -0.23 (0.11), 95%CI[-0.50, -0.07] and their anticipated satisfaction from making these purchases, *indirect effect* = -3.07 (1.21), 95%CI[-5.72, -1.02]. To rule out potential confounds that might result from the spontaneous recollection of effort-visible purchases, we designed a novel lab paradigm to examine the causal role of effort-visibility on feelings of guilt, purchase satisfaction (Study 2), and purchase intentions (Study 3).

In Study 2, participants were randomly assigned to outsource a disliked task to a specific other person ("effort-visible") or not, were provided with 30 minutes of free time, and were asked how much guilt and how much pleasure they felt during this 30 minutes of free time. Consistent with our correlational data, participants who were randomly assigned to make effort-visible time-saving purchases experienced greater guilt ( $M=34.40$ ,  $SD=30.45$ ) as compared to participants who were assigned to the effort invisible condition ( $M=24.01$ ,  $SD=27.49$ ),  $F(1, 321)=10.21$ ,  $p=0.002$ . These feelings of guilt in turn undermined participants' satisfaction during the 30 minutes of free time, *indirect effect* = -1.07 (0.052), 95%CI[-2.46, -0.31].

In Study 3, participants earned \$7 and were asked to consider giving up this \$7 to buy themselves out of a disliked task. Once again, participants who were randomly assigned to the effort-visible condition reported that choosing to pay money to have more free time would cause them significantly greater feelings of guilt ( $M=38.90$ ,  $SD=30.52$ ) as compared to participants who were randomly assigned



to the effort-invisible condition ( $M=29.74$ ,  $SD=30.58$ ),  $t(348)=2.73$ ,  $p=0.007$ , 95%CI[2.56, 15.76]. Furthermore, participants who were assigned to the effort-visible condition reported higher feelings of guilt, which in turn undermined their willingness to exchange their \$7 payment for 30 minutes of free time, *indirect effect* = -0.16 (0.07), 95%CI[-0.33, -0.04]. These studies provide causal evidence that feelings of guilt that often arise when making time-saving purchases—such as in the case of outsourcing to a specific other person—can undermine our satisfaction with the free-time and our purchase intentions.

In Study 4, we sought to intervene on consumers' feelings of guilt. To this end, we adapted ads from the website of a sharing economy company, *HelloAlfred*. We randomly assigned some participants to view ads that focused on the benefits of the purchase for the service provider—including highlighting the meaning that the service providers derived from helping others with daily tasks. Other participants viewed ads focused on the benefits of the purchase for the consumer. As predicted, participants who were randomly assigned to view the ad that emphasized the benefits to the service provider reported significantly lower feelings of guilt when thinking about using the service ( $M=25.04$ ,  $SD=27.38$ ) as compared to participants who were randomly assigned to view the advertisement that emphasized the benefits to the consumer ( $M=32.21$ ,  $SD=30.05$ ),  $t(390)=6.06$ ,  $p=0.014$ , 95%CI[-12.88, -1.44]. In turn, the provider-benefits ad reduced guilt and increased anticipated purchase satisfaction and intentions.

Across five studies, guilt undermined consumer willingness to buy more and potentially more meaningful time. This adds to a growing body of research examining how people should spend money to promote happiness, and why we often do not (Dunn, Aknin, and Norton 2008).

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# Vulnerable Groups and Stigma in the Consumption Sphere

Chair: Helen van der Sluis, Arizona State University, USA

## **Paper #1: When Taking Action Means Accepting Responsibility: Omission Bias Predicts Reluctance to Vaccinate Due to Greater Anticipated Culpability for Negative Side Effects**

Gary D. Sherman, Stony Brook University, USA  
Stacey R. Finkelstein, Stony Brook University, USA  
Beth Vallen, Villanova University, USA  
Paul M. Connell, Stony Brook University, USA  
Kristen Feemster, Vaccine Education Center at Children's Hospital of Philadelphia and University of Pennsylvania, Perelman School of Medicine, USA

## **Paper #2: When Stigma Does Good: Accentuating Certain Aspects of Stigma Enhances Effectiveness of Mental Health Messages**

Chethana Achar, University of Washington, USA  
Nidhi Agrawal, University of Washington, USA

## **Paper #3: Perceptions of Disability in the Marketplace: Moral Character Inferences and Persuasion**

Helen van der Sluis, Arizona State University, USA  
Adriana Samper, Arizona State University, USA  
Kirk Kristofferson, Arizona State University, USA

## **Paper #4: When People Stop Being Nice and Start Getting "Real": Identity Labels for Stigmatized Groups**

Esther Uduehi, University of Pennsylvania, USA  
Americus Reed, University of Pennsylvania, USA

### SESSION OVERVIEW

Recently, people have increasingly focused on obstacles faced by vulnerable populations, or those most potentially susceptible to harm or neglect (Aday 1994), including children and those facing mental or physical maladies. Vulnerable individuals may have limited influence on or barriers to making their own health and life decisions, face stereotyped person perception, and even be described in an exclusionary way (Corrigan 2004; Fiske et al. 2002; Dunn and Andrews 2014). Such stigma shapes the consumption experiences of vulnerable individuals, those making decisions for them, and those who stigmatize them. However, despite the importance of and the call for consumer research on such topics (Mick 2006), many questions remain about the factors and consumption implications associated with vulnerable consumer groups. This session provides new, vital perspectives on this area.

Four papers explore important issues for vulnerable consumers: vaccination decisions for children, health messaging for individuals living with mental health issues, consumer inferences of the physically disabled, and implications of identity label use for stigmatized groups generally. The first three focus on unique vulnerable groups while the last unites this work by examining broad implications associated with vulnerable, stigmatized groups.

First, **Sherman and colleagues** examine a crucial consumption choice (vaccination) within a vulnerable group whose decisions are often made by others: children. In two studies conducted in collaboration with Children's Hospital of Philadelphia, they show that, due to anticipated moral culpability, parents with strong omission bias respond negatively to physician vaccine policy, which in turn negatively impacts pediatrician trust and vaccination intent.

Second, **Achar and Agrawal** then shift to examine vulnerable individuals living with mental health issues. They show that health messages emphasizing certain aspects of mental health stigma (i.e.,

discuss perceptions that someone with mental health issues is not "normal") are more effective than those that do not address the stigma. The responsiveness to accentuating aspects of stigma is moderated by the nature of individuals' moral beliefs.

Third, **van der Sluis, Samper, and Kristofferson** examine another vulnerable population, those with physical disabilities, and find that people perceive those with physical disabilities as having elevated moral character and that these inferences can have downstream persuasion consequences in retail settings.

Finally, **Uduehi and Reed** conclude by exploring more broadly how vulnerable, oft-stigmatized groups are described by others. They unpack language about people in stigmatized groups, identifying for the first time important inferences (i.e., controllability, willingness to change) associated with using person-first (i.e., person with obesity) versus identity-first (i.e., obese person) labeling.

Together, these papers shed light on understudied, vulnerable consumer populations, and connect them to a variety of consumer behaviors. As protections previously afforded to vulnerable groups are loosened in our "post trust" world, consumers no longer trust that social or government institutions will ensure the safety and well-being of vulnerable individuals. This collection contemplates the issues facing vulnerable populations as well as interventions that may benefit these groups. We expect this session to have a broad appeal to scholars interested in socially relevant research, morality, identity, stigma, and the connections between them.

## **When Taking Action Means Accepting Responsibility: Omission Bias Predicts Reluctance to Vaccinate Due to Greater Anticipated Culpability for Negative Side Effects**

### EXTENDED ABSTRACT

Omission bias describes the tendency to prefer harm from inaction over equivalent harm from action (Baron & Ritov 1994), and can lead individuals to avoid behaviors with potential negative outcomes even when inaction carries equivalent or greater risk. Previous research has considered the contribution of omission bias to vaccination decisions (Asch et al. 1994; Connolly & Reb 2003; Ritov & Baron 2004). We extend this work by exploring whether moral psychology—namely, anticipated culpability for potential harm—helps explain why individuals prone to the omission bias might be hesitant to vaccinate their children despite recognizing the value of vaccines.

In two studies, we examine how individual differences in omission bias impact patients' responses to physician-level vaccination policy. We demonstrate that omission bias predicts negative emotional responses to physician vaccination policy, which in turn undermines trust of the physician providing information and doctors more generally, and reduces the perceived importance of vaccination behaviors. We show that anticipated moral culpability helps to explain why parents with strong omission bias respond negatively to physician vaccine policy and, as a result, lose confidence in their child's pediatrician and in the importance of vaccinating on schedule. In exploring the omission bias in the context of vaccine-related decision making, we contribute to the relatively limited literature on provider-patient relationships to show how provider policy affects compliance and relationship-related outcomes.

Three hundred parents from the United States completed the study. Using multi-item scales we assessed vaccination beliefs, emotional response to vaccine policy, trust in one's physician, and gen-



eral trust in the medical profession. Omission bias was measured and participants completed demographic items.

We used path analysis (i.e., SEM) to test the pathways from omission bias to negative emotional response to the policy and then to the two trust outcomes. As predicted, parents with stronger omission bias responded to the dismissal policy with stronger negative emotion ( $p < .001$ ), and expressed having less trust in their pediatricians ( $p < .001$ ) and doctors in general ( $p < .001$ ). Parents' negative emotional response toward the policy predicted less trust in the pediatrician ( $p < .001$ ) and less general trust in doctors ( $p < .001$ ). Tests of the two indirect effects indicated that negative emotion in response to the policy partially explained the relationship between omission bias and provider trust ( $p = .002$ , 95% CI: [-.24, -.11]) and general trust in doctors ( $p = .001$ , 95% CI: [-.18, -.07]). Importantly, all pathways and indirect effects remained significant if the sample was restricted to parents who prioritize vaccination, suggesting that this effect is not limited to those that hold strong anti-vaccination beliefs.

Study 1 established that omission bias predicts parents' emotional response to physician vaccination policy and trust in doctors (both their child's pediatrician and doctors in general). Study 2 was designed to extend these findings by testing our contention that anticipated moral culpability is an important psychological mechanism underlying these relationships, and to extend the downstream consequences to vaccination priority.

Three hundred twenty-six parents from the United States completed the study. Participants rated their vaccine priority at the onset of the study. Participants then imagined that they were taking their child(ren) to the pediatrician's office for their next appointment and were informed about the pediatrician's policy regarding patient vaccines. They completed measures of omission bias, anticipated culpability for (in)action, emotional responses to vaccine policy, and trust in physicians and medical providers. Finally, participants restated their vaccine priority and a comparison from the original statement was used to calculate a change in vaccine priority score and provided demographic information.

In a single structural equation model, we tested the pathways from omission bias to negative emotional response to the policy via the two anticipated culpability measures, and from negative emotional response to change in vaccination priority and the two trust measures. Compared to parents with weaker omission bias, parents with stronger omission bias anticipated feeling less culpable for harm that might result from not vaccinating ( $p < .001$ ) and more culpable for harm that might result from vaccinating ( $p = .008$ ). The emotional response to the policy was more negative for parents who anticipated more culpability for potential harm of vaccinating ( $p < .001$ ) and less culpability for potential harm of not vaccinating ( $p < .001$ ).

There was a significant total effect from omission bias to negative emotional response to the policy ( $p < .001$ , 95% CI: [.09, .31]). There was evidence that the two anticipated culpability measures explained this relationship, at least in part. The combined indirect effect via the two culpability variables was statistically significant ( $p < .001$ , 95% CI: [.06, .17]). Once accounting for the indirect effect, the direct effect from omission bias to negative emotional response was no longer significant ( $p = .10$ , 95% CI: [-.02, .20]). This negative emotional response was consequential: parents who experienced more negative emotion toward the policy reported that the policy made them trust their pediatrician less ( $p < .001$ ), reported less trust in doctors in general ( $p < .001$ ), and had a greater decrease in vaccination priority ( $p = .003$ ).

Together, our studies explore the role of omission bias in vaccine-related outcomes. Distinct from prior literature, we implicate anticipated moral culpability as a driver of our observed effects, suggesting a unique source of patient vulnerability related to the omission bias.

Healthcare decisions are complex and vaccination decisions are no exception. Although vaccine hesitancy is often positioned in the popular press as resulting from misinformation regarding the safety risks of vaccines, we find that psychological biases also play a role. In this research, we focused on how consumers (patients) respond to a service policy in a complicated industry (i.e., healthcare) and in relation to what is sometimes an emotional decision (i.e., childhood vaccination). In doing so, we contribute to a limited literature on how policy changes and the manner in which they are communicated can affect patient compliance and the quality of the provider-patient relationship, and highlight consumer vulnerability driven by the omission bias.

### **When Stigma Does Good: Accentuating Certain Aspects of Stigma Enhances Effectiveness of Mental Health Messages**

#### **EXTENDED ABSTRACT**

In the U.S., 45 million adults were estimated to be living with any mental illness in 2016 – of which, only 41% received health services (NIMH Reports, 2016). Along with serious social consequences of large groups of vulnerable consumers being untreated, there is also a stunning economic cost: untreated serious mental illnesses cost the U.S. \$193.2 billion in lost earnings per year (Insel 2008). Significant research suggests that one barrier to seeking mental healthcare services is the stigma associated with mental issues (e.g., Corrigan 2004, Pietrzak et al. 2009). Despite the stigma – or probably because of it – advertisements that encourage consumers to seek help with mental health issues do not usually address the mental health stigma, or when they do so at all, they evoke the general concept of 'stigma'.

In this research, we propose that rather than not addressing stigma at all, accentuating certain aspects of mental health stigma might have positive consequences on the effectiveness of mental health appeals. Drawing from past work in mental health (Corrigan 2004, Clement et al. 2015), we consider two aspects that contribute to the social stigma surrounding mental health: a) harm-causing aspect (perceptions that an individual experiencing mental health issues may be violent) and b) norm-deviating aspect (perceptions that an individual experiencing mental health issues is not 'normal'). Second, we propose that the effects of the two aspects is moderated by the nature of moral beliefs held by consumers. Stigma surrounding health issues is a barrier to seeking healthcare because it endows the health issue with a sense of being 'bad' and unacceptable (Corrigan 2004). Thus, we reason that an individual's processing of stigma is moderated by their view of what is 'good' versus 'bad', that is, the nature of their moral beliefs. However, consumers may vary on what they believe to be moral. We use the framework of rights-based versus duty-based moral belief systems (Dworkin 1978; Chiu et al. 1997) to capture this variance. In this framework, individuals with rights-based moral beliefs believe individual freedom and rights are fundamentally moral; whereas to individuals with duty-based moral beliefs believe in supporting a system and following one's duty.

We hypothesize that when the norm-deviating (vs. control vs. harm-causing) aspect of mental health stigma is made salient, individuals with rights (vs. duty)-based moral beliefs are not deterred by the stigma to seek healthcare, since according to their beliefs,



being different from the norm is not a moral violation. However, when the harm-causing (vs. control vs. norm-deviating) aspect of stigma is made salient, individuals holding both rights-based and duty-based beliefs are defensive against mental health stigma since causing harm to others is a moral violation according to both belief systems. We tested these predictions in three experiments.

382 ( $M_{\text{age}} = 21.9$  yrs, 167 females) undergraduates participated in this study in exchange for course credit. They were randomly assigned to a condition in a 2 (Moral Beliefs: Rights-based vs. Duty-based) X 2 (Stigma Aspect: Harm-causing vs. Norm-deviating vs. Control) design.

As a first task, participants were presented a "Memory Task", that manipulated the rights (vs. duty)-based moral beliefs system. They were provided with a definition of morality, which varied by the rights-based (duty-based) condition and asked to write about an incident from their life in which they acted moral according to this definition of morality. Next, they were presented with 1 of the 3 types of mental health message. The messages were titled "People with mental health issues are still seen as being 'different' ('violent') in the norm-deviating (harm-causing) variant. The control message was titled "Look out for mental health symptoms" and did not mention stigma. The rest of the message was constant across conditions and summarized various mental health issues common among students. After reading the message, the participants were told that as compliments for participating, they could take a useful 'contacts card' discretely placed in their cubicle. These were pocket-sized 3.5"X2" cards, which contained information on accessing professional help for mental health problems on campus. A hypothesis-blind RA noted whether participants took the card (1) or not (0).

A binomial logistic regression using card taking as DV and moral beliefs and message type as IVs was significant ( $1.5 = 12.81$ ;  $p = .025$ ). There was no main effect of moral prime ( $p = .11$ ) or message type ( $p = .29$ ), only a significant interaction effect ( $p = .013$ ). Participants in norm-deviating (vs. harm-causing vs. control) message condition were significantly more likely to pick up the mental health services information card (table 1).

We replicated this effect in Study 3 among 445 ( $M_{\text{age}} = 40.79$  yrs, 252 females) Mturk participants, using another behavioral DV: amount of time spent reading mental health messages.

Study 2 was the same design as study 1 and was conducted with 785 ( $M_{\text{age}} = 36.05$  yrs, 380 females) Mturk participants. In this study, we used to measure moral beliefs as an IV that was premeasured before showing them one of the three message types. Participants were asked to estimate their susceptibility to experiencing depression: "What is the likelihood that you have experienced symptoms of depression?" 1 = highly unlikely to 10 = highly likely and "Indicate the likelihood that you might have symptoms of depression" on a visual scale 0 = not at all to 100 = definitely have symptoms. On the next page, participants were asked to indicate their intentions to seek professional help for depression ( $\alpha = .89$ ) on three 10-point items.

An ANOVA using perceived susceptibility as DV was significant ( $F(6, 777) = 34.07$ ,  $p < .001$ ) and showed a significant interaction ( $p = .03$ ). Further probing of the interaction indicated that participants were significantly more likely to recognize their susceptibility to depression after reading the norm-deviating (vs. harm-causing vs. control) message (see table 1). A moderated mediation analysis (Model 8, Hayes 2013;  $b = .06$ , CI: .01, .11) showed that the increased risk recognition lead to stronger intentions to seek help ( $b = .90$ ,  $p < .001$ ) with a significant indirect effect ( $b = .18$ , CI: .02, .36).

Overall, this research contributes to understanding consumer behavior theory by examining various aspects of stigma and their differential consequences. In addition, this enquiry provides insights

to healthcare marketers and policymakers on enhancing mental health persuasion.

## Perceptions of Disability in the Marketplace: Moral Character Inferences and Persuasion

### EXTENDED ABSTRACT

In 2016, 44.3% of employed people with disabilities worked in sales and service occupations (U.S. Bureau of Labor Statistics 2016), contexts that typically require significant customer contact and interactions. While past research has shown that people perceive those with disabilities as high in warmth but low in competence (Fiske et al. 2002), it has not focused on moral traits, which play an important part in person perception (Goodwin, Piazza, and Rozin 2014), or examined perceptions of physical disabilities in the marketplace.

In the present research, we make the prediction that consumers attribute a moral halo to individuals with disabilities (S1), and that such effects are mediated by the increased adversity people with disabilities are assumed to have endured (S1, S2). We further show these effects are bounded when explicitly immoral behaviors take place (S3), and finally, that within a sales context, salespeople with a physical disability elicit greater compliance and higher satisfaction even when persuasion knowledge activation is high (S4).

Study 1 establishes that a physical disability (i.e., wheelchair use) elicits perceptions of higher moral character and examines potential mediators. In a two-cell (disabled, able-bodied) design, 116 undergraduates read a profile about man named Alex. In addition to details about his life (e.g., job, hobbies, relationship status), they learned he was physically disabled (vs. not), then assessed his moral character (Aquino and Reed 2002;  $\alpha = .96$ ). We found that participants assigned Alex higher moral character when he was disabled (vs. not) ( $M_{\text{disabled}} = 6.72$ ,  $M_{\text{not disabled}} = 5.93$ ;  $p = .01$ ). Further, participants perceived Alex to have overcome more life adversity when he was disabled (vs. not) ( $M_{\text{disabled}} = 5.60$ ,  $M_{\text{not disabled}} = 4.04$ ;  $p < .0001$ ) and felt more empathy towards him ( $p < .001$ ). Mediation analysis revealed only a significant indirect effect through overcoming adversity (Model 4; Hayes 2013;  $B = .41$ ,  $CI_{95\%} : .14, .73$ ).

Study 2 replicates the moral halo effect and manipulates our proposed mediator to support our causal chain (Spencer, Zanna, and Fong 2005). Within a three-cell (disabled, able-bodied, disabled + privilege) design, we manipulated adversity perceptions by adding privilege to the target. Mturk participants ( $n = 149$ ) read a scenario about waiting in a long line at the movies and observing a consumer named Alex in line, who either had a physical disability (i.e., in a wheelchair) or not. In the disabled + privilege condition participants additionally overheard Alex say, "Here, I'll cut to the front and get our tickets – nobody ever says anything to me when I do that." Results revealed a main effect of disability condition ( $p < .001$ ) such that the moral halo effect emerged in the disabled ( $M_{\text{disabled}} = 6.56$ ) v. not disabled conditions ( $M_{\text{not disabled}} = 5.88$ ;  $p = .02$ ) but was mitigated in the disabled + privileged ( $M_{\text{disabled+privilege}} = 3.81$ ;  $p < .001$ ) condition. Process evidence showed that perceived adversity in the disabled + privilege condition was significantly lower than the disabled ( $p < .0001$ ) and not disabled ( $p < .0001$ ) conditions, together demonstrating that when a person is perceived to experience lower adversity, the morality boost from the physical disability disappears.

Study 3 examines the effects of committing a moral transgression as a boundary condition. 337 undergraduates were randomly assigned to a 2 (Disability of target: Disabled v. Not Disabled) x 2 (Moral transgression: Keep dropped \$20 v. Return dropped \$20) between-subjects experiment. As in study 2, participants imagined being in a movie theater line and observing someone drop a \$20 bill. In

the moral (immoral) condition, Alex returns the \$20 bill to the person who dropped it (puts the \$20 bill in his pocket). A 2 x 2 ANOVA on perceived moral character revealed a marginal two-way interaction ( $p = .062$ ). Alex was perceived as more moral if he had a physical disability (vs. not) when he returned the money ( $M_{\text{disabled}} = 5.69$ ,  $M_{\text{not disabled}} = 5.18$ ;  $p < .01$ ), yet no such differences emerged when he kept the money for himself—both conditions revealed a significant drop in morality ( $M_{\text{disabled}} = 2.42$ ,  $M_{\text{not disabled}} = 2.62$ ;  $p = .98$ ).

Study 4 examines how people interact with disabled individuals in a retail context, particularly when persuasion knowledge is made salient. This study used a 2 (disabled, not disabled) x 2 (persuasion knowledge: high (clothing irrelevant), low (clothing relevant)) design. Undergraduates ( $n=305$ ) read a guided visualization in which they interacted with Gina, a female salesperson (disabled vs. not), and told her they were shopping for a shirt for work. In selecting items to try, Gina offered either a dress shirt (relevant to need) or a pair of jeans (irrelevant). Upon completion, participants indicated their willingness to accept the salesperson's clothing suggestion. (We had pretested this scenario to confirm that Gina was seen as moral in the disabled (v. not disabled) condition and that provision of the irrelevant clothing item increased persuasion knowledge activation (Kristofferson, Lambertson, and Dahl 2018)). Results revealed a significant disability x persuasion knowledge interaction ( $p = .01$ ). When the clothing item was relevant, there was no significant difference in salesperson compliance, regardless of disability. However, when the clothing suggestion was irrelevant (persuasion knowledge was activated), participants were significantly more compliant to the salesperson's suggestion when she was disabled versus not ( $M_{\text{disabled}} = 4.37$ ,  $M_{\text{not disabled}} = 3.39$ ;  $p = .002$ ). We also measured salesperson and retail experience satisfaction and the results show the same pattern. Thus, consumers were more compliant and satisfied with the explicit sales attempt even when it was irrelevant to what their purchase goal.

Together, these studies provide the first investigation into the psychological and persuasive consequences of persons with disabilities in a consumption context. We find that consumers perceive those with disabilities as having elevated moral character due to the perception of their having overcome adversity. Further, the presented evidence suggests that heightened moral character is associated with persuasion such that the moral halo may activate persuasion knowledge that strengthens credibility, not suspicion.

### When People Stop Being Nice and Start Getting “Real”: Use of Identity Labels for Stigmatized Groups

#### EXTENDED ABSTRACT

No systematic research exists that has explored the impact of using identity labels to describe stigmatized groups. Yet, regulatory agencies are making suggestions about which labels should and should not be used. Ironically, these conditions are often associated with stigmatized groups. More importantly, these are “identity labels” that have implications for the person *doing* the labeling and the person *being* labeled. This is the first research, to our knowledge, that systematically explores perceptions in using *person first* in the description (e.g., person with obesity) or describing the *condition first* (e.g., obese person) in the description.

Across four studies, we first examine the frequency of person-first versus condition-first language in scholarly articles using Google Search. We find that more stigmatized medical disorders were more likely to contain condition-first language (Study 1). Next, we find that the less offensive way to address stigmatized groups is using person-first language, but the actual language used depends on the specific disorder (Study 2). Also, when people perceive a stigmatized

disorder to be controllable (not controllable), they use condition-first (person-first) language (Study 3). In study 4, when people perceive an individual is (not) willing to change in order to improve their condition, they use (condition-first) person-first language.

Growing interest surrounding how we address disabilities stems from concern over the victimization and stigmatization of these conditions. Previous research has focused on language differences to describe stigmatized groups and the need to use person-first language (Blaska 1993; Dietz 2015; Jensen et al. 2013). Researchers argue that the person-first approach presents conditions as just one part of the individual and distances the individual from their condition: a perspective that creates a more holistic view of the person being described (Dunn and Andrews 2015). However, condition-first language advocates argue that this language portrays disability as a distinct experience and brings its unique attributes to the forefront of discussion of stigmatized groups (Altman 2001).

Our findings indicate that language choices may have an important impact on how we view and interact with stigmatized groups. This research is a preliminary attempt to uncover when and why people use certain language, which can inform how they are judging others and the consequences of doing so.

In study 1, in order to shed light on language choice preferences, we conducted a Google Scholar search for scholarly articles published after 2013 containing person-first and condition-first language for six common disorders (Table 1):

Results show a clear pattern of language choices, with not all disorders following the person-first language guidelines. As an initial gauge of label usage, at least for these six conditions, it appears that condition first language is “preferred” for more stigmatized conditions and person-first language is used for less stigmatized medical conditions.

In study 2, we examine people's overall beliefs on identity labels used for stigmatized groups. We asked 215 MTurk participants what phrases, either person-first or condition-first, they believed were *least offensive*, as well as which they *preferred to use* for nine common diseases and disorders: obesity, alcohol addiction, drug addiction, anorexia, bulimia, dyslexia, schizophrenia, disability, and autism. People were significantly more likely to choose person-first language as the *less offensive* term for all nine disorders (all percentages > 85%,  $p < .001$ ). However, the phrase *actually used* varied based on the disorder, with people more likely to use condition-first language for obesity, alcohol addiction, and drug addiction than for the other disorders.

The variation in use of person-first language may be linked to perceived controllability of the disorder. Previous research indicates that the degree of perceived controllability affects the blame attributed to stigmatized groups (Weiner 1993, 1995, 1996). In study 3, we examine how controllability affects language choice. We found that people preferred person-first language when there was low perceived controllability and condition-first language for high perceived controllability situations. We used four disorders that varied on stigmatization: obesity and alcoholism (high stigmatization) and dyslexia and autism (lower stigmatization). We asked 301 MTurk participants to choose which phrasing, person-first or condition-first, they would prefer to use for each disorder under either high controllability, low controllability, or the controllability was not described. We manipulated the level of controllability for each disorder in a between-subjects experiment. In the high controllability condition, participants were told that the disorder was worsened by factors dealing with the person's lifestyle. In the low controllability condition, participants were informed that the disorder was worsened by the person's genet-

ics. If controllability was not described, participants were only told the disorder the individual was diagnosed with.

While there were no significant differences in dyslexia and autism manipulations, for both obesity and alcoholism, people were significantly more likely to choose person-first language when the condition was not in the person's control and were as likely to use condition-first language if the condition was in a person's control or not described at all. This suggests that people use condition-first language for stigmatized groups in order to convey the perceived controllability of the disorder by the person.

In study 4, we examine the impact of a person's willingness to change on the identity labels used. We ask participants which identity label they would use to refer to someone else for the four medical conditions used in study 3. The between-subject manipulation was willingness to change of the individual. Participants were told that the individual was either willing to change in order to improve their condition, not willing change, or willingness to change was not described.

For both obesity and alcoholism, people were more likely to use person-first language when an individual was willing to change versus when they were not willing to change or when willingness to change was not described. There were no statistically significant differences within dyslexia and autism manipulations. These results suggest that people use person-first language to convey an individual's willingness to change and that for highly stigmatized groups when willingness to change is not described, it is implied they are not willing to change.

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# Context Matters! New Perspectives on Attitude Functions

Chair: Aaron J. Barnes, University of Illinois at Urbana-Champaign, USA

## **Paper #1: Felt Ambivalence: Exploring the Storage Structure and Role of Situational Relevance on the Accessibility of Dominant and Conflicting Reactions**

Amit Surendra Singh, The Ohio State University, USA  
H. Rao Unnava, University of California at Davis, USA

## **Paper #2: Data... the 'Hard' & 'Soft' of it: Impact of Embodied Metaphors on Attitude Strength**

Sunaina Shrivastava, University of Iowa, USA  
Gaurav Jain, Rensselaer Polytechnic Institute, USA  
JaeHwan Kwon, Baylor University, USA  
Dhananjay Nayakankuppam, University of Iowa, USA

## **Paper #3: Deny the Voice Inside: Are Accessible Attitudes Always Beneficial?**

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Sharon Shavitt, University of Illinois at Urbana-Champaign, USA

### **SESSION OVERVIEW**

Decades of research suggests that attitudes serve important functions for consumers. However, much of past work has examined attitude functions in contexts where external factors (e.g., norms) play a minimal role. How do attitude functions change when different external factors are more directly considered? In this session, four papers demonstrate novel ways in which the context matters when determining the functional value of attitudes. The first paper explores how situational relevance (Paper 1) alters the function of attitude ambivalence. The last two papers investigate the roles of embodied states (Paper 2) and norm focus (Paper 3) affect the functions of attitude strength and accessibility, respectively.

Paper #1 (Singh and Unnava) explores the mental storage structure and retrieval of ambivalent product beliefs. Earlier work has demonstrated that the simultaneous accessibility of both positive and negative product beliefs often generates the experience of ambivalence and the associated discomfort. Yet, a series of studies show that, although positive and negative product information are stored together, situational relevance reduces the importance of non-applicable conflicting thoughts. Hence, the consumption context can moderate feelings of ambivalence and the associated discomfort toward an object.

Paper #2 (Shrivastava, Jain, Kwon, and Nayakankuppam) looks at the role of embodied states on attitude strength. Traditionally, it has been held that strong attitudes towards a target are a result of the conscious cognitive process of elaboration, where individuals engage in effortful issue relevant thinking. However, the authors posit that attitude strength can come about from non-elaborative processes as well, depending on certain embodied states. Four studies show that incidental bodily experiences that influence one's perceptions of 'information quality' (e.g. 'hard vs soft' data) affect the strength of one's attitude towards a target object.

Paper #3 (Barnes and Shavitt) examines a cost to attitude accessibility in contexts where fitting in is important. Prior literature suggests that having accessible preferences puts one at ease and consequently, are beneficial for coping with decision demands. The authors refine this conclusion by demonstrating that accessible attitudes have drawbacks when others' attitudes are unknown or conflict with personal preferences. The results show that, when normative consid-

erations are important, having accessible attitudes can get in the way of feeling at ease and responding positively to consumption-related decision demands.

## **Felt Ambivalence: Exploring the Storage Structure and Role of Situational Relevance on the Accessibility of Dominant and Conflicting Reactions**

### **EXTENDED ABSTRACT**

Feeling both positive and negative about a product is referred to as ambivalence (Zemboiran and Johar 2007). The Gradual Threshold Model (GTM) of ambivalence (Priester and Petty 1996) distinguishes between latent (the existence of conflicting thoughts in mind) and felt ambivalence (the discomfort felt by an individual because of the conflicting thoughts). GTM shows individuals possess dominant and conflicting reactions simultaneously but may not feel ambivalent. The model suggests that felt ambivalence and its intensity depend on the rate at which conflicting reactions are accessed. The number of conflicting reactions activated from memory should reach a threshold for an individual to feel the discomfort due to ambivalence. Thus, GTM elegantly reduces the notion of felt ambivalence to one of access to conflicting reactions in an individual's mind.

Since access to information in memory depends on how it is stored (or structured) in memory, this research first focuses on how individuals store ambivalent information. Are dominant and conflicting thoughts stored together in mind in an inter-connected way so they can cue each other? Or, are individuals' dominant thoughts separated from their conflicting thoughts, even though they are both connected to the object? Thus, our first objective in this research is to investigate whether dominant and conflicting reactions about an attitude object are stored together and whether they could be retrieved associatively. Past work suggests that simultaneous accessibility of dominant and conflicting reactions leads to felt ambivalence (Newby-Clark and Zanna 2002). Therefore, if dominant and conflicting reactions are stored together and retrieved associatively, activating one would simultaneously activate all leading to experienced discomfort every time the object is faced. Hence, our second objective is to investigate whether the situational relevance affects the retrieval of conflicting thoughts to minimize felt ambivalence in consumers.

If both dominant and conflicting reactions about an attitude object are stored at same location, activating one type of reaction would facilitate the activation of other stored reactions. In contrast, if dominant and conflicting reactions are separately stored, activating dominant would create facilitation only for dominant reactions and not for conflicting evaluations and vice-versa.

Study-1 used a two-cell design (Presentation order: control vs. sequential). Pre-tested, two univalent (positive-valence: Warren Buffet and negative-valence: Lance Armstrong) and two ambivalent objects (French fries, Nordstrom) were used as target stimuli, and evaluative statements were created for them. One positive (P) and one negative (N) evaluative statement for each ambivalent attitude object and two univalent evaluative statements for each univalent object were created. In sequential presentation condition, participants always saw two statements about the target object sequentially (e.g., French fries are tasty followed by French fries are fatty). Four types of sequential statements were used: French fries (P-N), Nordstrom (N-P), Warren Buffet (P-P) and Lance Armstrong (N-N). Participants were asked to express if they agreed with the statements and their re-



sponse latencies were measured. These response latencies, viewed as indicating the proximity of storage of two types of thoughts, formed the critical dependent measure for the study. In control condition, first statement from sequential condition was replaced by filler. The second statement used in the sequential presentation condition was used in the control condition and response times between control and experimental conditions were compared. In addition, multiple filler statements were used to space out the target objects.

Analysis of response times (in milli-seconds) showed that the presence of one statement about an object facilitated the speed of response to the next statement for both univalent ( $p < .05$  for all the reported means) (Warren Buffet: Mean<sub>RTControl</sub> = 1540 vs. Mean<sub>RTExperimental</sub> = 1170; Lance Armstrong: Mean<sub>RTControl</sub> = 2220 vs. Mean<sub>RTExperimental</sub> = 1950) and ambivalent objects (French-fries: Mean<sub>RTControl</sub> = 1660 vs. Mean<sub>RTExperimental</sub> = 1500; Nordstorm: Mean<sub>RTControl</sub> = 2110 vs. Mean<sub>RTExperimental</sub> = 1670). Thus, a *facilitation effect* was found and it was independent of the valence of preceding statement.

Study-2 replicated study-1 more conservatively. Evaluative statements for Chinese restaurants and Donuts were used. In the experimental condition, one negative statement was sequentially presented after three positive statements, and vice-versa (i.e. dominant followed by one conflicting thought). A *facilitation effect* was replicated. For both, the response time kept getting lower with each following statement and then continued for the fourth statement of opposite-valence (Donuts: Mean<sub>RTfirst</sub> = 1500 vs. Mean<sub>RTfourth</sub> = 970; Chinese restaurants: Mean<sub>RTfirst</sub> = 1840 vs. Mean<sub>RTfourth</sub> = 1110). Hence, results indicate that both the conflicting and dominant reactions toward an object are stored together and retrieval of one associative link (either dominant or conflicting) would lead to activation of all.

Given the structural property of ambivalence, does situational relevance affect the accessibility of conflicting reactions leading to minimization in ambivalence? If so, does the inhibition of conflicting reactions occur due to reduction in their perceived importance? Study-3 used a two-cell (primed scenario: tasty vs. healthy) between-subjects design. Three evaluative statements for French fries (they are: tasty-(P), crunchy-(P) and fatty-(N)) were used. Participants were primed using a party planning scenario. Situational relevance was manipulated by describing guests either as young-twenty to twenty-five with no health concerns or older-between twenty to fifty years with some health concerns. Results found, for health-prime condition, facilitation occurred for all the statements (Mean<sub>RTtasty</sub> = 1299.5, Mean<sub>RTcrunchy</sub> = 1129.9 and Mean<sub>RTfatty</sub> = 1032). But, when only taste was primed, accessibility of health related reactions was significantly reduced (Mean<sub>RTtasty</sub> = 1115, Mean<sub>RTcrunchy</sub> = 996.46, Mean<sub>RTfatty</sub> = 1204.12).

Further, study-4 incorporated an importance measurement task to study-3 design. Participants rated the importance of tastiness, crunchiness, and fattiness of French fries. Prior results were replicated. Critically, the importance of taste-associated attributes was significantly higher in no-health concern condition compared to health concern condition (Tastiness:  $M_{\text{no-healthprime}} = 5.77$  vs.  $M_{\text{healthprime}} = 3.12$ ; Crunchiness:  $M_{\text{no-healthprime}} = 4.10$  vs.  $M_{\text{healthprime}} = 2.34$ ). However, results flipped for health-associated attribute (Fattiness:  $M_{\text{no-healthprime}} = 2.52$  vs.  $M_{\text{healthprime}} = 5.55$ ).

Thus, dominant and conflicting reactions towards an ambivalent object are stored at same location and activating one would make both accessible. Interestingly, situational relevance reduces the importance of non-applicable conflicting thoughts, inhibiting their accessibility to minimize felt ambivalence.

## Data... the 'Hard' & 'Soft' of it: Impact of Embodied States on Attitude Strength

### EXTENDED ABSTRACT

Substantial research finds that *strong* attitudes come to mind faster, persist over time, and, guide behavior. Possessing strong attitudes increases the ease, speed, and, efficiency of decision-making; it is thus functionally beneficial for individuals to hold strong attitudes. Traditionally, it has been held that strong attitudes towards a target are a result of the conscious cognitive process of elaboration, where individuals engage in effortful issue-relevant thinking (Petty & Cacioppo 1981,1986). In our research however, we propose that attitude strength can follow from non-elaborative processes, as a function of certain embodied states. While embodiment has been found to influence one's attitudes towards target objects (e.g., Wells & Petty 1980; Strack, Martin & Stepper 1988), little attention has been paid to how specific embodied states can impact the 'strength' of one's attitude without impacting the attitude itself. In this vein, we find that incidental bodily experiences *that alter one's perceptions of information quality* affect attitude strength and lead one to have strong attitudes towards a target object.

Study 1 embodies the notion of '*hard vs soft*' data – an expression we often use in daily discourse. In first of the three stages, participants seated at their work stations read information about an attitude object with their feet placed on either a plank base or a pillow base. Participants reported their attitudes towards the target object. The second stage consisted of unrelated buffer tasks to create a time delay of 25 minutes. In the last stage, we measured attitude accessibility (measure of attitude strength) using the response latency to access participants' attitudes formed towards the target brand during stage 1. Essentially, the bodily feeling of hardness from the plank served to induce individuals to perceive the information as being 'hard' or dependable – so, one should be more inclined to form a stronger attitude based on such 'hard' information. Alternatively, when the same information is perceived as being 'soft' or fuzzy (from the pillow), one should be less inclined to form a strong attitude. We did *not* find any differences on attitudes towards the target between the plank and the pillow condition ( $M_{\text{pillow}} = 2.68$  Vs  $M_{\text{plank}} = 2.65$ ;  $F(1,155) = 0.028$ ;  $p = .868$ ;  $\eta_p^2 = .000$ ). However, true to our hypothesis, we found that participants in the plank condition had more accessible attitudes, i.e. they were quicker in accessing their attitudes formed towards the target brand in stage 1, when compared to those in the pillow condition ( $M_{\text{pillow}} = 1643.16$  msec Vs  $M_{\text{plank}} = 1391.89$  msec;  $F(1,155) = 4.378$ ;  $p = .038$ ;  $\eta_p^2 = .027$ ). To bolster the validity of our results, we pre-registered a study, identical to study 1, with a similar sample of 150 participants with Uri Simonsohn's AsPredicted (a pre-registration portal recommended by the Association for Psychological Science). We replicated study 1.

Study 2 embodies the notion of 'information converging to the same conclusions' versus 'information diverging to imply different conclusions' about the object. Eight pieces of paper containing information about the object were arranged depending on the condition on a panel board. Information was identical in both conditions. In the 'converging' condition, participants picked the pieces of paper, arranged in eight locations along the borders of the board, and pinned them together at the center of the board. Alternatively, in the 'diverging' condition, participants picked the pieces of paper, arranged in the center of the board, and pinned them separately in eight locations along the borders of the board. All participants then reported attitudes towards the object, followed by the buffer tasks. Finally, we measured attitude accessibility. Essentially, individuals should form stronger attitudes when they perceive the information

as converging as opposed to diverging. We did *not* find any differences on reported attitudes towards the target brand between the two conditions. However, as expected, participants in the converging condition had more accessible (stronger) attitudes, than those in the diverging condition ( $M_{\text{converging}}=1134.63\text{msec}$  Vs  $M_{\text{Diverging}}=1414.64\text{msec}$ ;  $F(1,98)=7.245$ ;  $p=.008$ ;  $\eta_p^2=.070$ ).

In study 3, under the pretext of simulating an exercise scenario in the lab, we made individuals strap on wrist weights on only one hand or on both hands, while they read an advertisement about an object. We found that individuals who read information about the object with weight *only* on one hand (thus leaning towards one side) -perceived the information as clearly favoring one side- and had more accessible attitudes. Alternatively, participants for whom the weight was distributed on both hands equally -perceived the information to be favoring both sides -and had less accessible attitudes. In this latter case, one might not have a strong clear opinion about the object and might actually need additional information before feeling more strongly about the object ( $M_{\text{one-hand}}=1168.78\text{msec}$  Vs  $M_{\text{both-hands}}=1448.71\text{msec}$ ;  $F(1,63)=4.283$ ;  $p=.043$ ;  $\eta_p^2=.065$ ).

In study 4, we find evidence for an *attitude-rehearsal* based mechanism to explain the observed effect of embodied states on attitude accessibility. We theorized that individuals on the plank perceive the arguments as being ‘hard’, dependable (i.e., high in quality), and, will thus rehearse their attitude based on those arguments to a larger extent than individuals on the soft pillow. Repeatedly rehearsing one’s attitude strengthens the object-evaluation association in memory, resulting in increased attitude accessibility (i.e., strength) (Powell & Fazio 1984, Fazio 1995). We conducted a 2(base: hard-plank Vs soft-pillow) x 3(rehearsal: facilitating-rehearsal vs hindering-rehearsal vs control) between-subject design and manipulated the second factor (rehearsal) similar to Kwon and Nayakankuppam 2015, study 6. For participants on the ‘plank’, the control condition was insignificantly different from the facilitating-rehearsal condition ( $M_{\text{faci}}=1099.15\text{msec}$  Vs  $M_{\text{ctrl}}=1103.44\text{msec}$ ;  $F(1,80)=.002$ ;  $p=.962$ ;  $\eta_p^2=.000$ ), but was faster than the hindering-rehearsal condition ( $M_{\text{hind}}=1331.25\text{msec}$  Vs  $M_{\text{ctrl}}=1103.44\text{msec}$ ;  $F(1,80)=3.529$ ;  $p=.064$ ;  $\eta_p^2=.042$ ). This suggests individuals on the plank in the control condition *already engage in rehearsal by themselves*. Alternatively, for participants on the ‘pillow’, the control condition was insignificantly different from the hindering-rehearsal condition ( $M_{\text{hind}}=1362.85\text{msec}$  Vs  $M_{\text{ctrl}}=1691.50\text{msec}$ ;  $F(1,80)=1.499$ ;  $p=.224$ ;  $\eta_p^2=.018$ ), but was slower than the facilitating-rehearsal condition ( $M_{\text{faci}}=1074.73\text{msec}$  Vs  $M_{\text{ctrl}}=1691.50\text{msec}$ ;  $F(1,81)=5.738$ ;  $p=.019$ ;  $\eta_p^2=.066$ ). This suggests individuals on the pillow in the control condition *don’t engage in as much rehearsal by themselves*.

Our work has implications for sensory marketing and can inform businesses to have harder surfaces in their stores. The feeling of hardness can influence consumers’ perceptions of product information and can lead to stronger attitudes. There can be many such manifestations of our work in marketing and sales.

### **Deny the Voice Inside: Are Accessible Attitudes Always Beneficial?**

#### **EXTENDED ABSTRACT**

Decades of attitudes research suggest that accessible preferences put at us ease. Specifically, studies have shown that people with accessible attitudes experienced less stress (e.g., Fazio, Blascovich, and Driscoll 1992). However, we suggest that having accessible preferences is not always beneficial. For example, although having highly accessible clothing preferences may be comforting when deciding what to wear on a casual night out, the same might not be said

for making decisions in normatively stricter contexts such as work. Our research expands upon prior work by examining when and why accessible preferences facilitate coping with decision demands, and when accessible preferences have drawbacks.

Our current understanding of attitude accessibility relies on key assumptions. First, attitudes have been assumed to primarily serve an object-appraisal function (Smith, Bruner, and White 1956). Second, past research has examined the functions of attitude accessibility in contexts in which norms may not be highly salient or strictly enforced. Yet, these assumptions may not hold in other contexts where norms are equally, or sometimes more, useful as a basis for preferences (Riemer et al. 2014). We propose that in contexts when there is high norm focus (Cialdini, Reno, and Kallgren 1990), accessible personal attitudes are less beneficial.

High norm focus prompts adaptation to others’ preferences. In contrast, accessible personal preferences increase private self-awareness rather than awareness of others, and thus, can conflict with fitting in (e.g., Goukens, Dewitte, and Warlop 2009). Therefore, when there is low norm focus, people should feel more at ease when holding highly (vs. not) accessible attitudes. Four experiments tested this prediction using dispositional and situational operationalizations of norm focus.

Study 1 provided initial evidence that having an accessible personal preference is less beneficial in a national culture where there is greater norm focus. 122 Americans and 120 Indians were randomly assigned to rehearse their preferences toward autonomous cars (focal attitude object) or brain transplants (filler object). Then, they rated their anticipated emotions when discussing autonomous cars with friends (positive: confident, prepared, intelligent,  $\alpha = .90$ ; negative: defensive, uptight, tense,  $\alpha = .75$ ). An ANCOVA revealed a marginally significant attitude accessibility  $\times$  country interaction ( $F(1, 237) = 3.29, p = .071$ ). As expected, having more accessible personal attitudes helped Americans cope with an attitude-relevant situation ( $M_{\text{High, US}} = 4.29, M_{\text{Low, US}} = 3.68, p = .012$ ). This was not the case for Indian participants ( $M_s = 5.46$  vs.  $5.46, ns$ ).

The goal of Study 2 was to demonstrate that having accessible preferences can backfire when norm focus was situationally salient. We manipulated norm focus with a validated self-construal prime (independent vs. interdependent; Brewer and Gardner 1996) and used the same attitude accessibility conditions as Study 1 (high: autonomous cars vs. low: brain transplants). 183 US participants were randomly assigned to one of four conditions and rated their anticipated emotions when discussing the focal topic. However, in this study, all subjects were told that their friends held the opposite preference. Thus, we expected that close others who opposed one’s accessible (vs. not) attitudes would only make those in the interdependent condition feel less at ease. An ANCOVA revealed the predicted attitude accessibility  $\times$  self-construal interaction ( $F(1, 178) = 4.66, p = .032$ ). In this context, high (vs. low) attitude accessibility decreased positive emotions for interdependents ( $M_{\text{High}} = 4.23, M_{\text{Low}} = 4.80, p = .017$ ; independent:  $M_s = 4.64$  vs.  $4.50, ns$ ). These results also suggest that having less accessible attitudes can facilitate adapting to norms and be more reassuring.

Study 3 built upon the previous two by using a different operationalization of attitude accessibility (measured) toward familiar attitude objects. 180 adults indicated their preferences toward several snacks (e.g., Cheez-its). Next, participants were randomly assigned to think about what snacks they would bring to a gathering with friends that the group (vs. participants themselves) would enjoy. Again, they rated the anticipated emotions from past studies. Regression analyses revealed the expected interaction ( $\beta = -6.07, se = 2.50, p = .016$ ). When the wishes of others were salient, having

more accessible personal preferences toward snacks decreased positive emotions (group:  $M_{\text{high}} = 5.15$ ,  $M_{\text{low}} = 5.74$ ,  $p = .005$ ; self:  $M_s = 5.07$  vs.  $4.91$ , *ns*).

Study 4 achieved three objectives. First, we explored whether attitude accessibility hurts coping when the salient norm was less relevant. Second, we generalized our findings to a marketing outcome that reflects the reassurance of having accessible attitudes (e.g., willingness-to-pay; Fazio, Powell, and Williams 1989). Third, we examined the mediating role of private self-awareness. Prior work suggests that people differ in the degree to which they rely on internal states to cope with decisions (Lam and Zane 2004). Moreover, private self-awareness has been associated with a greater consciousness of personal preferences (Goukens et al. 2009). Thus, we expected that increased private self-awareness would mediate the relationship between accessible preferences and positive coping outcomes under low norm relevance.

233 undergraduates participated in a 2 (attitude accessibility: high vs. low)  $\times$  2 (norm relevance: high vs. low) between-subjects design. After expressing their attitude toward an apparel item three times (vs. once), participants rated whether the item and others would be good or bad to wear in class (high norm relevance) or in a sports bar (low). Participants then rated their private self-awareness (Govern and Marsch 2001) and willingness-to-pay (WTP) for the focal item. As expected, two ANOVAs revealed that high (vs. low) attitude accessibility only increased participants' private self-awareness and WTP for the focal item when norm relevance was low, not high. Furthermore, moderated-mediation analysis showed that private self-awareness fully mediated WTP when norm relevance was low ( $\beta = .216$ , Boot SE =  $.13$ , 95% CI:  $.02$ ,  $.56$ ), not high (95% CI:  $-.19$ ,  $.13$ ).

In closing, our findings support the notion that normative factors are important when considering the functional value of attitude accessibility. Accessible attitudes may not always function to ease coping – particularly in normative contexts that heighten the importance or difficulty of fitting in with others. In such contexts, having less accessible attitudes can facilitate adaptation to norms and thus are more reassuring.

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# Not Just The Sum of Its Parts: Evaluating Sets and Bundles

Chair: Uma R. Karmarkar, University of California, San Diego, USA

## **Paper #1: Worse is Bad: Asymmetric Inferences on Items and Assortments From Logically Equivalent Comparisons**

Yoel Inbar, University of Toronto Scarborough, Canada  
Ellen R. K. Evers, University of California, Berkeley, USA

## **Paper #2: When the Ends Do Not Justify Paying for the Means: Consumers Prefer Shifting Costs from Means to Goals**

Franklin Shaddy, University of Chicago, USA  
Ayelet Fishbach, University of Chicago, USA

## **Paper #3: How Does the Perceived Value of a Medium of Exchange Depend on its Set of Possible Uses?**

Stephen Spiller, University of California, Los Angeles, USA  
Dan Ariely, Duke University, USA

## **Paper #4: Dissociable Mechanisms for Evaluation Involved in Appraising a Set Versus Choosing From It**

Amitai Shenhav, Brown University, USA  
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### **SESSION OVERVIEW**

We commonly find ourselves evaluating sets of options, such as when browsing retail displays, or purchasing bundled goods. Similarly, when buying gift cards, memberships, and/or vouchers, we consider the individual and joint benefits of the options that they allow us to access. Interestingly, the perceived value of such sets rarely arises from simply summing the value of their components.

Instead, prior findings suggest that the value of a set of options with comparable attributes reflects the average value of the individual items (Gaeth et al. 1991; Brough and Chernev 2011; Chernev and Gal 2010). However, not all options may contribute equally – a preferred target or item that receives initial consideration can have disproportionate influence on a set's net value (Yadav 1994; Shenhav and Buckner 2014). Furthermore, a cohesive relationship between items can create a unique superseding value for them when considered collectively as a set (Evers, Inbar and Zeelenberg 2013.)

The papers in this session examine how the value of individual options can relate to or interact with the value of a set based on inter-item relationships, set meanings and overarching decision goals. To start, Evers and Inbar consider how the values of individual items in a bundle are established in relation to each other. They find that a framing of “Option A is better than Option B” versus “Option B is worse than Option A” impacts not only the individual values of the options, but also the value of the bundle.

Shaddy and Fishbach consider bundles of options that serve distinct roles such as goals (e.g., ordering a gift) and means (e.g., paying for delivery), and find that people prefer shifting costs to goals and away from means. As a result, valuation of items within these bundles can reverse depending on the item's perceived role. Furthermore, consumers see more value in a goal item (e.g. a book), compared to a goal-means bundle (e.g., a book *and* delivery), meaning that they can be willing to pay more for less.

Spiller and Ariely similarly demonstrate ways in which adding options to a set can decrease its perceived value. They consider evaluations for a medium for exchange such as a gift card that can be applied to specific types of goods. They find that a medium for exchange that is designated for use on a single (preferred) good can be seen as more valuable than one that can be used on the preferred good as well as other categories.

Finally, Karmarkar and Shenhav examine the mechanisms involved in evaluating a set as a whole (appraisal) versus evaluating a set as a group of choice options (choice). Consistent with prior findings, they show that a set's appraisal value correlates most significantly with the average value of its component items. This overall set value is represented in neural activity during *both* appraisal and choice tasks. However, choice recruits additional areas of brain activity, possibly reflecting the comparative value of options within the set. Their findings suggest separable task-dependent mechanisms underlying set vs. option evaluations.

## **Worse is Bad: Asymmetric Inferences on Items and Assortments From Logically Equivalent Comparisons**

### **EXTENDED ABSTRACT**

When evaluating products, we usually compare these products to other products in the reference category (see for example, Tversky & Kahneman, 1981). The same relation between products in a bundle or category can usually be framed in two different ways; A is better than B, or B is worse than A. In this project we look at how these two different ways of framing affects quality inferences about the products under consideration as well as other products within the reference-category.

Based on work investigating the “leakage of information” (Sher & McKenzie, 2006), we expect that beyond the actual information in a description, consumers also draw inferences from the speaker's choice of frame. But what information do they infer, and how does this affect the consumer's judgment and choices about the focal products and the rest of the assortment? A simple prediction is that when “toaster A is better than toaster B”, consumers infer that toaster A must be really good. When “toaster B is worse than toaster A” consumers may infer that toaster B is really bad. Alternatively, instead of merely inferring the quality of A and B, consumers may infer different quality for the entire set of toasters. When  $A > B$ , all toasters must be pretty good, when  $B < A$  all toasters must be pretty bad.

In 8 studies, we consistently find an asymmetric pattern of inferences both for the focal products (A and B) as well for the entire assortment. Compared to an assortment where product A is described as being better than product B, consumers who see that B is worse than A infer only slightly lower quality for A, but infer a much lower quality for B. For example, in Study 1 ( $N = 313$ ), participants evaluated toasters in the top-10 toaster list from Consumer Reports. They read in the review that toaster A (JC Penny) is better than toaster B (KitchenAid), or that toaster B is worse than toaster A. Judgements for toaster A were slightly worse in “B is worse than A” ( $M = 2.87$ , on a -5 to +5 scale) as compared to “A is better than B” ( $M = 3.32$ ,  $p = 0.03$ ), but were much more pronounced for toaster B ( $M_{\text{Bworse}} = 0.43$ ,  $M_{\text{Abetter}} = 1.27$ ,  $p < .01$ ). We replicate these findings in Study 2 using different products.

We find similarly asymmetric inferences being drawn about the rest of the assortment. More specifically, between the different kinds of framing, participants do not infer that the quality of the average and top products in the assortment differ in quality, however we find stark differences in inferred quality for products in the lower range of the assortment. For example, in Study 5 ( $N = 400$ ), participants are asked to evaluate engineering teams. They read that their assistant has made a list of the ten teams available and read that either “team A is better than team B” or that “team B is worse than team A. Partici-



pants then judged the quality of Team A, Team B, but also the best, the average and the worst team. We replicate the previous effects with a small difference in judgments of team A ( $M_{\text{better}} = 3.3$ ,  $M_{\text{worse}} = 2.8$ ,  $p < .01$ ) and a larger difference for team B ( $M_{\text{better}} = -0.1$ ,  $M_{\text{worse}} = -1.45$ ,  $p < .001$ ). More importantly, we find a similar pattern of inferences for other objects in the category with no differences in the judgments of the best team ( $M_{\text{ABetter}} = 4.25$  vs  $M_{\text{BWorse}} = 4.27$ ), nor the average team ( $M_{\text{ABetter}} = 1.78$  vs  $M_{\text{BWorse}} = 2.06$ ), but find strong differences in the quality judgments of the worst teams ( $M_{\text{ABetter}} = -0.25$  vs  $M_{\text{BWorse}} = -0.95$ ). We replicate this finding in a different domain in Study 6 ( $N = 400$ ), and using different measures (percentile scores rather than subjective judgments) in Study 7 ( $N = 400$ ).

Beyond mere inferences, we also measure the downstream consequences on choice, both for the focal objects (A and B) as well as the rest of the set. In Studies 1 and 2, where product A and B are both in the top-10, we find that participants are more likely to buy an item ranked 11-25 rather than product B (which is in the top 10) when product B is described as worse than product A (68/156) as compared to when A is described as better than B (32/157),  $p < .001$ . We find similar effects for choice for the non-focal objects in the assortments. For example, in Study 8 ( $N = 400$ ), we give participants the opportunity to buy several unusual flavors of jellybeans. These participants are shown 5 different flavors of jellybeans ranked by average liking. Half of these participants read that "Orange crush" (#2) is judged to be better than "Jewel bubble gum" (#4), the other half of participants read that "Jewel bubble gum" is worse than "Orange crush". Then for each of the 5 flavors, participants can decide to buy a sample for \$0.25, or not buy. As in the quality judgments, we find no differences in the proportion choosing to buy the top ranked jellybeans (#1<sub>Better</sub> = 88%, #1<sub>Worse</sub> = 85%; #2<sub>Better</sub> = 83%, #2<sub>Worse</sub> = 74%), but a more substantial difference in the lower end of the distribution (#4<sub>Better</sub> = 35%, #4<sub>Worse</sub> = 23%; #5<sub>Better</sub> = 45%, #5<sub>Worse</sub> = 22%).

To summarize, we investigate how the framing of products within a category as "A is better than B" vs. "B is worse than A" affects inferences about the focal products (A & B) as well as the rest of the assortment. We find consistent asymmetric inferences such that the framing only weakly affects judgments of the higher end products in the assortment, but strongly affects judgments of the lower end of the range. These inferences affect subsequent choices, such that consumers avoid products in the lower range more when the focal products are described as "B is worse than A" as compared to "A is better than B".

### When the Ends Do Not Justify Paying for the Means: Consumers Prefer Shifting Costs from Means to Goals

#### EXTENDED ABSTRACT

Many consumption episodes conform to a goal-means structure (Etkin and Ratner 2012; Fishbach and Dhar 2005; Pieters, Baumgartner, and Allen 1995). Someone wishing to order a gift (a goal), for example, may also need to pay for shipping (the means). We investigate how the hierarchical configuration of goal systems affects preferences for resource investment in these goal-means "bundles."

Specifically, we propose that consumers are more willing to invest resources in goals than in means. Consequently, within a goal-means bundle, consumers will both pay more for the item perceived to be the goal (vs. the item perceived to be the means) and pay more for only the goal (vs. a means that is bundled with the goal). Consumers will also prefer to pay sooner for goals (vs. means), choose to use marketing promotions to reduce costs associated with means (vs. goals), and are happier when costs associated with means (vs. goals) are eliminated by such promotions.

We explain that this preference persists because in the architecture of goal systems, goals sit atop the hierarchy. Thus, investing resources in goals is perceived as direct investment in goal attainment (i.e., higher in the goal hierarchy), while investing resources in means is perceived as indirect investment (i.e., lower in the goal hierarchy). We argue that people prefer direct investment. Critically, this distinction between direct and indirect resource investment is a novel feature of our account and important because previous research has explored the allocation of resources horizontally (i.e., between various means; Kruglanski et al., 2002), but not vertically (i.e., between means and goals).

In Study 1 we manipulated, for a pair of products, which item was perceived as the goal and which item was perceived as the means. We elicited actual WTP (Vickrey 1961) for both chef's knife and a cutting board. In the *knife* condition, we framed a cutting board as a means for the goal of using a chef's knife; in the *board* condition, we framed a chef's knife as a means for the goal of using a cutting board. In the *knife* condition, participants expressed greater WTP for the chef's knife ( $M = \$17.17$ , 95% C.I. = [\$15.38, \$18.96]) than for the cutting board ( $M = \$14.43$ , 95% C.I. = [\$12.72, \$16.14];  $F(1, 408) = 29.98$ ,  $p < .001$ ). In the *board* condition, however, the pattern reversed. Participants expressed greater WTP for the cutting board ( $M = \$16.81$ , 95% C.I. = [\$14.96, \$18.67]) than for the chef's knife ( $M = \$14.04$ , 95% C.I. = [\$12.24, \$15.83];  $F(1, 408) = 28.15$ ,  $p < .001$ ).

One implication of our theory is that because people are more willing to invest resources in goals than in means, it is possible that they will express greater WTP for only a goal, compared to a means that is bundled with the goal. In Study 2, MBA students submitted bids for either a book autographed by Richard Thaler (i.e., paying for the goal) or for a tote bag in which the same autographed book would be delivered (i.e., paying for a means bundled with the goal). WTP for just the book ( $M = \$23.38$ , 95% C.I. = [\$17.24, \$29.51]) exceeded WTP for the tote bag bundled with the book ( $M = \$12.18$ , 95% C.I. = [\$7.06, \$17.31];  $t(79) = 2.84$ ,  $p = .006$ ).

In Studies 3-4, we presented participants with one of three scenarios, each of which presented a goal-means "bundle." Participants imagined that they needed to either take a prerequisite class (means) before a target class (goal), run a qualifying marathon (means) before running the Boston Marathon (goal), or cook a practice meal (means) before cooking a dinner party meal (goal). When paying for each goal and each means, participants both expressed greater desire to eliminate costs associated with means ( $F(1, 298) = 36.58$ ,  $p < .001$ ) and were happier when costs associated with means were eliminated ( $F(1, 299) = 12.91$ ,  $p < .001$ ).

In Study 5, we presented participants with items that either formed a goal-means bundle (i.e., a tote bag served as a means to acquire beach towels) or would be purchased for two different people and hence, served as unrelated goals. When given the opportunity to delay payment for each (thereby reducing costs through temporal discounting), participants preferred delaying payment for the tote bag only when it was part of a goal-means bundle ( $F(1, 197) = 9.50$ ,  $p = .002$ ).

Finally, in Studies 6-7 we measured nonmonetary forms of resource investment to offer process evidence for our account and eliminate pricing norms as an alternative explanation.

In Study 6 we presented participants with two news articles and manipulated whether the articles maintained a goal-means relationship (i.e., an article about the opioid epidemic served as the means by which participants could achieve the goal of understanding an article about falling life expectancy) or represented separate goals. In the goal-means condition, participants spent more time reading the

article presented as a goal than the article presented as a means ( $F(1, 215) = 3.99, p = .047$ ). This pattern disappeared when both articles were perceived as goals ( $F(1, 215) = 21.99, p < .001$ ).

In Study 7 we predicted that the perception of direct (rather than indirect) investment in goal attainment would mediate the effect. We framed either dieting as a means for achieving the goal of exercising or dieting and exercising as separate goals. In the goal-means condition, participants were willing to spend more time planning their exercise regimen than their diet regimen ( $F(1, 223) = 21.01, p < .001$ ). This pattern disappeared when both were perceived as goals ( $F(1, 223) = 6.19, p = .014$ ). Moreover, this effect was fully mediated by the extent to which participants perceived exercise to be a more direct investment in goal attainment (indirect effect = .168, SE = .09, 95% C.I. = [.030, .373]).

In short, our results suggest that consumers systematically prefer shifting costs from means to goals. Thus, while the ends may justify the means, the ends may not always justify *paying* for the means.

### How Does the Perceived Value of a Medium of Exchange Depend on its Set of Possible Uses?

#### EXTENDED ABSTRACT

A medium of exchange is valuable because it may be exchanged for something else that directly or indirectly provides value. Money, gift cards, concert tickets, and arcade tokens are all media of exchange that are valuable because they eventually enable consumption of something else. The normative value of a medium of exchange is based on the best set of goods and services for which it can be exchanged. Formally, the normative value of a medium of exchange is the difference between the expected utility of the best bundle of goods that can be obtained with that medium and the expected utility of the best bundle of goods that can be obtained without that medium.

Previous work on the value of media of exchange has focused on the medium itself, independent of its uses. One stream of literature has focused on how the numerosness of a currency and its nominal value influence its perceived value: Holding constant real prices and wages, people are sensitive to nominal prices and wages (Fisher 1928/2011; Shafir, Diamond, and Tversky 1997), the presence of an irrelevant medium changes consumer behavior (Hsee et al. 2003; van Osselaer, Alba, and Manchanda 2004), and people spend differently when spending more or less numerous currencies (Raghubir and Srivastava 2002; Wertenbroch, Soman, and Chattopadhyay 2007). A second stream of literature has examined the effect of the form of a medium on spending decisions, showing that the same medium, presented as cash or credit cards, leads to apparent differences in valuation (Soman 2001, 2003; Prelec and Simester 2001).

In contrast, we ask the basic question of how the perceived value of a medium is grounded in its potential uses. We propose the value of a medium of exchange can be affected in non-normative ways by its entire associated set of potential purchases.

We posit this because of the stylized fact that people evaluate sets according to their averages. When evaluating products as sets of attributes (Troutman and Shanteau 1976) and bundles as sets of products (Gaeth et al. 1991; Yadav 1994; Brough and Chernev 2012; Chernev and Gal 2010), people use a weighted average across multiple components to come to a judgment about the composite set (Anderson 1965; Nisbett, Zukier, and Lemley 1981). When evaluating sets of bets, people report higher evaluations of a single highly valued outcome than of the combination of that single highly valued outcome and a second, moderately valued outcome (Shanteau 1974; Lynch 1979).

In each of the evaluative cases above, the focal value individuals attempt to assess is a function of the *sum* of the components of the set. In contrast, the value of a set of potential purchases relevant for a medium of exchange should be a function of the *maximum* of the components of the set, not the sum. Whether this same averaging principle extends to such a “max-set” in addition to “sum-sets” remains an open question. If the averaging principles does extend to medium of exchange’s max-sets, such integration across irrelevant potential uses of a set would imply that adding less-desirable uses could decrease evaluations.

Findings from research on assortments lends suggestive support to this proposal, though whether it applies to the perceived value of media of exchange remains to be tested. The evaluation of a set of products decreases as the number of unacceptable products in the assortment increases (Kahn and Lehmann 1991) and decreasing the number of undesirable products available can increase evaluations when category salience is held constant (Broniarczyk, Hoyer, and McAlister 1998). These effects are particularly pronounced when people make direct evaluations of the set as a whole rather than actively thinking through all the stages of the decision and deriving an evaluation based on the underlying choice (Sood, Rottenstreich, and Brenner 2004).

*Studies 1A–1D.* In our first set of studies, we examine how including a less-attractive option reduces choice of a medium of exchange. Participants (total  $N = 603$ ) were less likely to choose a medium of exchange that could be used on either of two goods than they were to choose a medium of exchange that could only be used on the more-attractive good ( $ps < .01$ ). The magnitude of the effect increased with the difference in value between the more- and less-attractive goods (bigger differences led to bigger effects).

*Studies 2A–2E.* In our second set of studies, we examine perceived value as operationalized via willingness to pay. We also varied the salience of the value of the component goods and the choice between the component goods. Across studies (total  $N = 1300$ ), we again find that media of exchange are valued less when usable on two goods than just the more-attractive good ( $ps < .005$ ). The manipulations of value and choice had no consistent effects but together indicate that choice aversion, nor comparative loss aversion, nor non-consequential reasoning, nor category averaging fully accounts for the overall devaluation.

Using both measures of choice and willingness to pay, we find that adding a less-attractive alternative decreases the perceived value of the medium of exchange. These findings hint that comparing apples and oranges may not be as difficult as idioms lead us to believe; what is difficult is comparing two apples to a dollar that can be exchanged for any one of a nearly countless set of products.

### Dissociable Mechanisms for Evaluation Involved in Appraising a Set Versus Choosing From It.

#### EXTENDED ABSTRACT

People commonly encounter arrays of options that can be as varied as those in a bakery case, a course catalog or a car dealer’s lot. In these situations, there are two possible modes of engaging with such sets: “just browsing” the set (appraisal), versus making a choice from it. These modes intuitively seem to be distinguishable phenomena, but it’s less clear if they represent distinct processes and/or types of value.

Separate lines of research have shown specific mechanisms associated with appraising the value of individual stimuli/goods (Knutson et al., 2007; Plassmann et al., 2007; Lebreton et al., 2009), and with the process of choosing (Levy and Glimcher, 2012; Bartra et

al., 2013; Clithero and Rangel, 2013). However, that work does not establish whether the *overall* set value can be extrapolated from the value(s) of its individual options. It also remains unclear to what degree the mechanisms involved in appraising a set of options overlap those involved in choosing from that set of options.

Here we examine these questions by using behavioral tasks combined with functional magnetic resonance imaging (fMRI). We scanned participants while they were actively directed to appraise (e.g. report their liking for) sets of four items, or choose their preferred item from such sets. Importantly, both tasks required participants to consider the same kind of sets, and the value of each item in the set, but differed in terms of whether they require a *composite* of those values or a *comparison* between them.

For this experiment, a group of 30 individuals first rated their liking for each of a large number of consumer products. Based on these ratings, we constructed individualized four item sets of low-, medium-, and high-value options. We also created mixed-value sets by randomly sampling four products from across the participant's entire value distribution (without replacement). In the main fMRI task, participants were shown one of these sets on each trial, and were asked to either make a Like (e.g. appraisal) decision by rating their value for the set as a whole, or make a Choose decision, by indicating which of the items they preferred most. Each set was seen only once in this part of the experiment, but after exiting the scanner, participants engaged in a counterbalanced version of the task, so that we had both appraisal and choice ratings for all of the sets.

The first question was how the appraisal value of the set related to the individual option values. Preference for the set could be driven by the value of the best item in the set, the average value of items in the set, or some combination thereof. When regressing set liking on both of these variables, we found that it was most strongly associated with the average option value ( $\beta=0.59$ ,  $t(26.0)=10.1$ ,  $p<0.001$ ). The value of the best item in the set exerted a non-significant positive influence on set liking ( $t(25.6)=1.7$ ,  $p=0.10$ ).

This finding is convergent with prior studies on bundle values (Gaeth et al. 1990; Brough and Chernev 2011; Chernev and Gal 2010), but divergent from work involving choices from two-item sets (Shenhav and Buckner, 2014). This raises the issue of whether participants recognized that the set represented a grouping of possible choice options. Thus in a separate behavioral experiment, participants (N=300) were randomly assigned to one of three conditions related to evaluating a set of four bags of snack chips. One condition asked participants: Assuming that you are planning to buy one of these bags, how much do you like this display, or set of options, as a whole? The second condition asked "How much do you like this display, or set of options, as a whole?" The final condition replicated the framing of the fMRI task; participants were first informed that they might be asked to appraise the set or choose from it, and then were given the appraisal task. After rating the set, participants rated the individual snack bag options. There were no differences in liking ratings for the set ( $F(2,297)=.306$ ,  $p=.736$ ) across these conditions, and across conditions, each person's liking for the set was once again significantly predicted by the average of their ratings for the four snack bags separately ( $\beta=.589$ ,  $p<0.001$ ).

To study neural activity associated with set value during the Like and Choose tasks, the following analyses use a set of *a priori* regions of interest related to set preference and choice from functional results in Shenhav and Buckner, 2014. For completeness, we also performed a whole-brain analysis (thus avoiding assumptions about the specific areas involved) and observe similar results and distinctions to those reported here.

In line with prior work, neural activity in a Dorsal Value Network (DVN; ventral striatum, posterior cingulate cortex, and pregenual anterior cingulate cortex) increased parametrically with ratings of set liking during the Like task ( $\beta=0.09$ ,  $t(25.6)=3.3$ ,  $p=0.003$ ). Importantly, activity in the DVN also increased parametrically with ratings of set liking when participants were evaluating that set for the Choose task ( $\beta=0.08$ ,  $t(26.5)=2.5$ ,  $p=0.020$ ). Thus the set's appraisal value, best related to the average liking for each of the set options, was similarly represented in the brain regardless of task goal.

In contrast, activity in a differing set of brain regions that could be considered a Ventral Value Network (VVN, medial orbitofrontal cortex, retrosplenial cortex, and left middle frontal gyrus), was substantially greater for Choose relative to Like trials ( $\beta=0.36$ ,  $t(27.2)=7.1$ ,  $p<0.001$ ). Indeed we observed a network-by-task interaction demonstrating that the relative difference in activity for Choose versus Like was significantly greater in the VVN ( $F(1,65.7)=25.0$ ,  $p<0.001$ ).

Our findings indicate that when we encounter sets of items, we encode their value as the average value of the items that compose the set. In addition, the results suggest that there are differentiable task-specific mechanisms involved in estimating value when we are appraising a set of possible options versus considering and comparing the individual value of items within a set.

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# Motivation to Save: New Insights into the Psychology of Saving Goals

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## Paper #1: The Role of Expectations about Changes in Wealth in Discounting Decisions

Shweta R. Desiraju, University of Chicago, USA

Oleg Urminsky, University of Chicago, USA

Abigail Sussman, University of Chicago, USA

## Paper #2: When Perceiving Oneself as a Spender Increases Saving

Emily Garbinsky, University of Notre Dame, USA

Nicole Mead, University of Melbourne, Australia

## Paper #3: When Implementation Intentions Backfire: Illusion of Goal Progress in Financial Decisions

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Gergana Y. Nenkov, Boston College, USA

Min Zhao, Boston College, USA

## Paper #4: Saving for Experiences versus Material Goods

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### SESSION OVERVIEW

Saving requires consumers to forego spending in the present to increase available resources for future use. It can reduce consumers' reliance on credit to fund consumption and may reduce financial stress. Despite the benefits of saving, consumers worldwide do not save enough. This symposium investigates consumers' psychological barriers toward saving, as well as steps for overcoming them, offering novel insights into the psychological and situational factors underlying saving motivation. Four papers shed light on the broad question of how current and future financial circumstances (actual and perceived) affect motivation to save. We discuss the influences of consumers' beliefs regarding future wealth, present financial identity, interaction of skills and mindset, and characteristics of their saving goals.

First, Desiraju, Urminsky, and Sussman examine how consumers' optimistic beliefs of future wealth may hamper their motivation to save. Consumers who expect increased future wealth demonstrate less patience and higher discount rates-- suggesting that consumers who anticipate a positive boost to their future resources may be less likely to save. They find the belief in a more favorable financial future is widespread-- most consumers believe they will be better off in the future, and such optimism may weaken saving rates on a large scale.

While perceptions of future financial resources impact current savings, Garbinsky and Mead explore how saving decisions are influenced by current financial behavior. They find that consumers who consider instances of spending money express greater saving intentions, whereas, considering instances of saving does not increase saving intentions. Consistent with the first paper, Garbinsky and Mead find a positive bias in financial perceptions: As American consumers are more likely to identify as savers, this mindset may prevalently dampen saving motivation.

In addition to perceptions of future and current financial circumstances, Salisbury, Nenkov, and Zhao evaluate how consumer mindset in goal-pursuit influences savings decisions. They find that consumers with low savings knowledge save less in an implementation mindset (focusing on the steps to achieve a goal), rather than a

deliberative mindset (focusing on whether one should pursue a goal). While implementation mindsets have long been hailed as a positive intervention to increase goal directed behavior, they find that such a mindset creates illusionary progress for low-knowledge consumers.

While the first three papers speak to cognitive evaluations of oneself and one's future that help and hinder saving, our final paper considers characteristics of savings goals. Donnelly, Ksendzova, and Norton find that consideration of future experiential (vs. material) purchases better motivates consumers to save. Underlying this effect is that experiential purchases better allow for anticipatory pleasure in the process of saving.

Together, the papers in this symposium identify important and previously unexamined influences on saving decisions (papers 1, 2 and 4) and uncover paradoxes in saving rates (papers 2 and 3). We present a cohesive view of how, why, and when consumers choose to spend in the present or save for future.

## The Role of Expectations about Changes in Wealth in Discounting Decisions

### EXTENDED ABSTRACT

When making intertemporal choices, people persistently demonstrate present bias, choosing "smaller sooner" options instead of "larger later" ones (O'Donoghue and Rabin, 1999). This pattern is particularly strong when individuals are making choices about money (Carvalho et al., 2016). Furthermore, these patterns (favoring having money to spend in the present over money for the future) in intertemporal choices about money can create obstacles to saving.

Existing research on intertemporal choices about money primarily focuses on how current wealth affects discounting. For example, people display less present bias on discounting tasks right after receiving a paycheck (Carvalho et al., 2016). Additionally, studies suggest that liquidity constraints influence discounting with some literature positing that present bias is observed in lab settings because people take part in experiments when they have an urgent need for money.

While research on resource slack and discounting suggests that individuals may consider beliefs about the future when making intertemporal choices (Zauberman and Lynch, 2005), the question of whether people are sensitive to changes in their wealth remains largely unanswered. We predict that expectations about changes in wealth factor into individuals' smaller sooner versus larger later decisions, representative of propensities to spend versus save. In particular, we hypothesize that those who anticipate having more money in the future *relative to the present* will choose fewer delayed outcomes when making intertemporal choices, demonstrating less propensity to save, than those who anticipate having less money in the future relative to the present. We anticipate this pattern to remain after accounting for current wealth.

In study 1 (N=363), we tested whether beliefs about changes in personal wealth related to individuals' discount factors, both spontaneously and when reminded to consider change. We randomly assigned participants to either answer questions about changes in their available wealth (money in their checking or savings accounts) or not, prior to making intertemporal choices. Those who were reminded to consider changes in personal wealth were asked to report their available wealth currently and the available wealth

they expected to have in six months before making intertemporal choices while those in the non-reminder condition completed those questions after making intertemporal choices. Instead of answering questions about wealth, the non-reminder group was asked to report how much furniture they had at home at different points in time. Then, all participants completed a discounting task. Those who were reminded to consider changes in wealth chose fewer delayed options in the discounting task than those who were not reminded ( $F(1,361)=8.009, p=0.004$ ). This pattern of results reflects individuals' beliefs about their future wealth: the majority of participants (83.47%) expected a positive change in their available wealth. As expected, those who anticipated a greater increase in wealth in the future were less patient (chose fewer delayed options and therefore had a lower discount factor) than those who expected a smaller one ( $F(1,361)=25.6, p<.001$ ). This relationship held when controlling for current income ( $F(2,351)=17.3, p<.001$ ). Furthermore, the impatience of participants who were reminded to consider changes in wealth was more sensitive to believed changes than those who were not reminded ( $F(3,359)=10.8, p=0.027$ ). However, the relationship between believed change and impatience was significant in both conditions (reminder:  $F(2,167)=6.59, p=0.01$  non-reminder:  $F(2,181)=10.8, p<.001$ ).

In study 2 ( $n=674$ ), we investigated whether reminding people to consider changes in personal wealth would affect the relationship between beliefs about income change and discounting. Participants either did a task reminding them of reasons their household income could increase or reasons why it could decrease. Those reminded of increases were asked to think of reasons such as receiving a promotion or experiencing a boost in the economy, while those reminded of decreases were asked to think about reasons such as losing a job or experiencing a downturn in the economy. Next, participants reported their available wealth currently and in 6 months. Then, all participants completed the discounting task used in study 1. People appeared to be spontaneously taking into account reasons why their wealth might increase or decrease; preferences for saving did not differ according to the type of reminder ( $F(2,671)=27.95, p=0.9333$ ), and the manipulation was not effective in changing expected beliefs about the future. As in study 1, most people (74.77%) expected a positive change in their personal wealth, irrespective of condition. However, those who anticipated a greater increase in wealth were less patient than those who expected a smaller increase ( $F(2,671)=27.95, p<.001$ ).

A study in progress seeks to explore whether individuals' expectations for the future match their actual changes in wealth. In this study, participants' predictions will be compared to their actual changes in wealth over a three-month period.

Overall, these studies suggest that people's expectations about changes in wealth, rather than current wealth alone, factor into their intertemporal choices. In two studies, those who believed they would have more in the future relative to the present were less patient, demonstrating that they may be less willing to put off spending than those who believed they would have less. Additionally, beliefs about changes in wealth were primarily positive, which may suggest that present bias observed in lab experiments may be due to participants' optimism about future finances rather than liquidity constraints. Broadly, these findings suggest that individuals' optimistic beliefs about changes in their personal wealth may be particularly persistent, hampering saving.

## When Perceiving Oneself as a Spender Increases Saving

### EXTENDED ABSTRACT

According to industry experts, half of Americans spend more than they earn without realizing it (Kavoussi 2012). Three quarters of Americans do not save enough money to cover an unexpected expense (Johnson 2013), and perhaps most troubling, the persistence of these overspending tendencies and failures to save for the future are expected to prevent approximately half of Americans from adequately supporting themselves in retirement (Bernheim et al. 2000).

Although statistics such as these suggest that Americans have difficulty saving money, it is not clear whether Americans perceive themselves the same way. We asked 202 MTurkers to categorize themselves as a saver, a spender, both, or neither. In contrast to what one may predict after consulting the above statistics, the results revealed that 77% of participants perceived themselves as a saver only or both a saver and spender. How is it that Americans can perceive themselves this way, yet fall so short when it comes to adequate saving?

We posit that when making savings decisions, a saving salience mindset is activated, such that consumers can more easily recall instances in the past where they saved instead of spent. In this paper, we focus on shifting consumers' mindset to one of spending salience, in the hope that causing consumers to recall past instances where they spent instead of saved, will encourage greater saving in the present moment.

### Study 1: Effect of Spending Salience Mindset on Saving

Three hundred and one participants from Mturk completed this study for 50 cents. They were randomly assigned to one of three conditions: 1) spender salience mindset, 2) saver salience mindset, or 3) hanging baseline. To activate the mindsets, we modified a procedure that instills self-perceptions through cuing everyday behaviors for the savings domain (Cornelissen et al. 2008). Those in the spender and saver conditions first answered five questions using the same scale (1 = once every 18 months or less (i.e., less frequent engagement); 7 = once a month or more (i.e., more frequent engagement), while those in the baseline condition did not answer any questions before proceeding to the savings dependent variable.

In the *spender* salience condition, participants first answered the following five questions. [Note: we highlight important differences between the two conditions using italics; participants did not view the italics.] How often do you...1) Choose to eat at a *more expensive* restaurant, instead of a cheaper one? 2) Buy something at *full price*, instead of waiting for it to go on sale? 3) *Buy something you want*, instead of forgoing the purchase? 4) Purchase a *more expensive* brand, instead of a cheaper one (e.g., store brand)? 5) *Go out to eat*, instead of cook at home?

In the *saver* salience condition, the questions directly mirrored those of the spender condition: How often do you...1) Choose to eat at a *cheaper* restaurant, instead of a more expensive one? 2) Wait for something to go *on sale* before buying it at full price? 3) *Forgo a purchase* you want? 4) Purchase a *less expensive* brand (e.g., store brand)? 5) *Cook at home*, instead of go out to eat? We selected these five behaviors based on pre-testing.

To assess savings intent, participants indicated their monthly income, and of this amount, how much they would be willing to put in their savings account at this moment. Consistent with prior work (e.g., Garbinsky, Klesse, and Aaker 2014), the main dependent variable was the amount of money participants indicated they would save divided by monthly income. Seventeen participants were excluded from the analysis because they either failed the attention

check, indicated they would save more money than they make, or indicated an unrealistic monthly income (e.g., \$2); this left 284 participants in the final sample.

Results revealed a main effect of mindset,  $F(2,281) = 3.88$ ,  $p = .022$ , such that those in the spender salience mindset were willing to save a significantly greater percentage of their monthly income ( $M = 30.6\%$ ) than those in the saver salience mindset ( $M = 21.9\%$ ),  $t(281) = 2.74$ ,  $p = .007$ , and a marginally greater percentage of their monthly income than those in the baseline condition ( $M = 24.8\%$ ),  $t(281) = 1.83$ ,  $p = .068$ . As expected, those in the saver salience mindset and baseline condition did not significantly differ regarding the percentage of monthly income they were willing to save,  $t(281) = .93$ ,  $p = .35$ .

## Study 2: Manipulating Mindset in the Field

One hundred and fifty-eight participants completed this study for \$1 at an outdoor concert in downtown South Bend, Indiana. They were randomly assigned to the spender or saver salience mindset conditions, using the same manipulation as Study 1. To establish the robustness of the savings effect, we relied on a different measure to assess savings intent; participants allocated a \$1,000 windfall across five categories: 1) Use it to buy something nice for someone special, 2) Invest it in a retirement fund, 3) Plan a fun and extravagant occasion, 4) Put it into a checking account, and 5) Other. Consistent with prior work, the main dependent variable was the amount of money participants indicated they would invest in a retirement fund (Her-shfield et al. 2011).

As expected, those in the spender salience mindset were willing to allocate a significantly greater portion of their \$1,000 windfall ( $M = \$192.41$ ,  $SD = 275.16$ ) than those in the saver salience mindset ( $M = \$114.68$ ,  $SD = 217.17$ ),  $t(156) = 1.97$ ,  $p = .051$ . There were no significant differences in the amount of money participants were willing to allocate across the other four categories, all  $ps > .3$ .

Two studies suggest that prompting people to see themselves as spenders rather than as savers can facilitate saving in the present moment. They also suggest that Americans may have a tendency to see themselves as savers, and that such perceptions may thwart actual savings. By understanding and changing self-perceptions of saving and spending, the current work contributes novel insight into the psychological barriers that limit saving and present new opportunities for improving financial decision-making.

## When Implementation Intentions Backfire: Illusion of Goal Progress in Financial Decisions

### EXTENDED ABSTRACT

A vast amount of research on an implemental vs. a deliberative mindset has demonstrated across various domains that an implemental mindset (which focuses on the steps to achieve a goal) leads to more successful goal attainment than a deliberative mindset (which focuses on whether one should pursue the goal; Gollwitzer 1999). However, related literature has also shown that an implemental mindset can be associated with optimistic inferences, such as illusory control over the extant environment (Gollwitzer and Kinney 1989) or illusion of higher personal capability (Taylor and Gollwitzer 1995).

How could these positive illusions triggered by an implemental mindset impact consumers' goal pursuit? Research on licensing has indicated that a prior choice that boosts a positive self-concept can subsequently license the choice of a more self-indulgent or less moral option (Effron and Monin 2010; Khan and Dhar 2006). Further, recent work on the effect of past good behavior has shown that while

abstract thinking highlights the underlying reasons for the good behavior and leads to consistent goal pursuit, concrete thinking focuses attention on the past good behavior itself and leads to a licensing effect (Conway and Peetz 2012). At the same time, prior research has suggested that people's knowledge of an event influences their thinking-- such that those with greater knowledge or experience are more able to integrate details at an abstract level, whereas those with lower knowledge focus on the concrete specifics (Vallacher and Wegner 1987). Drawing on these findings, we predict that an implemental mindset can backfire for low-knowledge consumers, reducing their goal pursuit because of the illusion of goal progress of the preceding task.

To test our hypothesis, we conducted three studies involving consumers' financial decisions. In all studies, participants first completed a priming task that induced different mindsets or goals. Following classic mindset manipulations (Gollwitzer 1999), in the implemental mindset condition, participants were asked to choose a specific goal they have decided to pursue and write down 5 steps and the details involved in implementing these steps. In the deliberative mindset condition, they were asked to indicate a specific goal they were deciding whether to pursue and write down 5 positive and 5 negative consequences of this goal. After the priming task, participants were shown a financial goal scenario and asked to indicate their decisions including saving (Study 1) and credit card debt repayment (Studies 2 and 3). Knowledge in the specific domains was measured at the end of each study.

In Study 1, student participants ( $N = 193$ ) were asked to consider the goal of saving money and were assigned to either the implemental or deliberative condition in the priming task. Afterwards they read about a special savings program from their local bank to encourage college students to save money that offered varying interest rates based on the amount of saving in the account. Participants were then told that they have just received a paycheck of \$500 and needed to decide how much to deposit in the savings account vs. to spend on other things. Consistent with our predictions, we found that an implemental mindset backfired for low-knowledge participants and led to a lower amount of saving compared with those in the deliberative mindset condition ( $M_{\text{implemental}} = \$302.37$  vs.  $M_{\text{deliberative}} = \$341.50$ ,  $t = 2.165$ ,  $p < .04$ ).

In Studies 2 and 3, we switched to another form of saving-- paying off credit card debt. In these studies, we also measured participants' perceived progress after the priming task. In Study 2, ( $N = 137$ ) participants from an online panel were randomly assigned to an implemental or a deliberative mindset condition and reported their perceived progress of the personal goal they have just considered. Subsequently, participants saw a typical credit card statement with total balance (\$1,937.28), APR (14%) and Minimum Required Amount (\$38.74), and were asked to indicate how much money they wished to allocate toward repaying this credit statement. The results confirmed our hypotheses: participants in the implemental mindset condition perceived greater progress on the personal goal they had considered in the priming task, compared with the deliberative condition ( $M_{\text{implemental}} = 3.00$  vs.  $M_{\text{deliberative}} = 2.15$ ,  $t = 5.33$ ,  $p < .001$ ). Further, we found a goal progress illusion bias for participants with low financial knowledge: Implemental mindset (and the greater perceived progress of the preceding personal goal) led to a higher proportion of participants paying the minimum required amount, which represented a lower payment commitment ( $M_{\text{implemental}} = 21.4\%$  vs.  $M_{\text{deliberative}} = 12.9\%$ ,  $z = 2.00$ ,  $p < .05$ ).

In Study 3, ( $N=128$ ) which used the same credit card debt repayment scenario as Study 2, we compared the effect of an implemental mindset induced by a goal that is consistent with paying off debt



(e.g., a repayment goal) versus a goal that conflicts with it (e.g., a spending goal). The results showed a similar licensing effect for low knowledge participants. Participants in the repayment goal condition perceived greater progress toward their financial goal compared with those in the spending condition ( $M_{\text{repayment}} = 3.45$  vs.  $M_{\text{spending}} = 2.89$ ,  $t = 3.64$ ,  $p < .001$ ). As a result, those thinking about implementing the consistent repayment goal indicated a significantly lower subsequent payment amount in the main task than those thinking about an inconsistent goal ( $M_{\text{repayment}} = \$242.28$  vs.  $M_{\text{spending}} = \$601.60$ ,  $t = -2.46$ ,  $p < .02$ ).

Taken together, these studies suggest that an implemental mindset can backfire and reduce goal pursuit for low-knowledge consumers because of illusory goal progress. These novel findings identify a new type of progress bias (see Campell and Warren 2015) and contribute to literature on goal attainment implementation intention, and the licensing effect. They also caution marketers and policy makers when applying implemental mindset in practice.

### Saving for Experiences versus Material Goods

#### EXTENDED ABSTRACT

Saving money involves a trade-off between present and total utility: consumers forego spending in the present to increase available resources for future use. This practice reduces consumers' reliance on credit to fund consumption, as well as their financial stress (Ksendzova, Donnelly, and Howell 2017; Xiao, Sorhaindo, and Garman 2006). Despite these benefits, household savings rates are relatively low worldwide (OECD 2014).

Thus, researchers and practitioners face an important question of how to encourage consumers to save. The answer offers value for marketers, as saving is multiply determined: while recognizing that saving money is important for its mere availability (e.g., to spend in emergencies), consumers also acknowledge more hedonic motivations to save, such as future discretionary purchases (Canova, Rattazzi, and Webley 2005; Xiao and Noring 1994).

In the current research, we explore what characteristics of discretionary purchases can motivate saving behavior. We compare consumers' interest in saving money for material and experiential purchases. On one hand, the time-sensitive nature of experiences (vs. material goods) more often leads consumers to take on debt in order not to delay or forego the purchase (Tully and Sharma, 2018). On the other hand, consumers find more pleasure in waiting for experiential (vs. material) purchases (Kumar, Gilovich, and Killingsworth 2014) and see experiential purchases as less comparable (Carter and Gilovich 2010). Thus, they may save for the experience they wish to afford in the future instead of spending money on an affordable substitute in the present.

To answer this question, we examine the influence of experiential versus material consumption on consumers' interest in saving, as expressed in scenario-based studies and revealed in a field experiment.

In Experiment 1 ( $N=261$ ), we prompted all participants to name one desired but currently unaffordable purchase that would increase their happiness. We randomly assigned participants to prompts specifying this aspirational purchase as experiential or material (i.e., "an event or series of events that you personally encounter or live through" or "a tangible object that you obtain and keep in your possession"). Subsequently, participants decided how much they would allocate to savings from a \$100 windfall. Even though purchases did not significantly differ in desirability and estimated cost (med. \$1200) by condition, participants chose a greater saving allocation after considering an experiential purchase than a material one (med.

\$60 vs. \$50;  $t=2.17$ ,  $p=.031$ ). Further, purchase type predicted saving allocation beyond the effects of annual income and general saving tendency (ratio of money available in one's savings vs. checking accounts).

In Experiment 2 ( $N=18,542$ ), we partnered with a financial service company to encourage their customers to create savings goals, using either experiential or material-purchase motivation. Prior to New Year's Eve (a popular time for goal-setting; Dai, Milkman and Riis 2014), customers received an e-mail encouraging them to create a savings goal for the new year, with an emphasis on later spending the saved money on desired but costly purchases that improve happiness. We randomly assigned customers to a message emphasizing experiential or material consumption (textually and graphically). This message concluded with a link to the service's website, urging customers to create a new year's goal. We treated a customer's clicking on the link as a binary proxy for interest in saving. We found that the encouragement of saving for experiences (compared to material goods) increased click likelihood (1.2% vs. 0.9%;  $B=.31$ ,  $p=.036$ ).

Next, we explored the explanations for why experiential consumption may better motivate saving. In Experiment 3 ( $N=242$ ), we again asked participants to name a single aspirational purchase (experience vs. material good; similar in desirability and cost [med. \$2,000]). As in Experiment 1, participants chose a greater saving allocation when considering a desired but unaffordable experience, compared to a material good (med. \$75/100 vs. \$51/100;  $t=2.00$ ,  $p=.047$ ). Further, this relationship between purchase type and intended savings was not explained by importance of purchase timing or likelihood of sharing one's purchase with others. Instead, this exploration provided evidence for mediation via pre-purchase savoring - the pleasant overlap consumers perceived between anticipation and consumption (i.e., extent to which waiting feels like already experiencing/owning, weighed by enjoyment).

In sum, we find that consumers feel more encouraged to save for future experiential (vs. material) consumption, reflected in either a single aspirational good (Experiments 1 and 3) or a broader notion of discretionary spending for happiness (Experiment 2). Relative to material goods, experiential purchases connote greater pre-purchase savoring, which helps explain why they foster a stronger interest in saving. With consumers' personal savings rate on the decline, our research suggests that saving may increase when closer coupled with consumption. If the saving process better allows consumers to affectively "preview" purchases they can enjoy in the future, they may allocate more money toward saving in the present.

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# Price versus Value: New Insights on Consumer Willingness-to-Pay

Chair: Sharlene He, Concordia University, Canada

## Paper #1: Visualizing Price Magnitude: How Slider Scales Change Willingness-to-Pay

Manoj Thomas, Cornell University, USA  
Ellie Kyung, Dartmouth College, USA

## Paper #2: Only “\$20 More”: Additional Price Framing Increases the Choice of Upgraded Products and Services

Thomas Allard, Nanyang Technological University, Singapore  
David J. Hardisty, University of British Columbia, Canada  
Dale Griffin, University of British Columbia, Canada

## Paper #3: Hindsight Value: Failed Transactions Inform Willingness to Pay

Masha Ksendzova, Boston University, USA  
Carey K. Morewedge, Boston University, USA  
Dan Ariely, Duke University, USA

## Paper #4: Willingness to Pay: A Contextualized Method of Valuation

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Derek D. Rucker, Northwestern University, USA

### SESSION OVERVIEW

Understanding consumers' valuation of goods and services is an integral part of marketing and pricing strategy. It is therefore critical for researchers and practitioners to gain insight into how value is constructed and what contextual factors affect its construction. The four papers in this session offer new perspectives on this topic: they examine novel contextual influences on consumers' valuation of goods and present a new contextualized methodology to measure willingness-to-pay (WTP). Together, these papers offer convergent support that comparative processes underlie how consumers construct value.

The first two papers examine how marketers can influence context with different strategies to elicit WTP and to present prices. **Thomas and Kyung** assess two methods that online firms commonly use to elicit WTP from consumers: textboxes versus slider scales. The authors find response format is an important contextual factor that affects WTP—slider scales systematically elicit more extreme WTP responses. This phenomenon is due to consumers' representation of magnitudes on a mental number line. A slider scale makes both endpoints of the line salient, which influences accessible comparisons and thus consumers' judgment of magnitude. **Allard, Hardisty, and Griffin** examine the impact of two different pricing strategies for premium options: additional price framing (e.g., “for \$20 more”) and inclusive price framing (e.g., “for \$60 total”). The authors find that such contextual framing alters choice—additional price framing significantly increases the choice share of the premium option, implying a shift in consumers' valuation. The additional price framing strategy focuses consumers' attention on the price difference compared to the standard option, which increases the perceived value of the premium option.

The third paper turns to examine failure of a transaction as a contextual influence on consumers' WTP. Specifically, **Ksendzova, Morewedge, and Ariely** show that, when consumers fail to acquire a product, their WTP for the product increases substantially. The authors demonstrate that WTP increases only for the same product and not for other products and suggest that, in hindsight, consumers reconsider and update their valuation of the good.

The first three papers suggest that consumers' valuation is highly constructive in nature. The fourth paper in this session (**He, Anderson, and Rucker**) formalizes a conceptualization of WTP as a metric constructed based on the consumer, comparison, and situation. This work introduces a new methodology to measure WTP that captures these factors. In accounting for comparisons underlying the construction of WTP, this methodology can specify two pathways, direct and indirect, through which situational factors affect valuation.

Collectively, these papers advance the field's conceptual understanding of how consumers construct value and offer practical insights for pricing. They also highlight the importance of comparative processes in value construction and introduce a new methodological approach. This session is expected to generate significant interest among researchers investigating WTP, pricing, and related areas.

## Visualizing Price Magnitude: How Slider Scales Change Willingness-to-Pay

### EXTENDED ABSTRACT

Many organizations allow customers to decide how much to pay for a product or a service on technology interfaces. Online retailers such as eBay allow customers to bid on the items. Priceline allows customers to name their own prices for hotels rooms. Charitable organizations allow donors to enter a donation amount of their choice. In many cases, the response format is an open-ended textbox where people have to come up with a price in their mind and enter it. With the proliferation of mobile transactions, some organizations now use slider scales instead of textboxes due to their perceived ease-of-use. This has led to their widespread use on mobile interfaces, web sites, and even by academic researchers.

Interchangeable use of textboxes and slider scales is based on the assumption that response formats do not change people's responses because their valuations are stable. While several studies suggest that this assumption might not be valid (Champ and Bishop 2006; Klien, Thomas, and Sutter 2007), surprisingly, none of the extant studies have examined whether valuations and bids elicited using a textbox would be any different from those elicited through a slider scale. This research focuses on the following questions: Do consumers respond in systematic differently ways when presented with textbox versus slider scale response formats? If so, then what is the psychological mechanism underlying this systematic difference?

Across seven experiments, we show that relative to a textbox, a slider scale elicits more extreme responses in willingness-to-pay contexts. In experiment 1a, lab participants bid on a real Japanese thermal mug and were given the retail price (\$24) and range of possible bids. They indicated their bid price using either a slider scale or textbox. Those using slider scales bid higher (\$11.40) than those using textboxes (\$8.01,  $F(1, 125) = 37.05, p < .01$ ). Experiment 1b replicates this effect in a donation context where all participants were unexpectedly given \$1 after being asked to complete a 51-cent study. The study was run on Veteran's Day, and participants using a slider scale donated significantly more of their \$1 ( $M = 37.8$  cents) than those in the textbox condition ( $M = 24.0$  cents,  $F(1, 202) = 307.29, p < .01$ ) to a charity for veterans (Intrepid Fallen Heroes Fund). Demonstrating the robustness of the effect, the following two studies use repeated measures designs in a more familiar bidding context. In experiment 2, participants were shown three products in an ascending numeric format where bids were made that were higher than the

starting point (e.g. e-Bay) and those using a slider scale (\$291) made higher bids than those using a textbox (\$280,  $F(1, 393) = 5.61, p = .02$ ). Experiment 3 examined a descending numeric format (e.g. Priceline) where the bids were made that were lower than the starting point—they were asked to indicate their bids for six items using a textbox or using a slider with an anchor on either the right or left side of the scale. Participants' average bids in both the left-to-right-slider condition (\$130 vs. \$142;  $t(1504) = -3.25, p < .01$ ) and right-to-left-slider condition (\$135 vs. \$142;  $t(1504) = -1.84, p = .07$ ) were lower than bids in the textbox condition. Thus bids are not always higher on slider scales, but more extreme depending on the type of bid.

We offer an explanation for this effect based on the numerical cognition literature in cognitive psychology (Dehaene 2001, 2003; Dehaene and Changeux 1993; Parducci 1965, 1995) and consumer psychology (Adaval 2013; Bagchi and Davis 2016; Cheng and Monroe 2013; Grewal and Marmorstein 1994; Lembrechts and Pandelaere 2013; Monroe 1973; Thomas and Morwitz 2009). We propose that the effect of response formats on valuations is caused by a change in the boundaries of mental categories—low, medium, and high—that people use to judge magnitudes. When people use a textbox to submit their bids, the category boundaries are assimilated towards the starting bid on their mental number line. With a textbox, only the starting point is salient. In contrast, when people use a slider scale to submit their bid, the category boundaries are influenced by both end-points of the scale, causing people to recalibrate their mental number line more linearly between both the starting and ending points. Therefore, the boundaries of the mental categories used to judge magnitudes can be quite different depending on whether the responses are elicited using textbox or slider scale.

We demonstrate this underlying process in several ways. (*For brevity, the remaining results are summarized in the table below.*) First, we show that the slider scale effect is stronger for extreme categories farther away from the starting point. In experiment 4, participants were asked to submit what they considered low, medium, and high bids for a product using either a textbox, slider scale, or select a bid amount from a horizontal list of bid amounts. The effect of response format increased as distance from the starting point increased, and the effect of selecting a bid amount from a horizontal list was the same as using a slider scale, providing further evidence that visualization of a number line, rather than response momentum, is important for the effect. In experiment 5, we show that employing a slider scale that is formulated to have more convex values that increase more slowly towards the starting point results in values similar to a textbox. In experiment 6, we show that increasing the range of possible input values influences only participants responding on slider scales but not those using textboxes. Together, the results of this research demonstrate a robust new effect in the highly managerially relevant domain of response format while offering new insights in theory development.

### Only “\$20 More”: Additional Price Framing Increases the Choice of Upgraded Products and Services

#### EXTENDED ABSTRACT

Consumers must often decide between standard and upgraded versions of products and services, such as indirect vs. direct flights or smaller vs. larger capacity hard drives. The price of the superior quality option can be framed using Additional Price Framing (APF) (e.g., “for \$20 more”) or Inclusive Price Framing (IPF) (e.g., “for \$60 total”). APF is often used in retail settings but, surprisingly, has not been studied in academic literature. (Note that APF is conceptually and practically distinct from price partitioning, e.g. “\$10.80

including tax” vs. “\$10.00 plus \$0.80 sales tax”, Morwitz, Greenleaf, and Johnson 1998.) Across six studies, we find that APF leads to greater choice share for the premium option. We show that the benefit of APF is driven by *pricing focalism*: APF (relative to IPF) focuses attention on the price difference which, by virtue of being smaller than the total price, leads to lower perceived expensiveness, and hence greater choice share for the superior quality option. The APF effect is robust to displaying the total cost of the purchase and to bad deals, but is eliminated when participants are instructed to take their time and decide slowly.

Study 1 demonstrates that the APF effect occurs even when the total cost of the upgraded product is made salient (thus ruling out that the effect is driven by confusion or deception). 546 undergrad students were randomly assigned to either the IPF, APF, or APF + total condition. They chose between a 23-inch television for \$199.99 or a 27-inch version for “\$259.99” [“\$60.00 more”] [“\$60.00 more (\$259.99 total)”. The proportion of participants selecting the upgraded option in the APF condition ( $P=58%$ ) was significantly higher than in the IPF condition ( $P=42%, p < .01$ ). Likewise, the APF+total price condition was also higher than in the IPF condition ( $P=53%, p < .05$ ). Furthermore, there was no difference between the APF and the APF + total price conditions ( $p > .75$ ). According to our pricing focalism account, consumers are naturally interested in the price difference and base their judgments of expensiveness on that (rather than the total price). Thus, adding the total price to APF framing has little effect.

Study 2a shows that the effect is unique to price, and does not work when applied to other product dimensions such as quality. 235 undergraduate students chose between a smaller, cheaper hard drive (“2 TB storage capacity for \$119.99 total.”) and a larger, more expensive hard drive, which was framed with IPF (“3 TB storage capacity for \$169.99 total.”), APF (“3 TB storage capacity for \$50.00 more.”), or an Additional Quality Frame (AQF, “1 TB additional storage capacity for \$169.99 total.”). The proportion of participants selecting the upgraded option in the APF condition ( $P=48%$ ) was significantly higher than in the IPF condition ( $P=33%$ ),  $p=.05$ , replicating previous results, and also higher than the AQF condition ( $P=29%$ ),  $p < .05$ . There was no difference between the IPF and AQF conditions,  $p=.85$ . Study 2b (Prolific Academic,  $N=600$ ) found similar results using flights (framing the price or the travel time). Studies 2a-2b provide support for the pricing focalism mechanism underlying the APF effect and cast doubt on other explanations such as anchoring and adjustment or a trade-off mindset model.

Study 3 provides mediational support for the proposed mechanism by showing that APF influences consumer choice by reducing the perceived expensiveness of the upgraded option and also tests the robustness of the effect across increasingly bad deals. 404 MTurkers were instructed to imagine themselves shopping for a new computer monitor and shown two different monitor options (23-inch vs. 27-inch), where the 23-inch version retailed at \$199.99. In the IPF conditions, the upgraded 27-inch monitor was available for either “\$259.99,” “\$319.99,” or “\$379.99” depending on the price condition (for “\$60.00 more,” “\$120.00 more,” or “\$180.00 more” in the APF conditions). Participants then answered, “Compared to the 23-inch version, how much more expensive is the 27-inch version?” (1:No more expensive-7:Very much more expensive.) Replicating previous results, a higher proportion of people selected the upgraded option in the APF condition ( $P=37%$ ) compared to the IPF condition ( $P=22%$ ),  $p < .001$ . There was also no significant interaction between that APF and IPF conditions and price level in predicting the choice of the upgraded option ( $p=.20$ ). In other words, the effect of APF on choices was the same across different price levels. Moreover, judgments of expensiveness mediated the effect of AP framing on

choices. Studies 3 provide mediational evidence that APF increases the choice of upgraded options over IPF because of a shift in the perceived expensiveness of the product. Importantly, the effect appears robust across “good” and “bad” deals, further differentiating the APF effect from a price partitioning effect.

In Study 4, 221 undergraduates took the role of buyer or seller of used bicycles, using APF or IPF. The “buyer” condition replicated previous results ( $P=70\%$  vs.  $P=50\%$ ,  $p<.05$ ), while the seller condition showed the opposite pattern ( $P=26\%$  vs.  $P=46\%$ ,  $p<.05$ ), a significant interaction,  $p<.01$ . This reversal happens because the offer price in the APF appears cheaper. Therefore the seller prefers to sell the upgraded product in the IPF condition (vs the APF condition). Indeed, judgments of expensiveness mediated the choice results, replicating and extending the results of Study 3.

In Study 5, before participants ( $N=571$  MTurkers) chose between a standard and upgraded set of wine glasses, they were told to respond quickly, or slowly, or no instruction control. The main effect of AP framing replicated previous studies,  $p<.03$ , but this was qualified by a significant interaction between AP framing and decision speed,  $p=.02$ . Specifically, the effect of AP framing was eliminated when participants were instructed to take their time and choose slowly and deliberately. APF (vs. IPF) also did not affect total purchase price recall ( $Z<1$ ).

Across all studies, we find support for the hypothesized link between APF, expensiveness judgments, and product choice and show that this is not driven by confusion. Thus, we contribute a new branch of inquiry to a substantial literature examining the effect of price formats on consumer judgments while offering important and straightforward implications for effective pricing practices.

### **Hindsight Value: Failed Transactions Inform Willingness to Pay**

#### **EXTENDED ABSTRACT**

Despite a well-documented gap between buyers’ and owners’ valuation of goods, markets work: buyers buy, owners sell, and the endowment effect no longer persists once actors in both roles gain market experience (List 2003). Focusing on one component of market experience, the present research examines failed transactions – buyers’ failure to acquire a good and owners’ failure to sell it. We ask, do failed transactions inform consumers’ valuation of goods?

For example, buyers may fail to acquire a good when its price exceeds their maximum willingness to pay (WTP) for it. Such failure may decrease buyers’ WTP via cognitive dissonance or, in other situations, prompt greater spending without increased valuation (e.g., bidding frenzy, Ariely and Simonson 2003; jilting effect, Litt, Khan, and Shiv 2010). However, we propose that failure to acquire can also increase consumers’ WTP as an update in true valuation rather than an instance of regrettable overspending.

Our studies utilize the Becker-DeGroot-Marschak “BDM” (1964) mechanism, which elicits a person’s maximum WTP for a good in the form of a bid. That bid is then compared to a randomly-selected price  $P$ . If  $WTP \geq P$ , one must purchase the good for  $P$ ; in contrast, if  $WTP < P$ , one must forego the purchase. This binding resolution should reveal people’s true preferences, incentivizing them not to bid above their true maximum WTP, as well as not to bid below it.

We first examined the effect of acquisition failure on WTP in incentive-compatible designs. In Study 1A ( $N = 101$ ), participants first selected a song they wished to own in their iTunes library. All participants were endowed with \$2 and could use any portion of this experimental budget to purchase their desired song via BDM, keep-

ing any money they did not spend. We adapted the classic BDM procedure in two ways. First, we made failure systematic: after bidding their maximum WTP ( $M_{bid} = \$30$ ), participants reached the “no purchase” outcome as the undisclosed random price supposedly exceeded their bids. Second, we offered participants an unexpected opportunity to submit new bids for comparison to a new random price. In turn, 41% stated a higher maximum WTP. Overall, maximum WTP significantly increased in final bids (revised in the second round or unchanged from the first) relative to initial bids (+\$.07, 95% CI [+0.03, +.11]).

For a conceptual replication in Study 1B ( $N = 102$ ), we endowed participants with \$0.50, any of which they could bid to purchase a novel gamble for a randomly-selected entry price. This purchase would grant them access to a virtual “Money Tree” with a 33% chance of “growing” a dollar on its branches ( $M_{bid} = \$23$ ). As in Study 1A, participants stated a significantly higher WTP for the gamble after failing to acquire it (+\$.07, 95% CI [+0.05, +0.09]). Next, we examined whether the hindsight value effect extends beyond songs and small-stake gambles. In Study 2 ( $N = 250$ ), we engaged participants in a hypothetical BDM procedure and randomly assigned them to bid on one of five products (Snickers bar, bottle of Trader Joe’s wine, FitBit fitness tracker, MacBook Air laptop, or used Honda Accord car). After bidding their maximum WTP and failing to acquire the target good, 54.9% of participants subsequently chose to bid greater amounts. Overall, final bids increased by 7.7%-20.7% of the initially-stated maximum WTP.

We further characterize the hindsight-value effect in Study 3 ( $N = 202$ ). In a 2x2 between-subjects design, we varied the target good and outcome of a hypothetical BDM: participants imagined first bidding on a travel mug (vs. clock) and then failing to acquire (vs. successfully acquiring) it. Next, participants unexpectedly entered a second BDM round in which they all bid on the travel mug. We compared WTP stated in these new bids by experimental condition. First, our results suggest that failure to acquire informs valuation of the target good in particular, instead of creating a general desire to win after losing: participants bid more on the mug after failing to acquire that mug than after failing to acquire the clock (\$25 vs. \$19). Second, we found that WTP increases in hindsight of acquisition failure, rather than from repeated bidding on a good: When bidding twice on the mug, participants increased their bids after imagining a failure to acquire (+\$7.70, 95% CI [+5.25, +10.24]) but did not significantly revise their bids after imagining a successful acquisition (-\$1.15, 95% CI [-3.23, +.93]).

Finally, we propose that failed transactions help bridge the WTP-WTA gap. In Study 4 ( $N = 202$ ), we randomly assigned participants to either buyer or seller roles. As in Study 1B, we endowed buyers with \$.50, any portion of which they could bid to purchase the Money Tree gamble. Conversely, we endowed sellers with the Money Tree gamble and prompted them to bid a minimum WTA, between \$.00 and \$0.50, for selling their Money Tree. Reverse BDM rules bound owners to sell the gamble, if stated  $WTA \leq P$ , or forego the sale if  $WTA > P$ . Participants in both roles encountered transaction failure after bidding (failure to buy or to sell) and, then, an unexpected second bidding opportunity. Initially, WTP fell short of WTA (\$.24 vs. \$.30). However, subsequent transaction failure eliminated the endowment effect: buyers and owners resembled each other in valuation as WTP increased (+\$.08, 95% CI [+0.05, +.10]) and WTA decreased (-\$.07, 95% CI [-.09, -.04]).

Our findings contribute to an understanding of how markets work despite the endowment effect, as well as how consumers decide on their reservation prices. While market experience provides consumers with various cues of how much others value a good, we



propose that it may also inform consumers' own valuation through failed transactions. If consumers better recognize surplus utility in hindsight, such initial failures may foster successful and mutually-beneficial exchanges in the future.

## Willingness to Pay: A Contextualized Method of Valuation

### EXTENDED ABSTRACT

WTP is commonly defined as the maximum amount a consumer will spend to obtain a product or service. Despite decades of research on this apparently simple metric, theory and empirical approaches on the study of WTP remain somewhat underdeveloped. This talk seeks to offer two contributions. First, we develop a more cohesive conceptualization of the WTP construct based on a review of the literature. Second, we introduce and validate a new methodology to assess WTP, the Contextualized Method of Valuation (CMV).

*Conceptualization.* The common definition of WTP is ambiguous, and existing measures of WTP reflect this conceptual ambiguity. We clarify that the WTP of a given *consumer* is the result of a specific *comparison* in a specific *situation*. That is, WTP reflects a given consumer's valuation for a product compared to an alternative option (Nagle 1987), and this relative valuation depends on the situation the consumer is in (Voelckner 2006). To illustrate, suppose a consumer is choosing amongst an array of chocolates and her WTP for a Lindt bar is of interest. Our conceptualization suggests that to fully understand her WTP for Lindt, we must know what her comparative option is (e.g., a Hershey's bar) and the situation in which she compares Lindt to Hershey's. Importantly, WTP is not a well-defined metric when the comparison or situation is unspecified.

This conceptualization suggests that situational factors (e.g., marketing activity, psychological states) can affect WTP through two pathways, direct and indirect. Continuing our example, suppose the situational factor is purchase goal (personal-consumption vs. gift-giving). The *direct pathway* refers to how purchase goal changes the valuation of Lindt relative to Hershey's (the comparative option, Hershey's, is held constant), and thus WTP for Lindt. The *indirect pathway* refers to how purchase goal changes the comparative option, e.g., in a gift-giving context, the relevant comparative option might be Godiva rather than Hershey's.

*CMV Methodology.* We introduce CMV, a new methodology to measure WTP that captures both the direct and indirect pathways. CMV is a powerful generalization of the BDM (Becker-DeGroot-Marschak 1964) procedure. The respondent views a choice set, specifies the comparative option, and states a WTP for the target product that equates preference for the target and the comparative option (i.e., relative valuation). A truth-telling lottery mechanism is employed: if  $WTP \geq R$ , a randomly drawn number ( $R$ ), the participant buys the target product; if  $WTP < R$ , the participant buys the comparative option at its stated price. Because the comparative option is clearly specified *and* free to vary, CMV can specify both the direct and indirect pathways through which a given situational factor affects WTP. Existing methods (e.g., open-ended response, BDM) lack these capabilities, which means that while they undoubtedly measure some aspect of preference, they may yield poorly-defined or inaccurate estimates of WTP per se.

Across six sets of experiments, we demonstrate that CMV is sensitive to situational factors present in common consumer purchase situations and, moreover, captures the comparative mechanisms through which situational factors operate.

In Experiments 1 and 2, we compared CMV and BDM, the best current method of measuring WTP (Miller et al. 2011; Wert-

broch and Skiera 2002). Experiment 1 implemented three conditions: CMV, BDM, and BDM with the same choice set as in CMV shown. CMV yielded a different WTP estimate compared to BDM ( $p < .001$ ). Showing participants the choice set in BDM partly but not fully closed the gap to CMV ( $p < .08$ ). This experiment also found evidence that because the BDM method does not specify comparative options, participants overlooked comparisons or had different ones in mind, rendering the WTP estimates ambiguous. Experiments 2a-2c demonstrated, across three different product categories, that CMV can offer opposite implications for WTP compared to BDM, i.e., preference reversals resulted due to a lack of a clear comparative option in BDM.

Experiments 3-6 demonstrate the ability of the CMV methodology to capture the effects of the situation through direct and indirect pathways. Experiments 3a-3b provided a demonstration of the direct pathway: CMV was sensitive to contextual information affecting preference for the target, which changed its valuation relative to a comparative option. Experiments 4a-4b illustrated the indirect pathway: CMV was sensitive to changes in the price of the comparative option. In experiment 4a, participants saw a choice set of wines in which the price of one wine (La Crema) was manipulated between participants to be either low or high. CMV revealed that WTP differed across conditions *only* for participants who specified La Crema as their comparative option ( $p = .004$ ); no differences in WTP were found for participants selecting other comparative options, whose prices did not change ( $ps > .30$ ). This experiment highlights the importance of knowing participants' comparative option when measuring WTP. Existing methods could not reveal these findings. Experiment 4b provided a conceptual replication of 4a, demonstrating that in a market where the same comparative options were priced high (vs. lower), WTP accordingly increased (decreased).

The direct and indirect pathways of context were jointly examined in experiments 5 and 6. For brevity, only experiment 6 is described here. The effect of the situational factor of purchase goal (personal-use vs. gift-giving) on WTP for a Parker fountain pen was examined. A gift-giving goal might affect WTP for the target by changing its valuation relative to a comparative option (direct) and by changing what the relevant comparative option is (indirect). The choice set consisted of two comparative options, a regular pen and a Waterman fountain pen. WTP was substantially greater under a gift-giving goal ( $p < .001$ ). This occurred because a gift-giving goal drastically shifted participants' comparative option to the expensive Waterman pen ( $p < .001$ ). Existing methods would not be able to capture this mechanism.

In sum, this paper offers two important contributions. First, we clarify that consumers' WTP is situation-specific, and that situational factors can operate through direct and indirect pathways. Second, we introduce and validate a new methodology to measure WTP that reflects this conceptualization and addresses the shortcomings of existing methods.

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# Myths and Markets

Chair: Aimee Dinnin Huff, Oregon State University, USA

## **Paper #1: Consumer Enactment of Devaluing Marketplace Myths: Insights from a Multi-sited Ethnography of “Gypsies”**

Ela Veresiu, York University, Canada  
Markus Giesler, York University, Canada

## **Paper #2: “For the Unknown and the Unknowable”: The Rise and Reconfiguration of the CrossFit Brand as a Post-9/11 Mythos**

Craig Thompson, University of Wisconsin-Madison, USA  
Anil Isisag, University of Wisconsin-Madison, USA

## **Paper #3: Negotiating the Legitimacy of an American Icon: Myth and the U.S. Gun Market**

Michelle Barnhart, Oregon State University, USA  
Aimee Dinnin Huff, Oregon State University, USA

## **Paper #4: Erasure as Institutional Maintenance**

Pierre-Yann Dolbec, Concordia University, USA  
Joel Bothello, Concordia University, USA  
Pharo Sok, Concordia University, USA

### **SESSION OVERVIEW**

In this session, we consider myth – one of the most fundamental and pervasive ways that consumers make sense of the market and the world. Our understanding of the role of myth in consumption dates to the earliest days of what later came to be known as consumer culture theory (Levy 1981), and has spawned a substantial stream of research on myth in consumption and markets (e.g., Arsel and Thompson 2011; Brown et. al 2013; Brunk, Giesler & Hartmann 2018; Giesler and Veresiu 2014; Holt 2004; Luedicke, Thompson and Giesler 2010; Thompson 2004). Questions remain about the complexities, evolution, uses, and influences of myth in the marketplace. In this session, we aim to offer deeper, nuanced insight into ways that myth impacts, is used by, and is influenced by a diversity of agents in the marketplace. Overarching questions include: *How do myths evolve as they are appropriated and reconfigured by consumers and brands over time? How do myths and the resources needed for myth making influence the evolution of markets and socio-market systems? And, how can new research make novel, substantive contributions to this domain of consumer culture?*

The first presentation in our session examines the ways a marginalized and stigmatized consumer group enacts devaluing marketplace myths about themselves to increase their capital. While previous studies have demonstrated that devaluing marketplace myths disparage and degrade some groups, and that consumers can demythologize and de-stigmatize negative stereotypes, this research investigates the ways that consumers can actually use such myths to their benefit. This study of Roma gypsies illuminates the market-mediated race reiterations through which Roma further commercialize “Gypsy” devaluing marketplace myths.

In the next presentation, the authors investigate myth as an evolving salve for cultural anxieties and identity tensions and as an agent in the reshaping of cultural meanings. The study examines how the CrossFit brand fine-tunes established cultural discourses and ideals in its formative brand myth to alleviate identity tensions in the post-9/11 era. In contrast to previous research which has focused on the ways that consumers and brands draw from established cultural meanings in mythmaking, this research explicates the ways that established cultural meanings and ideals are transformed as they are retextualized in a brand myth.

In the third presentation, the authors unpack the role of myth in the evolution of the American firearms market system by investigating the ways that myths contribute to the (de)legitimation of products, services, and practices with potentially deadly consequences.

The final presentation extends the discussion by considering the ways that a resource for myth making—marketplace memory—is created and maintained to ensure the continuity of a market over time. This research “points to the long-lasting value of discursive acts, and how their accumulation, archival, and retrieval can, over time, shape market evolution.”

## **Consumer Enactment of Devaluing Marketplace Myths: Insights from a Multi-sited Ethnography of “Gypsies”**

### **EXTENDED ABSTRACT**

*Stay, sit down, relax, and discover the Gabor Roma tribe and true Roma culture from inside at the Gypsy House Hostel. [...] There is an interesting little activity we [Roma community] developed with our Gabor Girls where guests dress-up in the skin of the Gypsy, Gabor-Roma style head to toe. But more than that, it is an important lesson in Gabor etiquette. Being Gabor-Roma is not only about the clothing but an attitude, a walk, a presentation, etc. Our most recent actor was Loli, her baptized Gypsy name that means red. Loli toured the city with the Gabor Girls dressed in the skin of the Roma and experienced the world through their eyes and that includes the stares, comments, closed-door-receptions, and confrontation. It's an adventure that we call The Experiment. In addition, it's about experiencing the double discrimination Roma women endure. Discrimination outside the community for being Gypsy and inside for their second-class status for being female. It's interesting, a new experience. It's adventurous, you never know what's going to happen, and it's fun!*

*(Constantin, Gabor Roma, AirBnB Host, Romania)*

Constantin's creative marketplace offerings, self-branded as the *Gypsy House Hostel* and the *Experiment*, hint at a new way through which stigmatized groups approach devaluing marketplace myths – mainstream trivializations of consumers' social networks and interests rather than commercial sources of identity value (Arsel and Thompson 2011). Prior consumer research has investigated in great detail the various strategies and practices different stigmatized groups, including hipsters (Arsel and Thompson 2011), at-home fathers (Coskuner-Balli and Thompson 2013), black middle-class Americans (Crockett 2017), Asian immigrants (Hu, Whittler and Tian 2013), gay consumers (Kates 2002), Trekkies (Kozinets 2001), Apple Newton fans (Muniz and Schau 2005), veiled women (Sandkci and Ger 2010), and plus-size women (Scaraboto and Fischer 2013) utilize in order to challenge commercial stories or stereotypes circulating throughout popular culture caricaturing their communities. Together, these studies demonstrate how devaluing marketplace myths disparage and degrade individuals and their social groups, which in turn, lead consumers to defend, demythologize, and de-stigmatize themselves. However, do cases exist where stigmatized groups also benefit from marketplace stigma?

In this article, we depart from this standard view by uncovering a phenomenon where arguably the poorest and most stigmatized (im)migrant community worldwide, derogatorily referred to as “Gypsies”

but self-denominated as Roma (Simpson 2013), actively enact rather than challenge devaluing marketplace “Gypsy” myths to ensure their visible minority’s economic survival, as Constantin’s opening quote illustrates. Building on Veresiu and Giesler’s (2018) recent call “to not treat the experiences of the acculturating consumer as an essentialized point of departure but to instead pay more critical attention to the different ideological and socio-economic contexts that condition this consumer’s behaviour and the institutional frameworks that blanket uneven power relations between immigrant-sending and immigrant-receiving cultures in a seemingly inclusive marketplace,” we focus on one particular institutional variable that has only recently attracted consumer culture researchers’ attention: devaluing marketplace myths of “racialized otherness” found in mainstream media and advertising (Bonsu 2009; Hu, Whittler and Tian 2013).

To further understand this phenomenon we turn to the theory of racial performativity (Inda 2000; Miron and Inda 2000). Following Butler’s (1993, xii) seminal notion of gender performativity as the “reiterative power of discourse to produce the phenomena [gendered self or subject] that it regulates and constrains,” Inda (2000) defines racial performativity as the power of discourse to bring about what it names through the citing or repetition of racial norms. Accordingly, a series of traits linked to the whiteness of one’s skin (e.g., civilized, intelligent, moral, hardworking, clean, etc.) and non-whiteness (e.g., savage, emotional, licentious, lazy, dirty, etc) have been naturalized in service of specific social hierarchies and unequal power relationships between different racialized groups. Building on this notion of racial performativity as the “ways in which race is always actively constructed” (Inda 2000, 97), we not only argue that marketplace myths of racialized otherness are another powerful naturalizing discursive tool, but also theorize that stigmatized groups may engage in market-mediated race reiterations, which may provide short-term economic gains, but ultimately maintain the group’s unequal power position.

To investigate our theoretical proposition, we focused on dominant devaluing “Gypsy” marketplace myths and the accompanying Roma groups’ responses. Specifically, we first trace the history of the traditionally nomadic Roma race in Europe to understand how socio-political clashes with sedentary populations influence contemporary marketplace myths. Second, we uncover how a host of mainstream brands and entertainment products use these historically situated myths to enhance their contemporary marketing efforts. Based on this analysis, we extract three prominent devaluing marketplace myths about “Gypsies”: the free-spirit, the mystic, and the troubadour. Third, we unpack the market-mediated race reiterations through which Roma groups across Central Europe further commercialize these dominant devaluing marketplace myths for personal financial gain, as the opening quote summarizes, and reveal the accompanying mainstream consumers’ responses. We conceptualize this as a racialized myth market, which we define as an experiential market organized around culturally resonant stories stemming from non-white communities and sustained through marketplace performances. We then explore the visible minority group’s grass-roots race resignification attempt through the creation of the Roma denomination. This “Gypsy” racialized myth market was selected, not only because it represents a multi-million-dollar entertainment industry in Europe (Aniko 2009), but also because there are currently over 12 million individuals derogatorily referred to as “Gypsies” (European Commission 2016).

Methodologically, we adopted a historical approach in combination with an ethnographic approach to data collection (Karababa and Ger 2011; Giesler and Veresiu 2014). This entailed collecting and analyzing past historical materials, policy documents, mass media reports, as well as advertising campaigns, brand logos, and other

marketing promotional materials about “Gypsies” and the Roma ethnicity, focusing on the European continent as the bastion of Roma migration, struggle, and stigmatization. The ethnographic component involved (1) five data collection visits to Roma communities in Romania, Germany and Italy from 2009 to 2017 for triangulation purposes of different European nations, (2) photography and videography, and (3) in-depth, semi-structured interviews with Roma individuals. A hermeneutical approach (Thompson 1997) was employed to analyze the complete data set.

Overall, by critically interrogating how poor stigmatized (im)migrant individuals enact devaluing marketplace myths for economic gains, we contribute to the literatures on marketplace myths (Arsel and Thompson 2011), marketplace performances (Thompson and Üstüner 2015), and consumer acculturation (Veresiu and Giesler 2018).

### **“For the Unknown and the Unknowable”: The Rise and Reconfiguration of the CrossFit Brand as a Post-9/11 Mythos**

#### **EXTENDED ABSTRACT**

*We sought to build a program that would best prepare trainees for any physical contingency—prepare them not only for the unknown but for the unknowable as well.*

<http://journal.crossfit.com/2007/04/understanding-crossfit-by-greg.tpl>

Numerous studies have shown that significant socio-cultural disruptions—either due to natural disasters, economic crises, or major socio-political upheavals—destabilize consumers’ conventional cultural frames-of-references and sense making practices (Brunk, Giesler, and Hartmann 2017; Humphreys and Thompson 2014; Kravets 2012; Marcoux 2017; Phipps and Ozanne 2017; Weinberger and Wallendorf 2012; Zhao and Belk 2008). Such unsettled periods can engender a heightened state of reflexivity as individuals confront the socio-culturally contingent nature of formerly naturalized meanings and routines (Giddens 1991; Swidler 1986). The cultural branding paradigm (Holt 2004; Holt and Cameron 2010) similarly argues that social disruptions create a “cultural chasm” that enjoins a reflexive awareness of formerly naturalized ideological meanings. As consumers seek to negotiate the tumult of disruptive socio-economic changes, they become sensitized to the inadequacies of the ideological order that had formerly governed their identity practices. In response, they look to popular culture—movies, television, celebrities, and brands—to find new ideological meanings that can assuage the resulting identity tensions and provide a normative guide for orienting in these reconfigured socio-cultural fields.

Our analysis of the CrossFit brand as a post-9/11 mythos extends these prior analyses in two ways. First, the precedent works tend to focus on cases where emergent meanings precipitated by social disruptions necessarily manifest a historical continuity with the pre-disruption state as consumers and brands draw from the established stock of cultural meanings in their reflexive sense-making or mythmaking activities. Our analysis explicates these genealogical threads by focusing on how they are retextualized in the CrossFit brand myth. That is, established cultural discourses and ideals—such as the neoliberal self-optimizer; the Ayn Randian celebration of self-interested action; and the neo-authoritarian ethos of self-discipline—are transformed by their relation to the prevailing cultural anxieties and the mythic composition they collectively form. We argue that consumers are not so much looking for meanings that can restore a sense of lost order; but, instead, are transformed by the disruption in ways that lead them to re-evaluate the discourses that constitute their



cultural stock of knowledge. Resonant brand myths crystallize their reconfigured understanding and transposed identity projects.

Second, we explore how brand myths function as ideological performative scripts (Swidler 1986; Thompson and Ustuner 2015) that organize a range of individual and collective actions, such as CrossFit's totemic Workout of the Day (WOD). We discuss how these performative scripts once established in the context of the formative brand myth can be recontextualized by consumers whose world-views are not as strongly shaped by the disruptive events that trigger the emergence of these myths. Although consumers can rework the myth in relation to different identity goals and class and gender significations, the ideological structuring of the performative script constrains the extent of these modifications and produces modes of governmentality (Foucault 1991; Ygnfalk 2015) that may contradict consumers' reflexive understanding of the practice.

Founded in 2000, CrossFit stands out as a rebuke to specialized training regimes, opting for a more all-round mode of fitness that enables one to meet physical challenges across a broad range of functional situations. While it has rather expectedly analyzed as yet another form of neoliberal governmentality (James and Gill 2017), we suggest that its explosive growth amidst the post-9/11 socio-cultural transformations necessitates a consideration of the aspects of its brand myth that align with the post-9/11 authoritarian ethos.

Numerous studies have documented the profound shift in social attitudes and values among the American citizenry in the post-9/11 era (Perrin 2005; Woods and Arthur 2014). Prominent among these changes were amplified cultural concerns over security and a heightened favorability toward authoritarian values and ideals. During this crisis period, cultural figures associated with safety and security enjoyed a heightened state of cultural popularity, such as first responders (firefighters and paramedics) and the military (Faludi 2007). Popular media offered a steady flow of mythic representations that resonated with the post-9/11 zeitgeist and its need for affirming morality tales of strength and willpower conquering unanticipated threats (e.g. movies and TV shows such as *American Sniper*, *the Bourne trilogy*, *24*, and *Homeland*) (see McSweeney 2014).

The CrossFit brand myth's resonance with the post 9-11 ethos is readily discernible in its representations of physical preparedness and reliance on high intensity drills, which simulate the stress-inducing conditions characteristic of military combat or emergency rescue situations. Importantly, the early adopters of CrossFit were police and fire departments and military personnel as the training program aligned with the situational challenges that confronted these occupational groups. As the company opted for a comprehensive definition of fitness combining features of skill-related and health-related fitness and successfully branded itself as the "sport of fitness" (Dawson 2015), it has been appropriated by heterogeneous groups of consumers hailing from backgrounds dissimilar to that of the early adopters over the years.

In our analysis of the CrossFit brand myth, we draw on multiple data sources including online and offline branded content, news articles in popular press, interviews with CrossFitters and trainers, and a participant observation of this fitness regime, online forums, and the CrossFit Games. With this comprehensive analysis, our aims are threefold. First, we strive to illuminate how established cultural discourses and ideals are fine-tuned for CrossFit's formative brand myth with the purpose of alleviating identity tensions apropos of the post-9/11 cultural anxieties. Second, we aim to trace the reconfiguration of the formative mythos over time, brought about by CrossFit's adoption by consumers across different class and gender lines and with distinct identity goals. Third, given that the motivations and identity goals of the late adopters primarily hail from the health and well-being discourses; we seek to tap into this broader cultural space

and unravel the relations between CrossFit and similar lifestyle practices such as the paleo diet. This will allow us to make further sense of the evolution of the original myth and situate the trajectory of CrossFit within broader ideological and cultural currents.

## Negotiating the Legitimacy of an American Icon: Myth and the U.S. Gun Market

### EXTENDED ABSTRACT

Previous research has revealed how characteristics of myth, such as plot and ambiguity, restore trust in industry experts following a catastrophe (Humphreys and Thompson 2014), propel brands to iconic status (Holt 2004), and sustain a brand over time (Brown et al. 2013). Other work has investigated the legitimation of markets (Humphreys 2010), brands (Giesler 2012), practices (Ozlem and Ger 2010), and products (Wilner and Huff 2017). In this research, we consider the ways that characteristics of myth influence legitimacy of products and practices in a market system (Thornton, Ocasio, and Lounsbury 2012) by investigating these relationships in the context of the American firearms market.

In America, firearms are consumer products readily available at specialty shops, mass retailers, gun shows, and private sellers. American consumers possess over 300 million firearms (Cook and Goss 2014), which are the only consumer product whose possession is specifically protected in the U.S. Constitution. Guns are also unusual in that they are designed specifically to kill. Accordingly, gun rights have been coupled with gun control throughout the nation's history (Winkler 2011).

Debate over the appropriate balance between gun rights and gun control has loomed large in recent decades as death and injury rates have increased. Firearms were involved in the death or injury of more than 120,000 Americans in 2016, and the rate of death has increased 15.5% over the past ten years (U.S. Centers for Disease Control and Prevention). Public concern is heightened by mass shootings. While outrage over high-profile tragedies predictably manifests as alarm over related legislation – that is, the regulative legitimacy of various products and practices – the outrage also predictably wanes (Humphreys and Thompson 2014). Faced with repeated mass shootings during the last 20 years, on the whole, Americans have expanded regulative legitimacy to a broader range of firearms products and practices rather than restricting it (Waldman 2014). Seeing no federal legislative action and intensified cultural debate following Sandy Hook, Orlando, Las Vegas, and others, many Americans and the media have often lamented that "nothing will ever change."

However, on March 1, 2018, two weeks after a high-profile school shooting in Parkland, Florida, *The New Yorker* ran a piece entitled, "Something new on gun control: a glimmer of hope" (Casidy 2018). Other mainstream news outlets echoed the cautious yet optimistic twist to the typical narrative that follows mass shootings. Less than a month after the shooting, a previously staunchly pro-gun Florida legislature passed several gun control measures opposed by the powerful gun lobby. We seek to understand how this "something new" seems to be happening.

We draw from previous work on myth in the marketplace and institutional theory to examine this phenomenon. Institutional theory scholarship outlines three types of legitimacy – regulative, cultural-cognitive, and normative (Scott 2008). Previous research has revealed the ways that actors in a market system work to change regulative legitimacy of products and practices through lobbying and pressure from voters (Huff et al. 2017). We investigate changes in cultural-cognitive and normative legitimacy. Myth naturalizes ideology, practices, and socially constructed meanings, and gives legiti-

macy to social facts (Barthes 1957). In addition, marketplace myths can advance ideological agendas (Thompson 2004). In contrast to work showing the ways that the plot of a myth can restore the status quo of a market system following catastrophe (Humphreys and Thompson 2014), we investigate the role of characteristics of myth in the evolution of a market system with tragic consequences. Specifically, we aim to understand the ways that various characteristics of myths influence the cultural-cognitive and normative legitimacy of products and practices in the American gun market system.

Our methodological approach is an ongoing, multi-sited ethnography (Kjeldgaard, Csaba, and Ger 2006) begun in early 2015. We sought to understand the specifics of how market actors physically and discursively engage (or not) with firearms and in firearm practices at micro, meso, and macro levels. At the micro level, we interviewed and observed individual gun owners, non-owners, activists, and legislators, gathered public opinion data from Pew and Quinnipiac polls, and gathered posts to discussion forums related to firearms use. At the meso level, we observed and conducted field interviews at gun shows, the NRA annual convention, and gun control rallies. At the macro level, we conducted a textual analysis of mainstream media coverage and public communications from the NRA and the gun violence prevention group (GVPG) Everytown from Oct. 1, 2017 through March 15, 2018.

We analyzed the textual data iteratively over three years, moving between data, literature, and coding, and then collecting additional data and repeating the process. Our analytical approach was informed by Charmaz (2006) and followed protocol outlined by recent consumer research on market systems (Ertimur and Coskuner-Balli 2015; Martin and Schouten 2014) and automated textual analysis (Humphreys and Wang 2017).

Preliminary findings suggest that cultural myths influence the cultural-cognitive and normative legitimacy of firearms-related phenomena, and this occurs when myths have four characteristics: they serve as a framework that supports relevant facts and data; are manifest at both the individual and societal levels; are disseminated passionately; and effectively employ materiality. We find that the NRA has been relatively effective at influencing the legitimacy of firearms products, services, and practices through the use of these four myth characteristics. In contrast, GVPGs have been less effective at influencing legitimacy because their myths lack a hero character and justice for a villain, do not incorporate materiality, and have not served as an effective framework for the abundance of data that GVPGs believed would sway legislators and the public. Our data indicate that this has evolved subsequent to the 2018 shooting in Parkland, Florida.

This research will make theoretical contributions to literature on the relationship between myth and markets (Humphreys and Thompson 2014; Luedicke, Thompson, and Giesler 2010), legitimacy in market systems (Humphreys 2010), and consumer movements (Weijo, Martin, and Arnould 2018) by illuminating the ways that characteristics of myths influence legitimacy. In so doing, this study will also contribute a substantive link between marketing research and the nascent scholarly domain of gun studies (Huff and Barnhart 2019).

### **Erasure as Institutional Maintenance**

#### **EXTENDED ABSTRACT**

*“Halston’s name came to mean everything in fashion and then nothing”  
Kirby, in New York Times 1998*

Roy Halston Frowick—commonly known as Halston—was perhaps the most famous designer of the 1970s. Dubbed by Balen-

ciaga as “the greatest couturier in the world” (Gaines 1991), he was “America’s first internationally renowned designer” (Sporkin et al. 1990). Within a span of 10 years, he won four Coty awards and was inducted to the Coty Fashion Hall of Fame, a feat not repeated since. Apart from designing Jackie Kennedy’s pillbox hat, he was also the first designer to collaborate with a department store, predating collaborations such as Karl Lagerfeld & H&M. He was a fixture at Studio 54, and introduced numerous fashion innovations. Then, he disappeared into oblivion.

What can the rise and fall of Halston tell us about markets? How does remembering shape a market? Previous research has seldom examined market processes underlying the accumulation of market memories and how this affects the evolution of markets. Instead, it has thus far concentrated on micro-level, consumer-centric processes (e.g. Jiang et al. 2015), meso-level firm practices (Mena et al. 2016), and on how the interactions between a market and other types of memories, such as popular memories (Thompson and Tian 2008), nationalistic memories (Brunk, Giesler, and Hartmann. forthcoming), and memories associated to specific brands (Brown, Kozinets, and Sherry 2003), can inform myth making, branding, and marketization.

A market memory is the active past of a market, formed by the collection of archived documents referencing market occurrences (Halbwachs 1992; Olick 1999; Ocasio, Mauskopf, and Steele 2015). Occurrences, such as a fashion show or a faux-pas from a market actor, are turned into documents which are then archived. For example, the coverage of a fashion show by Vogue is transformed in an article which is archived on Vogue.com. The retrieval, re-activation, and re-interpretation of occurrences allow for their transformation into historical events and further transformation into documents. The documentation and historicization of occurrences around a market ultimately leads to the creation of a market memory (Ocasio et al. 2015). For example, the retrieval of a Vogue article to discuss a certain fashion show can lead to the creation of new documents, which over time turns the show into a historical event.

Understanding how a market memory evolves is important because such a collectively shared and commemorated past influences present events by “providing people with understandings and symbolic frameworks that enable them to make sense of the world” as we “rely on memory for the provision of symbolic representations and frames which can influence and organize ... our actions” (Miszta 2003, 13) and, we argue, markets. We propose that memory work, i.e. work upon market memory, is a type of institutional work: it helps create, maintain, or disrupt the understanding, practices, and rules that govern a market (Dolbec and Fischer 2015). We concentrate on erasure as a type of memory work that serves to maintain a market. This study asks two questions: How is a market actor erased from a market memory, and how does erasure maintain an institution?

Findings are based on an extensive archival dataset around the 1970s designer Halston from the *Women’s Wear Daily*, *New York Times*, and *Vogue*, covering the 1960s to the 2010s, and totaling 5546 pages. The analysis was performed by manually coding a subset of the data and creating dictionaries around dramatized identities of Halston, analyzing the evolution of these dramatized identities over time through automated coding (Humphreys and Wang forthcoming), and creating links with institutional and memory work. We concentrate on the dramatized identities of a market actor as they have been shown to affect institutional-level sensemaking (Giesler 2008).

Halston’s numerous identities (e.g. Halston the milliner, Halston the socialite, Halston the Halston the enfant terrible) all played mar-

ket-level roles and helped constitute the fashion market memory. We map the evolution of these identities together with the evolution of Halston within the fashion market memory. For example, positive identities helped maintain or foster aspects of the market. Mentions of how “Halston the milliner” created Jackie Kennedy’s pillbox hat helped maintain the status of hats within American society, while the numerous innovations and awards of “Halston the designer” helped promote American fashion. It also made Halston a celebrity both within and outside the world of fashion. As a celebrity, he became an important focal point for journalists to discuss the evolution of American fashion, its rules, norms, and conventions, and how it transformed from an industry that copied French design to one fueled by its own, homegrown designers. Halston helped create a “dramatized reality” of the American fashion market (see Rindova et al. 2006). In contrast, the negative identities of Halston, such as “Halston the failed businessman” and “Halston the enfant terrible”, contributed to delegitimize certain market practices (e.g. collaborations with department stores) and helped push Halston out of the fashion market memory altogether. We show how these identities are associated with processes of institutional and memory work (legitimization and celebrification; delegitimization and silencing following his breach of institutional norms; and re-integration of his legacy once the norms he once breached had changed enough that his actions, once transgressive, were now considered normal).

The findings have multiple implications: first, market memory processes can explain market maintenance and changes through memory contests. This points to the long-lasting value of discursive acts, and how their accumulation, archival, and retrieval can, over time, shape market evolution. Second, erasure contributes to institutional maintenance as it contains potential destabilization that can happen through non-exceptional events. This extends the work of Humphreys and Thompson (2014) to normal market events. Institutional maintenance thus entails a constant staging of memories to insure an alignment between occurrences, historical events, and the governing assumptions, beliefs, and norms of a market.

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# Inherently Moral or Immoral: New Perspectives on the Complex Interplay between Branding and Morality

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## **Paper #1: Brand's Moral Character Predominates in Brand Perception and Evaluation**

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## **Paper #2: Rejecting Moralized Products: Moral Identity as a Predictor of Reactance to "Vegetarian" and "Sustainable" Labels**

Rishad Habib, University of British Columbia, Canada  
Yann Cornil, University of British Columbia, Canada  
Karl Aquino, University of British Columbia, Canada

## **Paper #3: When Buffers Backfire: Corporate Social Responsibility Reputation and Consumer Response to Corporate Ethical Transgressions**

Marlene Vock, University of Amsterdam, The Netherlands  
Adrian F. Ward, University of Texas at Austin, USA  
Margaret C. Campbell, University of Colorado Boulder, USA

## **Paper #4: Crime and Punishment through the Political Lens: How Liberals Forgive, and Conservatives Punish Ethical Brand Users**

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### **SESSION OVERVIEW**

What sorts of information and cues do people mostly care about when forming brand evaluations? For over three decades, branding scholars have informed consumer research about various factors that shape consumer responses to brands. In the wake of a *recent* string of corporate *scandals* (United's passenger-dragging and dog death incidents, Volkswagen's "dieselgate", Uber's series of scandals) and a surge of academic interest in morality in the marketplace (Campbell and Winterich 2018), researchers have brought moral attitudes, judgments, and behaviors back to the forefront in understanding consumer reactions to brands. Capitalizing on this tradition, our session puts forward cutting-edge research into the interplay between branding and morality. Each of the four papers included in this session address the following research question: how can research on marketplace morality and immorality inform the study of brands in general and consumer evaluations of and reactions to brands in particular?

The first two papers focus on the interplay between branding and morality by exploring the role of moral character and moral identity in consumer responses to brands. The authors of the first paper examine how and why brand's moral character impacts brand perception and evaluation. They find that brand's moral character dominates in evaluation formation and is more important than brand's warmth. The second group of researchers explore the impact of moral identity in predicting rejection of moralized products and brands. They document that marketing/brand labels that signal moralized values trigger reactance among consumers high, but not low in moral identity, that leads them to reject such brands.

The second two papers provide new perspectives on the intersection between branding and immorality by investigating consumer reactions to brands in the context of moral transgressions. The authors of the third paper investigate whether a brand's moral reputation is a buffer or a liability when facing later accusations of cor-

porate ethical transgressions. They show that while a positive CSR reputation can act as a buffer against negative reactions to unethical corporate/brand behavior, it can also backfire when a brand transgression directly contradicts its reputation. The authors of the last paper look at whether and how political orientation moderates desire for punishment toward users of ethical (vs. conventional) brands committing moral transgressions. Their work indicates that liberals (conservatives) punish ethical brand users committing moral transgressions *less (more)* than conventional brands users, and that stereotyping of the transgressor drives such reactions.

By bringing to the fore four novel theoretical accounts, these papers advance our understanding of the complex interplay between branding and morality. From a theory standpoint, then, this session should interest branding, morality, trust, and consumer ethics researchers who examine morality and ethics in the marketplace. Moreover, as exemplified by a series of recent brand and corporate scandals such as the infamous Volkswagen emissions (Rhodes 2016) or the Ashley Madison data breach scandals (Rotman et al. 2018), the effects uncovered here can inform managerial decision-making. Accordingly, this session may also appeal to consumer research practitioners that want to apply academic insights to the practice of branding and marketing.

## **Brand's Moral Character Predominates in Brand Perception and Evaluation**

### **EXTENDED ABSTRACT**

What sorts of trait information do people most care about when forming brand evaluations? Recent research on brand relationships (Kervyn et al. 2012) suggests "warmth" should be of prime importance in evaluation formation. Yet, some psychological research on morality (Goodwin 2015) suggests information about brands' specifically moral traits—their moral "character"—may be a primary dimension. Although warmth and character are sometimes construed interchangeably in the interpersonal domain (Cuddy et al. 2008), we argue they are separable in the consumption domain. More importantly, we posit that across a wide variety of contexts, character is likely more important than warmth in brand evaluation formation.

Study 1 recruited 193 undergraduate students in exchange for course credit. Participants were asked to rate seven different brand targets in a random order that varied in both valence and closeness: "a brand you admire a great deal"; "a brand like a close friend of yours whom you like very much"; "a brand in your life you grew up with"; "Labbatt, Canadian brand"; "Molson, former Canadian brand between 1786-2005"; "a brand that you dislike, or that irritates you"; and "a brand you despise, or have no respect for." Participants then rated these seven target brands with respect to how much they possessed each of 30 different traits (1 Not at all - 9 Extremely) that were carefully preselected from four different categories, so that the dimensions of moral character and warmth (as developed and validated by Goodwin et al. 2014) would be fully crossed. Following the trait ratings, for each target, participants responded to the primary dependent measure, which asked them to indicate how positive or negative their evaluation of the brand was (1 Very negative - 9 Very positive). In general, all four of the trait indices correlated strongly with evaluations, with the moral character—warmth, and moral character trait indices having the strongest relation with evaluations. Compar-

ing the raw correlations for all seven target brands, evaluations were more strongly associated with the pure moral character traits than to the pure warmth traits. Regression analyses revealed that as predicted, it was the moral character traits, along with the moral character–warmth traits, that best predicted variance in evaluations. Either one of these trait categories best predicted variance in evaluations for all seven target brands. In contrast, the warmth traits did not best predict evaluations for any of the target brands. Moreover, the moral character traits independently predicted variance in evaluations for all seven target brands controlling for other three trait categories.

Study 2 examined whether brand moral character information exerts a greater causal impact on brand evaluations than does warmth information. Participants were 384 U.S. adults recruited via Mturk. Brand’s moral character (good vs. bad) and warmth (warm vs. cold) were crossed in a 2 x 2 within-subjects design. An example description of a target brand was: “The brand has good moral character but is interpersonally cold.” The order of the moral character and warmth information in each description was randomized at the level of descriptions. Following manipulations, participants were asked to indicate their “overall evaluation” of each target brand on a scale from 1 (very negative, unfavorable, bad) to 9 (very positive, favorable, good). Within-subjects ANOVA revealed large main effects of both moral character and warmth on evaluations in the predicted direction. However, the overall main effect of moral character was larger than the main effect of warmth. And, of critical interest, the target brand that was of good character but cold was rated significantly more positively than was the target brand that was of bad character but warm. There was also an interaction between moral character and warmth, reflecting that the effect of warmth was larger for good than for bad targets.

Study 3 sought to extend findings of study 2 using a between-subjects design and employing behavioral intention measures in addition to the attitudinal one. 223 undergraduate students were recruited in exchange for course credit. Moral character and warmth manipulations mirrored those in study 2. Following manipulations, participants filled out the same composite measure of brand evaluations as in study 2 as well as measures of purchase intentions (MacKenzie et al. 1986), word-of-mouth intentions (Fedorikhin et al. 2008), and a single item capturing their willingness to pay in dollars. Our findings reveal a significant multivariate main effect of both moral character and warmth on brand-related dependent measures. Follow-up univariate ANOVAs revealed that the main effect of moral character was significant across all four dependent variables. The main effect of brand’s warmth was also significant across all four dependent variables. However, the overall main effects of moral character were larger than the main effect of warmth. Importantly, compared to the target brand that was of bad character but warm, the target brand that was of good character but cold was evaluated more positively, yielded higher purchase intentions, greater WOM intentions, and stronger willingness to pay. The significant multivariate interaction suggested the effect of warmth was again larger for good than for bad targets.

Theoretically, we contribute to the literature in at least several ways. Our first contribution to brand relationships research (Alvarez and Fournier 2016; Fournier 1998) lies in bringing a new trait (moral character) from research on social cognition and psychology of morality into the branding domain while showing it really matters in the consumption context. To this effect, showing that the influence of brand’s moral character holds while controlling for brand’s warmth and competence that are already explored in the branding domain (Ivens et al. 2015; Kervyn et al. 2012) represents a particularly intriguing finding that can boost future research in the domain. Importantly,

although warmth and character are sometimes conceived of as interchangeable in the context of interpersonal relationships (Cuddy et al. 2008), our findings suggest they are separable in the consumption domain. Finally, our results also give back to psychology of morality and social cognition literatures (Goodwin 2015; Goodwin et al. 2014) by establishing that influence of moral character extends to consumption/branding domain.

### Rejecting Moralized Products: Moral Identity as a Predictor of Reactance to “Vegetarian” and “Sustainable” Labels

#### EXTENDED ABSTRACT

Morality is a distinct domain of social knowledge, separate from conventional and preference domains (Turiel 1983). Behaviors, concepts, or ideas can shift from the conventional to the moral domain as individuals mature and through social and cultural changes in attitudes and values, a process referred to as moralization (Rozin 1999). Once moralized, the failure to display these behaviors or endorse certain ideas can make a person subject to sanctions. Two behaviors that have possibly become moralized are sustainability (Feinberg and Willer 2013) and vegetarianism (Rozin, Markwith, and Stoess 1997).

Sustainable goals of conserving natural resources and maintaining an ecological balance can be achieved by reducing meat consumption or reducing one’s carbon dioxide emissions through travel mode choices. While eating (or not eating) meat or travelling (or not travelling) by car and airplane might be perceived as matters of preference or convention, we argue that moralization has turned these conventions into moral values (Rozin 1999; Rozin et al. 1997). Because of their implied social pressure, moral behaviors can reduce the freedom to choose (Kouchaki, Smith, and Savani 2018) showing that morality serves as a constraint on people’s perceptions of choice. Across eight studies (N = 2,217). For instance, being exposed to people who refuse to eat meat or actively seek out ethical products can cause others to feel morally reproached (Minson and Monin 2012) and experience self-threat as a result of negative social comparison (Zane, Irwin, and Reczek 2016) more ethical consumers who seek out and use this information in making purchase decisions. Across three studies, willfully ignorant consumers negatively judge ethical others they have never met across various disparate personality traits (e.g., fashionable, boring. Although the pressure to conform to certain socially desirable norms can lead some individuals to conform, others might actively resist that pressure - a phenomenon known as psychological reactance (Brehm 1966; Brehm and Brehm 2013) - and reject the desired behavior.

We propose that if sustainability and vegetarianism have become moralized, then marketing labels that signal these values can be interpreted as a moral pressure to conform, triggering psychological reactance among certain consumers. In particular, non-vegetarian consumers should be more likely to reject vegetarian dishes labelled “Suitable for Vegetarians” and global warming skeptics should be more likely to reject a flight ticket when it signals a “Contribution to Sustainable Travel”. More importantly, to demonstrate that these effects are driven by reactance to moral demands, we show that they are moderated by the self-importance of moral identity, the extent to which consumers consider “being a moral person” a key characteristic of their self-concept (Aquino and Reed 2002). We test these predictions both by measuring and manipulating the self-importance of moral identity.

The first study tested the hypothesis that non-vegetarians with a higher (vs. lower) moral identity will be more likely to reject a dish

labelled “Suitable for Vegetarians”. 184 undergraduate students were presented with a restaurant menu that contained three non-vegetarian dishes, and three vegetarian dishes. There were two between-subject conditions: the vegetarian dishes were either labelled “Suitable for Vegetarians” or not. Participants rated the likelihood of ordering each dish and taste perceptions, completed the moral identity scale (Aquino and Reed 2002) and then indicated whether they were vegetarians or not.

There were very few vegetarians among the participants, so we only analyzed non-vegetarians’ responses. There was no difference in taste ratings between the label conditions. Overall, non-vegetarian participants were significantly less likely to choose the vegetarian dishes when they were labeled (vs. not labelled) “Suitable for Vegetarians”,  $F(1, 164)=4.48, p=.036$ . More importantly, we found a two-way interaction between moral identity and label on preference for vegetarian dishes,  $t(164)=2.77, p<.01$ . As predicted, the rejection of the vegetarian-labelled dishes was significantly stronger among non-vegetarians with a higher (vs. lower) moral identity.

In the second study, we manipulated moral identity in 239 undergraduate students by asking them to write a story about themselves using moral (vs neutral) words (Reed, Aquino, and Levy 2007). As in study 1, participants saw menus either with or without “Suitable for Vegetarians” labels and rated their likelihood of ordering the dishes. We found a marginally significant two-way interaction between the “Suitable for Vegetarians” label and the moral identity prime on the preference for vegetarian dishes,  $F(1,211)=3.32, p=.07$ . Follow-up contrast analyses showed that non-vegetarians exposed to the “Suitable for Vegetarians” label were significantly less likely to choose the vegetarian dishes in the moral identity condition than in the control condition,  $F(1,211)=5.99, p=.02$ .

The third study investigated moral reactance against flight tickets that signal a “donation to Sustainable Travel”. A pretest of 2634 workers on Amazon Mechanical Turk measured participants’ attitudes towards climate change. Participants had to self-categorize as global warming “skeptics” (global warming is not happening), “neutrals” (global warming is happening but may be a natural phenomenon), and “non-skeptics” (global warming is due to human activity). Then, we re-contacted 245 skeptics, 269 neutrals, and 201 non-skeptics for a second study. All participants were asked to choose between two flight tickets with the same date, origin and destination, but a slightly different price and time; one flight departed an hour later in the morning but was \$5 more expensive. A pretest showed that participants were indifferent between the two options. There were two between-subject conditions: the more expensive flight either had a label “includes a \$5 contribution to Sustainable Travel”, or had no such label. Participants indicated their choice, and completed the moral identity scale.

Global warming skeptics, neutrals, and non-skeptics had similar moral identity scores. Not surprisingly, global warming skeptics were less likely than the other two groups to select the more expensive flight when it had (versus did not have) the “sustainable travel” label. More importantly, we found a significant three-way interaction between the belief in climate change, the label manipulation, and moral identity on the choice of flight ticket,  $t(421) = 2.54, p = .01$ . Among global warming skeptics, there was a significant two-way interaction between the Sustainable label manipulation and moral identity,  $t(186)=-2.79, p<.01$ . As predicted, global warming skeptics with higher (vs. lower) moral identity were significantly more likely to reject the flight with the “Sustainable Travel” label.

The three studies together provide converging evidence for our predictions; that sustainability labels cause certain consumers with high self-importance of moral identity to reject the product and shift

their preferences to another one. The findings add to research on morality, and caution marketers against the excessive use of labels that can trigger moral reactance.

### **When Buffers Backfire: Corporate Social Responsibility Reputation and Consumer Response to Corporate Ethical Transgressions**

#### **EXTENDED ABSTRACT**

This research contributes to the inconclusive debate in the field of corporate social responsibility (CSR) on whether a brand’s favorable CSR reputation helps or hurts brands when facing later accusations of corporate ethical transgressions. For instance, car manufacturer Volkswagen had trumpeted low emissions of their diesel cars in marketing campaigns, followed by the well-known emissions scandal in 2015 (Federal Trade Commission 2016). In this research, we explore the influence of mixed (i.e. moral *and* immoral) brand behaviors on consumer attitudes towards the brand by investigating how a brand’s prior CSR reputation affects consumer responses to evidence of corporate ethical transgressions. We find that a positive CSR reputation can act as a buffer against negative reactions to unethical behavior—but it can also backfire, causing a precipitous fall from grace when a brand transgression directly contradicts its reputation.

Our research reconciles contradictory theories and findings on this topic from past studies within a theoretical framework based on the principles of expectancy-disconfirmation in comparative judgments (e.g., Oliver 1977, 1980) and the weighting of extreme values in information integration models (e.g., Anderson 1974; Fiske 1980). We propose two causes for the mixed evidence regarding the effect of prior CSR reputation on consumer responses to corporate ethical transgressions: (1) illusory differences caused by varying cross-study operationalizations of the consequences of transgressions (i.e. outcome variables used), and (2) true differences explained by a previously unexamined moderator—the relatedness of the brand’s transgression domain to its domain of CSR reputation. First, we note that extant studies supporting a buffering effect of a positive (CSR) reputation largely focus on differences between brands in final outcomes, comparing post-transgression attitudes towards brands with positive (prior) reputations versus those with no or negative (prior) reputations (cf. Coombs and Holladay 2006; Eisingerich et al. 2010). However, studies suggesting that a positive CSR reputation can turn into a liability largely focus on change in attitude or behavior after a transgression, relative to a brand’s pre-transgression state (cf. Helm and Tolsdorf 2014; Vanhamme et al. 2015). In our research, we measure both pre- and post-transgression attitudes for brands with positive, negative, and no CSR reputations. We hypothesize that a positive CSR reputation can provide a buffer in terms of final (post-transgression) outcomes, while backfiring in terms of pre- versus post-transgression attitude change. These effects will depend, however, on whether the transgression domain is similar to the domain of the CSR reputation.

Second, because expectations set a reference point for evaluating outcomes (e.g., Oliver 1977, 1980; Skowronski and Carlston 1989), and more unexpected or extreme information is weighted more heavily in information integration processes (e.g., Anderson 1971, 1974; Feldman and Lynch 1988; Fiske 1980), we expect that the ‘relatedness’ of an ethical transgression to a brand’s domain of CSR reputation will interact with the valence of this reputation to influence consumer attitudes. Evidence of transgressions in the same domain as the brand’s positive CSR reputation directly contradicts the brand’s reputation, thereby violating expectations



(Afifi and Metts 1998), and hence gaining in diagnosticity. Unrelated transgressions are likely to be less surprising because they do not contradict consumers' existing beliefs and, additionally, consumers may expect that brands cannot perform well in all domains simultaneously. For brands with positive CSR reputations in a given domain (e.g., voluntarily paying a "living wage"), we expect stronger negative responses to transgressions in a related domain (i.e. sweatshop labor), relative to an unrelated domain (e.g. pollution).

We used a 3 (CSR reputation: positive, negative, no)  $\times$  3 (transgression domain: no transgression, same domain, unrelated domain) between-subjects design. 443 U.S. participants (56.7% male) were randomly assigned to one of the three CSR reputation conditions in the domain of 'paying (un)fair wages', and to one of three ethical transgressions (sweatshop scandal – related domain; pollution scandal – unrelated domain; no transgression). Our dependent variable was attitude towards the brand (Wagner et al. 2009).

A 3  $\times$  3 omnibus ANOVA revealed significant main effects of CSR reputation ( $F(2,434) = 111.38, p < .001$ ) and transgression condition ( $F(2,434) = 275.54, p < .001$ ) on consumer attitudes, as well as a significant interaction ( $F(4,434) = 42.58, p < .001$ ). See table for means and standard deviations. We conducted pairwise comparisons of final, post-transgression attitudes across the three CSR reputation conditions (positive, negative, no CSR): for unrelated transgressions, attitudes were significantly higher for a brand with positive CSR reputation, compared to a brand without CSR reputation ( $p < .001$ ), suggesting a buffer effect. No significant difference ( $p = .43$ ) between positive and no CSR was found for related transgressions. Moreover, post-transgression attitudes towards brands with positive CSR reputations were significantly lower following transgressions in a related domain relative to an unrelated domain ( $p < .001$ ).

To test the second operationalization of transgression consequences, we conducted a series of interaction contrasts. Although the drop from pre- to post-transgression attitude was significant for unrelated transgressions for both, positive and no CSR reputations, the mean differences for attitude change were similar, hence non-significant, across positive and no CSR reputation conditions ( $F(1,434) = 0.10, p = .76$ ). However, for related transgressions, the mean difference was significantly higher for a brand with positive CSR reputation compared to a brand without CSR reputation ( $F(1,434) = 8.64, p = .003$ ), indicating a backfire effect.

Concluding, when comparing brands with positive and no CSR reputations in terms of final, post-transgression outcomes, a positive CSR reputation can buffer brands from negative responses, but only if transgressions are unrelated from the domain of the reputation. This buffer effect is in line with expectancy confirmation perspectives, which suggest that individuals resist negative information when they have learned favorable information about a person or entity before (Coombs and Holladay 2006; Darley and Fazio 1980). On the downside, however, we show that the buffer effect disappears – and even backfires – after a transgression when considering the change in attitude, and when the transgression domain is in the same domain as the CSR reputation.

### Crime and Punishment through the Political Lens: How Liberals Forgive, and Conservatives Punish Ethical Brand Users

#### EXTENDED ABSTRACT

We live in a politically polarized world, and a crucial decision for brands is whether they should take a stance on controversial issues. However, and importantly, even if brands choose not to have a position on any issue, they cannot control their consumers, and these

consumers' actions can shape third-party responses toward the brand (Goh, Heng, and Lin 2013). That is, the same target consumer action can be viewed differently by third parties depending on characteristics of the brands (s)he uses (Olson et al. 2016). This research improves our understanding of factors influencing marketplace moral judgments by examining characteristics of both the target (brand usage) and characteristics of the third party (political orientation) on judgments of consumers performing moral transgressions.

Recent research has dedicated increasing attention to understanding factors that influence judgment and responses to moral transgressions. For example, research has generally focused on how the nature of the transgression—e.g., cleaning toilets with a flag (Haidt, Koller, and Dias 1993)—rather than the person involved (i.e., transgressor) affects moral judgments (Haidt 2001, 2007). Alternatively, observers can make different judgments depending on the target of a given action. For example, most people answer the trolley dilemma differently depending on whether the victim is an in-group member (Swann Jr. et al. 2014). Moral judgments are also colored by the observer's characteristics, for instance, and central to this work, by political orientation (Graham, Haidt, and Nosek 2009). Drawing on motivated reasoning (Kunda 1990), we suggest that characteristics of both the actor and observer interact to predict punitive judgments (i.e., forgiveness and punishment). Importantly, we focus on more ordinary, everyday behaviors (ethical consumption) than those typically examined in moral psychology.

Extending work to looking at negative downstream consequences of judgments about consumers' ethical choices (Olson et al. 2016) and desire for punishment in consumption contexts (Lin et al. 2013), we propose that political orientation moderates the desire for punishment toward users of ethical (vs. conventional) brands committing moral transgressions. Specifically, we show that more liberal (conservative) participants punish less (more) those committing a moral transgression when they are users of ethical (vs. conventional) brands. We also show that perceptions of the transgressor's ethical values mediate this effect. Importantly, we focus on moral transgressions unrelated to the ethical properties of the brand—such as social transgressions committed by environmentally-friendly brand users.

Study 1 demonstrates our basic interaction between brand type and political orientation on punishment intensity. Participants read a scenario where "someone has irresponsibly parked their Toyota [Prius Hybrid (ethical) vs. Camry (conventional) brand] near the store entrance, occupying the last two parking spots available." Participants indicated which fine amount would be appropriate for that person and rated their political orientation (-5=extremely liberal; +5=extremely conservative scale). We found a two-way interaction between brand and political orientation on punishment intensity ( $t(137)=3.01, p < .01; CI_{95}[11.47, 55.37]$ ). Liberal participants (13<sup>th</sup> percentile) punished the Prius user ( $\hat{y}=\$98.45$ ) less than the Camry user ( $\hat{y}=\$189.29$ ), whereas conservative participants (74<sup>th</sup> percentile) punished the Prius user ( $\hat{y}=\$224.28$ ) more than the Camry user ( $\hat{y}=\$151.02$ ).

Study 2 suggests that this effect occurs because of a shift in the perception of the transgressor ethical values, and uses an alternative measure of political orientation. Using the same design and scenario as in study 1, participants were asked to rate the transgressor's ethicality as a potential mediator (e.g., immoral/moral, unethical/ethical; Olson et al. 2016) and answered the same punishment measure. Participants also completed the 7-item Conservatism-Liberal Scale (Mehrabian 1996). We found an interaction between brand and political orientation on punishment intensity ( $t(227)=2.58, p = .01; CI_{95}[6.57, 48.75]$ ). Liberal participants (31<sup>st</sup> percentile) punished the Prius user ( $\hat{y}=\$139.69$ ) less than the Camry user

( $\hat{y}=\$186.66$ ), and conservative participants (95<sup>th</sup> percentile) punished the Prius user ( $\hat{y}=\$182.29$ ) more than the Camry user ( $\hat{y}=\$90.99$ ). Perceptions of the transgressor ethical values mediated this effect  $CI_{95}[2.48,17.03]$ .

Study 3 supports that decision-making biases stemming from marketplace stereotyping explain our effects and tests our framework in a context where the brand is incidental to the transgression. First, we manipulated participants' accountability for either the decision-making *process* leading their punishment decisions (assumed unbiased), or for the *outcome* of their decision (assumed biased; Pitesa and Thau 2013). Participants then imagined they were at a doctor's office. "One of the other people in the waiting room is a lady with a giant [Whole Foods Market (ethical) vs. Kroger (conventional) brand]." The lady had arrived after you did, had been shouting on her cell phone, and was "complaining how she *just can't believe that it's taking this long to see someone!* She says she *wants* to see a physician *NOW!*" Participants answered the same measures as in Study 1. Following a significant 3-way interaction ( $t(431)=3.37$ ,  $p<.001$ ;  $CI_{95}[-75.17,-19.79]$ ), our key effect replicated in the outcome-accountable condition (2-way:  $t(431)=2.79$ ,  $p=.01$ ;  $CI_{95}[8.46,48.66]$ ), but disappeared—and reversed—in the process-accountable condition ( $t(431)=1.95$ ,  $p=.05$ ;  $CI_{95}[-37.97,13]$ ), consistent with a (over) compensating behavior, biased judgment, and motivated reasoning.

Study 4 tests a managerial intervention using branding (i.e., around core performance vs. around ethical attributes) to minimize political biases when promoting ethical brands. Participants read a scenario where someone "has carelessly tossed a [Roaster Blend Ethical Coffee-"More Ethical Beans = Better Coffee" (Ethical) vs. Roaster Blend Coffee-"Better Tasting Beans = Better Coffee" (Conventional) vs. Roaster's Ethical Coffee-"Better Tasting Beans = Better Coffee" (Ethical brand+conventional branding)] cup on the lawn, despite numerous trash cans in sight." Participants answered a measure of punishment from Lin et al. (2013). We replicated our political orientation interaction between the conventional vs. ethical brand conditions (2-way:  $t(180)=-3.66$ ,  $p<.001$ ;  $CI_{95}[-.65,-.20]$ ), but not vs. the ethical brand+conventional branding (2-way:  $t(180)<1$ ;  $CI_{95}[-.27,.17]$ ), suggesting that promoting ethical brands with a focus on core performance (vs. ethical) attributes reduces stereotyping.

This paper makes two primary theoretical contributions to the growing literature examining the downstream consequences of moral judgments in consumption. We i) highlight the interplay between characteristics of the viewer and the target on moral judgments and their consequences and ii) show how relatively trivial consumption decisions can have important consequences for consumers, due to their effect on third-party judgments. Our findings offer important implications for a better understanding of marketplace stereotyping, attribution formation, and ethical branding.

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# Consumption as a Pathway to Love and Trust in Close Relationships

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## **Paper #1: A Preference for Effort when Caring for Close Others**

Ximena Garcia-Rada, Harvard University, USA

Mary Steffel, Northeastern University, USA

Elanor F. Williams, Indiana University, USA

Michael I. Norton, Harvard University, USA

## **Paper #2: Lavish Gifts are Most Satisfying When Given by Your Financial Opposite**

Tiffany Vu, University of Michigan, USA

Jenny Olson, Indiana University, USA

Gabriele Paolacci, Erasmus University, The Netherlands

Scott Rick, University of Michigan, USA

## **Paper #3: Time-Saving Purchases Promote Relationship Satisfaction**

Ashley V. Whillans, Harvard University, USA

Jessica Pow, University of British Columbia, Canada

Michael I. Norton, Harvard University, USA

## **Paper #4: Love, Lies, and Money: Financial Infidelity within Romantic Couples**

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Emily Garbinsky, Notre Dame University, USA

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## **SESSION OVERVIEW**

Close relationships with romantic partners, family, and friends are central to happiness: previous research has documented a robust link between having close, secure, and supportive relationships and happiness in life (Lyubomirsky, Tkach, and DiMatteo 2006). Similarly, close relationships influence daily consumption decisions—given that we are often making decisions with the people that we love and care about in mind (Cavanaugh 2016). This session contributes to our understanding of the critical question of how consumers engage with products and experiences to foster love and trust in their relationships with spouses and families (Gorlin and Dhar 2012; Simpson, Griskevicius, and Rothman 2012). Specifically, the papers in this session discuss four consumption behaviors that impact close others: caregiving (Garcia-Rada, Steffel, Williams, and Norton), gift-giving (Vu, Olson, Paolacci, and Rick), acquiring time-saving purchases (Whillans, Pow, and Norton), and managing shared finances (Garbinsky, Gladstone, Nikolova, and Olson).

The first paper focuses on how consumers feel when they use products and technologies that simplify their caregiving tasks. Garcia-Rada, Steffel, Williams, and Norton show that consumers feel less dedicated and guiltier when they use products and technologies that simplify tasks like caring for their sick spouse or feeding their child because they feel they are taking the “easy way out” rather than being good spouses or parents.

The second paper focuses on gift-giving within married couples. Vu, Olson, Paolacci, and Rick examine how individuals react when they receive a lavish gift from a partner who is otherwise a frequent source of financial distress. Specifically, they find that spendthrifts are most satisfied when receiving a lavish gift from a tightwad spouse, and tightwads are most satisfied when receiving a lavish gift from a spendthrift spouse.

The third paper studies how making time saving purchases together with one’s partner (e.g., hiring a housecleaner) can impact relationship quality. Whillans, Pow, and Norton show that buying time promotes relationship satisfaction because these purchases protect couples from the negative impact of stress, and enable couples to spend more quality time together.

Finally, the fourth paper examines financial infidelity in the context of romantic relationships. Gladstone, Garbinsky, Nikolova, and Olson further understanding of situations in which partners are dishonest about financial decisions. In this paper, the authors develop a scale to measure consumers’ propensity to engage in financial infidelity.

Understanding how consumers make decisions for their loved ones is essential to discovering how to help individuals have better relationships and lead happier lives. This session sheds new light on how consumers use products and experiences to foster and maintain close relationships. All four projects are working papers with at least two studies completed and involve different methodologies (e.g., scale construction, experiments, large-scale surveys) and populations (approximately 9,000 subjects, including college students and working adults). Given the widespread applicability of the issues discussed, we expect this session to attract researchers interested in close relationships, gift-giving, experiential consumption, and financial decision-making. Finally, we hope that these diverse approaches to studying consumer behavior in the context of close relationships will generate a fruitful discussion.

## **A Preference for Effort when Caring for Close Others**

### **EXTENDED ABSTRACT**

New products and services designed to streamline consumers’ lives have made life easier on many dimensions – including making it easier to care for close others. Consumers can now send ecards and egifts to their friends, buy pre-made meals to feed their families, and purchase countless devices that simplify parenting. Yet new products that make caregiving easier come with a cost: when consumers take the “easy way out” when caring for close others, that very ease can signal that consumers are failing to be good friends, spouses, or parents.

Take for example the case of the SNOO Smart Sleeper, a crib that helps infants sleep more through the night by automatically responding to babies’ cries and rocking them gently to sleep. We retrieved social media posts of two articles describing the SNOO Smart Sleeper. Although people acknowledged that this new technology makes parenting easier, several posts included negative judgments such as: “a mom or dad rocking their baby is invaluable bonding” or “more lazy parenting products.” Clearly in some cases, making caregiving tasks easier, more convenient, and less effortful can backfire when consumers feel they have not put ample time, thought, and effort into caregiving.

In the present work, we investigate the emotional consequences of using products that simplify caregiving. Building on work showing that people value effort (Buell and Norton 2011; Cutright and Samper 2014; Olivola and Shafir 2013), we argue that when taking care of close others, consumers will choose more effortful alternatives to signal love and care. In addition, we assess the emotional consequences of using these products, focusing not on how effort impacts valuation of the outcome or object (Norton, Mochon, and



Ariely 2012) but on how it influences consumers' self-evaluations as caregivers. Across several experiments, consumers feel less dedicated and guiltier when they use products that simplify caregiving. This relationship is mediated by symbolic meaning: choosing easier caregiving makes consumers feel that they are doing a worse job of signaling that they care about the recipient.

In Study 1, undergraduates ( $N = 251$ ; 68.5% male;  $M_{\text{age}} = 20.76$ ,  $SD = 1.89$ ) were randomly assigned to make cards themselves or choose a premade card to take care of an elderly relative. Participants who made the card felt more dedicated ( $M_{\text{made}} = 5.28$ ,  $SD = 1.22$ ;  $M_{\text{chose}} = 3.93$ ,  $SD = 1.28$ ;  $t(249) = -8.57$ ,  $p < .001$ ), like they took better care of their relative ( $M_{\text{made}} = 5.17$ ,  $SD = 1.24$ ;  $M_{\text{chose}} = 3.90$ ,  $SD = 1.46$ ;  $t(249) = -7.41$ ,  $p < .001$ ), and less guilty ( $M_{\text{made}} = 2.05$ ,  $SD = 1.23$ ;  $M_{\text{chose}} = 2.78$ ,  $SD = 1.52$ ;  $t(238.22) = 4.22$ ,  $p < .001$ ) than those who chose a premade card.

In Study 2, we provide evidence for our psychological mechanism: symbolic meaning. Participants recruited through Mturk ( $N = 201$ ; 48.8% male;  $M_{\text{age}} = 38.16$ ,  $SD = 11.63$ ) imagined that their romantic partner was sick and was craving a specific soup. Participants were randomly assigned to imagine that they cooked the soup themselves or bought the soup from a store, and answered the same measures as in Study 1. Then, participants answered two items about the functional meaning of the gesture ( $\alpha = 0.86$ ): "To what extent do you think that your gesture achieves the goal of satisfying your partner's hunger," and "To what extent do you think that your gesture achieves the goal of satisfying your partner's craving?" and two questions about the symbolic meaning of the gesture ( $\alpha = 0.84$ ): "To what extent do you think that your gesture achieves the goal making your partner feel cared for?" and "To what extent do you think that your gesture achieves the goal of signaling love to your partner?" Replicating results from Study 1, participants felt as more dedicated, better caregivers, and less guilty when they cooked rather than bought the soup (all  $ps < .001$ ). The effect of effort on emotional consequences was mediated by symbolic meaning. We tested the significance of this indirect effect using PROCESS MACRO (Hayes 2012), 5,000 bootstrapped samples and 95% confidence interval, and entering both symbolic and functional meaning as mediators (symbolic meaning:  $ab = .20$ ,  $SE = .07$ ,  $CI [.09, .35]$ ; functional meaning:  $ab = .04$ ,  $SE = .03$ ,  $CI [.00, .12]$ ).

In Studies 3A-3C, we demonstrate that our effect is unique to caregiving situations that involve close others. In Study 3A, more participants reported they would make a pie from scratch instead of heating a premade pie to cheer up their roommate (46%) than themselves (21%,  $\chi^2(1, N = 199) = 13.69$ ,  $p < .001$ ), even when controlling for quality and price. In Study 3B, more participants reported they would bake cookies instead of buying them from a store for a close friend who was recovering at the hospital (66%) than for a distant friend (34%,  $\chi^2(1, N = 200) = 20.48$ ,  $p < .001$ ). And in Study 3C, more participants reported they would dry their baby manually instead of using an automatic dryer (59%) compared to participants drying their dog (33%) or their car (17%;  $\chi^2(1, N = 301) = 39.01$ ,  $p < .001$ ), even when the automatic dryer was more effective.

In follow-up studies, we addressed alternative explanations and support a self-signaling account. We show that caregivers feel more dedicated when they invest effort even if the recipient is not aware of the effort they invested ( $N = 509$ ). Additionally, we find that the effect of effort on emotional consequences is primarily driven by doing the task oneself and not by investing more time ( $N = 404$ ), and that it holds in both joint and single evaluation ( $N = 282$ ).

Taken together, these studies show that caregivers feel worse when using products that simplify caregiving because these gestures lose symbolic meaning. We provide evidence to support the idea that

products that make things easier for consumers backfire when caring for close others because consumers feel like they are taking the easy way out instead of being good parents, spouses, and friends.

## Lavish Gifts are Most Satisfying When Given by Your Financial Opposite

### EXTENDED ABSTRACT

When are lavish gifts appreciated by recipients? The right amount to spend on a gift is a frequent source of anxiety for givers (Wooten 2000). Unfortunately, the relationship between the amount spent on a gift and recipients' appreciation of the gift is not as straightforward as givers anticipate (Flynn and Adams 2009). Disappointment can be unexpectedly common.

The potential for disappointing gift exchanges seems especially high within married couples, as prior work suggests that financial opposites attract: "tightwads" tend to marry "spendthrifts" (Rick, Small, and Finkel 2011). Tightwads generally find the prospect of spending money painful, and therefore tend to spend less than they would ideally like to spend. Spendthrifts, by contrast, do not experience enough pain when considering spending, and therefore spend more than they would ideally like to spend (Rick, Cryder, and Loewenstein 2008). These common differences within couples raise the question of how spouses' assortment on spending affects how partners respond to the gifts they receive. Tightwads and spendthrifts likely buy different types of gifts, but would partners experience a particular gift differently based on whether it was given by a tightwad or a spendthrift?

Consider a desirable, lavish gift. One possibility is that the identity of the giver is not relevant to the gift recipient's satisfaction. If the little pain experienced by spendthrifts when contemplating purchases is a result of simply enjoying products more intensely, then spendthrift recipients may be more likely to enjoy the lavish gift than tightwad recipients. But there are reasons why the opposite might be true. After all, spendthrifts are often buying lavish goods for themselves, so a lavish gift from a spendthrift spouse may be less special relative to what is already owned. By contrast, tightwad recipients may be more likely to enjoy a lavish gift that they themselves would not buy.

However, previous research indicates that reactions to gifts can be influenced by the identity of the giver (e.g., Paolacci, Straeter, and Hooe 2015), and gift appreciation patterns may be more complex. It is possible that whether one's partner is a spendthrift or a tightwad affects how lavish gifts are perceived. Based on the giver's past buying behavior and/or typical financial tendencies, a partner may infer that a tightwad giver endured a lot of distress to make such a large purchase, and find the psychological sacrifice flattering. Alternatively, financial opposites, who are married to someone with opposing feelings toward spending, may be particularly appreciative of lavish gifts. Given the frequent arguments that occur when tightwads marry spendthrifts (Rick et al. 2011), it is possible that a lavish gift is most appreciated (and perhaps most needed) when it comes from a partner who is otherwise a frequent source of financial distress.

We examined the viability of these different accounts in two studies. In Study 1, conducted three weeks after Christmas, we asked 267 married adults who received holiday gift(s) from their spouse to recall what those gift(s) were and to guess the total amount of money their spouse spent on the gift(s). Participants then indicated how satisfied they were with those gift(s). Finally, participants completed the Tightwad-Spendthrift scale (TW-ST) once for themselves and then again as they think their spouse would respond (as in Rick et al. 2011). We regressed gift satisfaction on the total amount spent by the giver (guessed by the recipient), the recipient's TW-ST score,

the giver's TW-ST score (as perceived by the recipient), and their interactions. In addition to a significant main effect of amount spent (i.e., more expensive gifts were more satisfying), there was a significant three-way interaction. Spendthrifts were most satisfied when receiving a lavish gift from a tightwad spouse, and tightwads were most satisfied when receiving a lavish gift from a spendthrift spouse. In other words, people on the far ends of the TW-ST continuum were happiest when receiving more expensive gift(s) from a spouse on the opposite end of the continuum. (By contrast, participants were least happy when receiving an inexpensive gift from a spouse on the opposite end of the TW-ST continuum.)

Study 2 was designed to address two limitations of Study 1. Study 1 relied on participants' perceptions of their spouse's TW-ST status and their guesses about how much their spouse spent on their gift(s). Study 2 therefore included both spouses (81 couples), so that each spouse could complete the TW-ST scale for themselves. In addition, we asked all participants to imagine receiving the same lavish gift from their spouse. Specifically, we asked participants to imagine that, for their next birthday, their "romantic partner buys you a very nice bottle of wine. Your partner pays about \$100 for the bottle." We asked participants to indicate how happy they would be with their partner after receiving this gift. Using multi-level modeling to account for nesting within couples, we regressed happiness with partner on the participant's TW-ST score (actor effect), their spouse's TW-ST score (partner effect), and their interaction. The results revealed a significant interaction. Consistent with Study 1, spendthrift actors were happiest when imagining receiving a lavish gift from a tightwad spouse, and tightwads were happiest when imagining receiving a lavish gift from a spendthrift spouse.

Thus, two studies suggest that people on the far ends of the TW-ST continuum are happiest when receiving an expensive gift from a spouse on the opposite end of the continuum. This is consistent with the notion that lavish gifts are most impactful when they come from a partner who is otherwise a frequent source of distress (cf. Saad and Gill 2003). Our ongoing research is further examining how lavish gifts are experienced based on the TW-ST status of romantic partners.

### Time-Saving Purchases Promote Relationship Satisfaction

#### EXTENDED ABSTRACT

A persistent source of frustration in romantic relationships stems from household chores. In one nationally representative study of new divorcees, 25% of respondents cited "disagreements about housework" as the number one reason for their divorce; a close third after "infidelity" (40%) and "drifting apart" (35%). New technology offers a potential solution to these conflicts. Companies such as *TaskRabbit* have made it increasingly possible for consumers to out-source any household chore. Recent research suggests that time-saving purchases, such as hiring a housecleaner, can improve personal happiness and reduce stress (Whillans et al. 2017). Yet, nothing is known about whether, when, and why making time-saving purchases together with our romantic partners may promote relationship satisfaction. To explore these questions, we conducted seven studies with employed adults in committed romantic relationships ( $N=3,409$ ).

*Hypothesis 1 Do Time-Saving Purchases Promote Relationship Satisfaction and Why?*

First, we examined whether couples who spent money on time-saving purchases were more satisfied with their relationships. In Study 1a&b ( $N=1,048$ ), respondents reported higher relationship satisfaction if they spent money on time-saving purchases together with their

partner in a typical month,  $d=0.23$ ,  $Z=3.53$ ,  $p<0.01$ , 95%[0.10, 0.36]. These results held controlling for relevant demographics including relationship length, age, number of hours worked/week, number of kids at home, and income,  $B=0.26$ ,  $Z=2.89$ ,  $p=0.004$ , 95%[0.08, 0.43].

In Studies 1a&b, we also examined *why* time-saving purchases promoted relationship satisfaction. Based on prior research (Cohen and Wills 1985; Whillans et al. 2017), we proposed that the benefits of time-saving purchases would emerge because these purchases would 1) enable couples to spend more quality time together, and 2) protect couples from the negative impact of work/life stress on relationship satisfaction. Consistent with the first hypothesis, respondents who spent money on time-saving purchases in a typical month reported spending more quality time together with their partners, which in turn predicted greater relationship satisfaction, *Indirect Effect*=0.21(0.05), 95%[0.12, 0.33]. Consistent with the second hypothesis, we observed a significant interaction between time-saving purchases and work/life stress,  $B=0.19$  (0.06),  $Z=3.22$ ,  $p<0.001$ , 95%CI [0.07, 0.30]. Among respondents who did not spend any money on time-saving purchases ( $N=655$ ), greater work/life stress was associated with lower relationship satisfaction,  $B=-0.14$  (0.04),  $Z=3.16$ ,  $p<0.001$ , 95%[-0.22, -0.05]. For respondents who spent money on time-saving purchases ( $N=389$ ), this relationship was significantly attenuated,  $B=-0.01$  (0.04),  $Z=0.51$ ,  $p=0.610$ , 95%[-0.10, 0.06]. A Fisher *r*-to-*z* transformation confirmed that these beta-coefficients were significantly different from each other,  $Z=2.89$ ,  $p=0.004$ , 95%[0.08,0.43]. These studies suggest that time-saving purchases promote relationship satisfaction by protecting couples from the negative impact of work/life stress on relationship satisfaction and enabling couples to spend happier time together.

In Study 2, we replicated these results with  $N=193$  dyads; there was 84% cross-partner agreement on whether they made time-saving purchases,  $Kappa=0.54(0.07)$ ,  $p<0.001$ . Couples who spent money on time-saving purchases reported greater relationship satisfaction (couple composite time-saving variable:  $\beta=0.17$ ,  $p=0.002$ ; female report:  $\beta=0.19$ ,  $p=0.001$ ; male report:  $\beta=0.11$ ,  $p=0.073$ ). These results held controlling for the demographic covariates described above, and when controlling for the amount of social support that each partner received and provided to one another,  $\beta=0.18$ ,  $p=0.003$ ). Of note, making time-saving purchases was as positively impactful for relationship satisfaction as receiving quality social support from one's partner ( $\beta=0.12$ ,  $p=0.050$ ). Again, these benefits emerged because time-saving purchases enabled couples to spend more time together and protected against stress.

Studies 1a-2 cannot rule out the possibility that happier couples might be more likely to make time-saving purchases. Consequently, in Studies 3a&b ( $N=899$ ), we used a validated recollection paradigm to provide causal evidence that time-saving purchases facilitate feelings of relationship closeness (Chan and Mogilner 2017). In these experiments, participants were randomly assigned to reflect on the last time they had spent \$40 together on a time-saving purchase or to reflect on the last time that they had spent \$40 on a material purchase. Consistent with our correlational data, participants reported greater post-purchase closeness with their partners after reflecting on the last time that they had spent \$40 to save time ( $ps<0.001$ ).

*Hypothesis 2 When Do Time-Saving Purchases Promote Relationship Satisfaction?*

In Studies 4a&b ( $N=1,076$ ), we examined *when* time-saving purchases would be most likely to promote relationship satisfaction. We proposed that time-saving purchases are a form of problem-focused vs. emotion-focused coping—a way of dealing with stress-

ful events that focuses on altering the stressful situation rather than regulating negative emotions associated with the stressful event. Consistent with the Goodness-of-Fit Hypothesis (Folkman, Schaefer and Lazarus 1979), we predicted that time-saving purchases would promote relationship satisfaction when couples were faced with controllable stressors, such as having too many tasks at home and not enough time, whereas experiential purchases would promote relationship satisfaction when couples were faced with uncontrollable stressors, such as an unexpected family emergency.

Participants were randomly assigned to reflect on the last time that they had spent \$40 together with their partner on a time-saving vs. experiential purchase (VanBoven and Gilovich 2003). Participants were asked to report their post-purchase closeness with their partner, and to report on the stressors they had faced seven days prior to making the purchase. Consistent with our predictions, there was a significant purchase-type by stressor interaction,  $B=0.22(0.09)$ ,  $t(1,065)=4.38$ ,  $p<0.001$ . Upon decomposing this interaction, time-saving (vs. experiential purchases) were significantly more likely to promote post purchase relationship satisfaction when couples were faced with controllable vs. uncontrollable stressors ( $p<0.001$ ). In an additional study ( $N=593$ ), we compared time-saving, experiential, and material purchases. Following past research (Whillans et al., 2017; VanBoven & Gilovich, 2003); reflecting on time-saving and experiential purchases promoted greater post-purchase closeness than reflecting on material purchases—yet, once again, time-saving purchases were more effective at promoting relationship closeness when couples were faced with controllable (vs. uncontrollable) stressors.

## Conclusion

Together, these results suggest that the daily purchases couples make together have critical implications for relationship satisfaction. Drawing on research from the social support literature, these findings show that happy couples support each other not just through their actions or words, but also through the purchases that they make together. To best promote happiness, couples should consider making purchases that best fit their daily demands.

## Love, Lies, and Money: Financial Infidelity within Romantic Couples

### EXTENDED ABSTRACT

When it comes to money, romantic partners are not always honest with each other, with couple members often hiding spending, debts, and even savings from their loved one. This form of infidelity is theoretically important to understand, given that both infidelity and financial behavior playing a central role in the health of romantic relationships (Dew, Britt, and Huston 2012; Shackelford and Buss 1997).

The first step to developing an understanding of consumer financial infidelity is to establish a measure that captures consumers' tendency to engage in financial infidelity behaviors at an individual level. Therefore, in this work, we develop and validate a scale (the FI-Scale) to measure financial infidelity within romantic relationships. We demonstrate that the FI-Scale is distinct from related scales and predicts real financial infidelity above and beyond other individual-level measures, including dishonesty and consumers' propensity to engage in sexual and emotional infidelity.

### Pilot, Study 1 and Study 2: Item Generation, Purification and Test-Retest Reliability

We identified archetypical behaviors that represent the financial infidelity construct by asking open-ended questions to 150 married individuals (52.7% male,  $M_{age} = 39$  years). We identified six main

types: (1) hiding or lying about spending; (2) hiding or lying about savings; (3) creating debt without telling spouse; (4) giving money to others; (5) gambling without telling spouse; (6) hiding or lying about income.

We used these categories to generate 30 items to measure financial infidelity, and these were administered to a sample of 857 married participants via MTurk. After performing a series of item purification analyses, we found a 12-item the scale to have the strongest psychometric properties, and a Confirmatory Factor Analysis (CFA) revealed that the 12-item model ( $RMSEA = .077$ ;  $SRMR = .039$ ;  $CFI = .939$ ) had acceptable model fit. We then examined the test-retest reliability of the FI-Scale by recruiting a new set of participants ( $N=968$ ; 33.1% male,  $M_{age} = 40.6$  years,  $SD = 11.56$ ) and followed-up with them six weeks later. With a 51% response rate, the intraclass correlation coefficient (ICC) of .72 suggested an acceptable level of stability over time.

### Study 3: Relationships Between the FI Scale and Related Constructs

We examine the relationship between the FI-Scale and 29 potentially related scales. To assess the FI-Scale's nomological validity, we included scales that were conceptually similar, such as general intentions toward infidelity and secrecy (Jones et al. 2011; Slepian, Chun, and Mason 2017). Across two samples of participants ( $N=619$ ), the results reveal correlation coefficients ranging in strength between .01 (i.e., extraversion and relative power within the relationship) and .61 (i.e., financial harmony). We demonstrate that the FI-Scale is empirically distinct from Rick et al's (2011) measure of financial harmony, the most similar scale, by using a confirmatory factor analysis on all the financial infidelity and financial harmony items together. This revealed a substantially better fit for a two-factor model than for a one-factor model ( $\Delta\chi^2 = 671.59$ ,  $p < .001$ ).

Across the correlations with the 29 scales, we identify three different "clusters" of interest. First, the FI-Scale is positively associated with measures of primary psychopathy (Levenson, Kiehl, and Fitzpatrick 1995), machiavellianism (Christie and Geis 2013), and psychological entitlement (Campbell et al. 2004), which all capture a willingness to deceive others for personal gain. Second, responses to the FI-Scale were positively associated with self-concealment (Larson and Chastain 1990), or the active concealment of personal information that one finds distressing. Third, the results reveal a negative association between the FI-Scale and general self-control (Tangney, Baumeister, and Boone 2004). These findings are consistent with previous research; for example, those low in self-control engage in more inappropriate or undesirable sexual behavior (Gailliot and Baumeister 2007).

### Study 4: Predictive Validity in the Field

To examine whether the scale is predictive of actual behavior, in study 4 we use real, consequential decisions, to demonstrate that participants' FI-Scale scores predicted their decision to hide information about gambling-and-losing money from their spouse. We designed a field study that presented married couples with an opportunity to gamble shared resources and ultimately withhold that information from each other. We recruited a total of 65 married couples ( $N=130$ , 50% male,  $M_{age} = 51.9$  years,  $SD = 38.34$ ), with each spouse completing a few personality measures (including the FI-Scale) privately before being "randomly selected" for a seemingly unrelated task. Importantly, each spouse had the opportunity to receive the bonus directly or try quadrupling the amount with a new random number generator, which was rigged to lose. Among spouses who chose to gamble shared resources, we predicted and found evidence that



participants with higher FI-Scale scores should be associated with a greater likelihood of withholding financial information from their partner. The higher their FI-Scale score, the greater the likelihood of hiding the gambling-and-losing outcome from their spouse ( $b = 4.59$ ,  $t(60) = 2.03$ ,  $p = .0046$ ).

### Study 5: Criterion Validity of Financial Versus Romantic Infidelity

Study 5 demonstrated that the FI-Scale can predict actual behaviors constituting financial infidelity above and beyond other individual difference measures of (i) romantic infidelity in relationships or (ii) general unethical tendencies. We recruited 232 married participants on MTurk (54.7% female,  $M_{age} = 35.85$ ), who were asked questions on whether they had engaged in a series of romantic and financial infidelity behaviors **without telling their spouse**. As expected, the FI-Scale was a significant predictor of financial infidelity behaviors ( $\beta = 0.62$ ,  $t(217) = 10.68$ ,  $p < .001$ ), while neither participant's intentions to engage in romantic infidelity nor a measure of their general dishonesty were significant predictors ( $p > .05$ ) when entered simultaneously into a regression model.

### Discussion

Our research provides several contributions, including: 1) introducing and defining the construct of financial infidelity in the consumer behavior literature; 2) identifying a specific set of behaviors that constitute financial infidelity and 3) developing a reliable instrument to measure consumers' propensity to engage in financial infidelity. It is our hope that these insights can be used to identify the reasons for engaging in such behaviors, with the goal of reducing their occurrence in marriage and increasing financial harmony and happiness among couples.

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# Brands as Mediators

Chair: Philipp K. Wegerer, University of Innsbruck, Austria

## **Paper #1: Brands as Mediators: A Research Agenda**

Philipp K. Wegerer, University of Innsbruck, Austria

## **Paper #2: Brands as Social Mediations**

Andrea Hemetsberger, University of Innsbruck, Austria

Hans Mühlbacher, University of Monaco, Monaco

Eric Arnold, Aalto University School of Business, Finland

## **Paper #3: The Re-Mediation of Consumer/ Brand Relationships Through Voice Shopping: The Case of Amazon Echo**

Johanna Gollnhofer, University of Southern Denmark, Odense, Denmark

## **Paper #4: Mediation as a Multi-Dimensional Process of Brand-Related Interaction**

Serena Wider, Copenhagen Business School, Denmark

Andrea Lucarelli, Lund University, Sweden

Silvia von Wallpach, Copenhagen Business School, Denmark

### **SESSION OVERVIEW**

Technological advancements, such as the emergence of social media networks, and new ways of life and consumption have fundamentally altered the way consumers relate to brands. Consumer-brand relationships have been found to be increasingly ephemeral (Bardhi and Eckhardt, 2017), and to be less tight than prior research suggested (Arvidsson and Caliandro, 2016). Consumers use brands as attention attractors in a growing culture of consumer ‘micro-celebrities’, or as elements of assemblages of branded consumer selves (e.g. Marwick 2015; Rokka and Canniford 2016) in other words, brands seem to partly lose their cultural authority (e.g. Holt, 2002). In a networked world, brands develop new social functions, such as mediating online publics (Arvidsson and Caliandro, 2016), enabling meaningful or discursive connections with and among consumers (e.g. Schöps, Wegerer and Hemetsberger, 2017). These developments render traditional perspectives of consumer-brand relationships problematic, and raise the question: What is the social function of brands in our contemporary, networked consumer society?

This special session combines four research projects that theorize on brands as mediators among different entities, that is, people, meaning, and tangible forms of the reified brand. The contributions are interested in two aspects: (1) gaining further understanding of/ to theorize on mediation as a social process that characterizes contemporary brand relations, (2) as well as describe various forms and specificities of brand mediation (processes) among a variety of stakeholders. The four contributions are united by an understanding of brand as mediators of social, organizational and managerial processes, which sets the focus of inquiry on interactions as the ultimate sources of value creation. This implies a view of branding as facilitating, structuring or constraining the interaction between two or more parties. The term mediation has been used in a variety of studies on brands and branding processes (e.g. Mumby, 2016; Kornberger, 2010; Arvidsson and Caliandro, 2016; Luedicke, Thompson & Giesler, 2010), and is generally used as a term whose meaning is self-evident, i.e. a term that explains, rather than a concept that is to be explained. This special session takes an in-depth look on mediation and provides empirical and conceptual contributions that develop mediation into an analytical concept that can be used to understand a broad variety of branding processes.

The session consists of four presentations. The first presentation takes an in-depth look at the term mediation itself and develops three

analytical directions for studying brand-mediation processes. The second paper is also of conceptual nature and develops the notion of brands as complex social representations and mediations. The third study is empirical in nature and explores how new technological devices alter the way consumers relate to brands. The fourth study contributes to the overall theme by conceptualizing mediation as a multi-dimensional process of brand-related interaction and analysing it via socio-material artefacts.

### **Brands as mediators: A research agenda**

#### **EXTENDED ABSTRACT**

This research project intends to contribute to our understanding of how brands and branding processes unfold in organizational, managerial and social contexts. Traditionally, branding is seen as a one-directional communication process, e.g. a sign attached to an entity that signifies some sort of meaning. This paper suggests that brands and branding processes mediate the interactions between different entities. Understanding branding as a mediation process extends the traditional, semiotic perspective by highlighting that branding can be understood as a multi-directional interaction process that unfolds between multiple entities. The analytical benefit of understanding branding processes in terms of mediation is, that it sheds light onto the interactions that are facilitated through branding. This implies a view of branding as being an important facilitator, that structures or constrains the interaction between two or more parties.

Brands are in between. Brands connect organizations with consumers, products with meanings, employees with their employer (Land and Taylor, 2016; Wegerer and Munro, 2018, Wegerer, 2018), and consumers with each other (Muniz and O’Guinn, 2001, Arvidsson and Caliandro, 2016). The increasing social significance of brands has generated a growing body of contributions in a diversity of fields including Marketing, Strategy, Consumer Research, Semiotics and Organization Theory. Each discipline studies particular branding processes, applies different analytical tools and uses different theoretical approaches. This conceptual paper takes the plurality of brand research as a starting point and suggests that at the very heart of branding is a process that mediates the interactions between different entities. It suggests an understanding of the term mediation that focuses on the role of the brand as the third party in enabling or structuring the interaction of two other parties. First and foremost, brands are a sign attached to an entity, created for the purpose of generating value and distinction for products, companies or any other entity they are attached to. Branding can also be understood as a set of activities, mainly executed by managers, but can also comprise activities from other stakeholders such as employees and consumers (Hemetsberger and Mühlbacher, 2014). The result of branding practices are brands, which can be understood as “a constellation of signs through which processes of social interaction and communication are mediated and captured and hence transformed into economic value” (Mumby 2016, 6).

The term mediation has been used in a variety of studies on brands and branding processes (e.g. Mumby, 2016; Kornberger, 2010; Arvidsson and Caliandro, 2016; Luedicke, Thompson & Giesler, 2010), and is generally used as a term whose meaning is self-evident, i.e. a term that explains, rather than a concept that needs to be explained. This paper takes an in-depth look at the term mediation itself, and develops it into a concept that can be used to understand

a broad variety of branding processes. What exactly is mediation? Mediation can be understood as a social process in which a third party (the brand) structures the interaction between two other parties. That there is some manner of interaction is inherent to the notion of mediation. The interaction can take on different qualities, such as being positive (Kozinets, 2001), neutral, or can have a tension (Thompson and Arsel, 2004, Wegerer and Munro, 2018), or conflict situation (Luedicke, Thompson and Giesler, 2010). This study finds that in the case of branding, there is mainly an interaction between two parties, or a conflict that is more or less latent in nature.

The mediation perspective suggests to explore how brands mediate (mediation processes), what brands mediate (the nature of interaction), and between whom they mediate (parties, stakeholders, entities). The how perspective implies to identify, explore and explain specific brand-mediation process at work. Mediation processes are highly dependent on the parties between which brands are mediating. The parties between whom brands mediate can have different ontological qualities. Brands can mediate between very real existing stakeholders, such as consumers (Schöps, Wegerer and Hemetsberger, 2017), employees (Hatch and Schultz 2003, Wegerer and Munro, 2018; Wegerer 2018), NGOs and organizations, but brands can also mediate between more abstract concepts such as values, ethics, ideas or social conflicts and categories (Wegerer and Munro, 2018). Brand mediation can happen between an organization and any internal or external stakeholder, such as management, management and consumers, management and employees (Botschen and Wegerer, 2017) or between two external stakeholders such as when a brand provides a mediation platform for the social interaction between consumers (Schöps, Wegerer and Hemetsberger, 2017). A third possibility would be when a brand mediates between a stakeholder, such as a consumer, and a more abstract sphere, such as a contradiction in the consumers' life or a certain discourse in society (Wegerer and Munro, 2018). This leaves us with the last dimension of what is mediated, i.e. the nature of interaction that is mediated. The interaction is of course linked to the ontological quality of the parties between whom the brand mediates. The what refers to any issue that is capable of creating an interaction between two parties. Looking at the management as a possible party, we will see that the interactions are related to managerial tasks, such as the management of organizational identity, the communication with organizational members, or how to govern organizational change projects (Botschen and Wegerer, 2017). Employees' questions tend to resonate around issues such as meaning, coping with contradictions, and motivation. Finally, looking at the stakeholder groups of consumers and society, conflicts that emerge include: responsible consumption, ethical buying decisions.

### Brands as social mediations

#### EXTENDED ABSTRACT

Branding has grown out of the business domain and firm authority (El-Amir and Burt 2010) and become a ubiquitous practice in contemporary networked society. Consumers not only engage in symbolic work and co-create brand meaning and value (Hatch and Schultz 2010); digital networks enable consumers to co-design; co-develop; individualize; personalize, link to, and hashtag brands for their own purposes of self-branding, publicity and identity construction (Arvidsson and Caliandro 2016; Marwick 2015; Rokka and Canniford 2016). In a networked world brands have become mediators of relationships among people, providing meaningful genres of content manifested in objects, experiences, people, places, and networks. Building on the premise that brands *mediate* interactions among different entities, this paper reviews extant literature in di-

verse fields and provides a detailed and comprehensive process perspective on brands. We introduce social mediation theory as theoretical lens to capture and extend existing theorizations of branding, and inform future branding research.

Scholars in branding and consumer research make several implicit suggestions how 'branding' occurs in several contexts and complex social brand arrangements. As brands find more public and varied expressions, consumer research and branding literature suggest more encompassing and agency-based theories to account for these complexities and new functionalities of brands in a technology-determined society. Recent conceptualizations include multiple, networked, human and non-human actors in branding (Jones 2005; Diamond, Sherry, Muñiz, McGrath, Kozinets and Borghini 2009; Merz, He and Vargo 2009; Onyas and Ryan 2015), emphasizing the sociomateriality character of brand constellations (Lucarelli and Hallin 2015; von Wallpach, Hemetsberger and Espersen 2017). Assemblage theoretic perspectives consider brands as loose assemblages of heterogeneous elements, including people, things, material and expressive elements, all of which contribute to an understanding of the mechanisms and logics of brands in a networked world (DeLanda 2006; Lury 2009; Onyas and Ryan 2015; Parmentier and Fischer 2015). Drawing on these perspectives, we understand brand mediation as processes that occur among brand elements in the broadest sense, which are people (multiple actors), objects (manifestations of sociomateriality), and its expressions (captured in brand meaning). We apply social mediation theory to understand the dynamics among these elements.

As suggested by Jovchelovitch (1995a, 1995b), social mediation constitutes the bridge between individual and social activity. Defined as process of communication or vivid experience mediating between the individual and the public sphere, social mediation comprises all discursive interactions among social actors, such as public dialogue, rituals, art, and patterns of work and production. Acknowledging that manifestations, meanings and brand interested actors are interrelated on an individual and social level, this study is interested in concrete processes that mediate the individual and social sphere, and contribute to an understanding of how social interaction forms individual thought and action and vice versa; how, for instance, brand fans create desire in individual consumers; how consumption in the private domain creates and alters brand objects and ideas; how consumers' ideas become public or how public brand articulations become anchored in individuals' everyday thinking. Drawing on Jovchelovitch's mediation perspective and including contemporary views of branding, we assume that the individual and the social sphere interrelate in a non-hierarchical manner, that individuals, objects, the social—all together build socio-material spheres of branding.

Our literature review results in a comprehensive set of mediations, categorized and integrated in a social mediations framework of brand. We find practices of individual and collective *engagement* through documentation and negotiation of meaning, as well as in processes of familiarization and figuration as a means to translate brands into a reified nucleus or image. *Impression management* contributes to the continuous creation of brand meaning amongst a network of a brand interested collective through forms of advocacy, persuasion but also through antagonistic practices. Brand manifestations result from various *collaborative* and *collective co-production* practices, and *brand use* in private and public domains. Mediating practices, for example, include several forms of ritualization, personalization, brand emplacement in several media and (sub-)cultures as forms of brand use, as well as concrete productive work, and all genres of brand communication. Social actors interested in a brand

apply *self-affiliation*, *co-member identification* and *social networking* practices, including identification, socializing, mobilization, recruitment, education, socializing and brand governance to negotiate legitimate participation in brand interactions. Overall, we find that brands processes comprise various forms of socially mediated *narrations* of brand meaning that *translate* into and gain momentum in their manifested form as organizations, objects, ideas, or people, and that *connect* brands and their public. We illustrate these mediation processes with real branding cases.

The paper makes several contributions to branding theory and consumer research. First, it includes consumers and other publics, brand meaning and manifestations in a comprehensive view of brand (assemblages). Second, it draws attention to the innate nature of new media where both, the individual and the networked public, are visible and in permanent exchange in that it integrates individual and social levels, and describes how these levels are socially mediated. Third, the paper is first to provide a catalogue of social mediations, which form and transform brands, and conceptualize brands as processes that connect objects, ideas, meaning, consumers and the interested public. In doing that, we propose a new perspective on branding as mediation among people, objects and meaning that prioritizes the facilitating role of brand management much more than the managerial one. Our view also acknowledges the increase in access-based, ephemeral, dematerialized, and more fluid nature of consumption (Bardhi and Eckhardt 2017) and puts emphasis on social mediations that *connect* brand and users network as, for example in the case of Uber; that *translate* consumer needs into concrete action and orders, as for example via Amazon Echo and Google Home, and that produce brand *narratives* that become meaningful to an interested public. In other words, brands as mediators are meaningful narrations translated into branded offers that are characterized by the capability to connect heterogeneous brand elements.

### The re-mediation of consumer/ brand relationships through voice shopping: The case of amazon echo

#### EXTENDED ABSTRACT

Brands help consumers to make sense out of products in purchasing decisions (e.g., Keller 1993; McCracken 1986). Brands mediate between products and consumers especially in industries where products are perceived as alike and/or almost interchangeably. Take for instance Fast-Moving-Consumer-Goods (FMCG), where toothpaste or shampoo are barely differentiable except for their brand. Visual clues such as packaging and brand logos help consumers to navigate through the jungle of choice (Ampuero & Vila 2006; Underwood 2003).

The rise of voice shopping (for instance Amazon Echo or Google Home) harbors two major changes: First, consumers cannot rely on visual clues for their sensemaking in purchasing decisions. Second, agency is shifted from consumers to voice assistants, i.e. voice assistants take a more proactive role (Rijsdijk and Hultink 2003; Rijsdijk and Hultink 2009) in considering and selecting products. For instance: When asking Amazon Echo to buy some batteries, Alexa will suggest some batteries of her choice and ask the consumer whether s/he wants to purchase them. This fundamentally questions the role of FMCG brands in voice shopping. This paper is interested in exploring the role of FMCG brands in voice shopping. By taking a consumer-centric perspective it asks the following research question: *How do consumers employ brands in voice shopping for FMCG products?*

As the technology is only emerging, this paper relies on an explorative approach that allows for adductive theory building (based

on interviews and netnographic data). FMCG products were chosen as they rely on strong visual clues in the shopping process. Data analysis followed an iterative coding process (Spiggle 1994). Preliminary insights show that consumers use three tactics in voice shopping: (1) habitualization, (2) commodification and (3) delegation. Those tactics help consumer to make shopping decisions based on vocal clues.

Consumers engage in habitualization when naming the name of the brand that comes first to their mind when thinking about a specific product category. For instance: They ask Alexa to order Pampers or Duracell instead of batteries or diapers. Informants mentioned that this simplifies sensemaking in the “competitive product jungle” (Quote from Lucia) that is perceived as far more complex as visual clues are absent. As voiced by Andreas:

*“It is really difficult to imagine how a product looks like and what the actual product. So I just go for the brands where I know how they look like. I can visualize the packaging in my mind. And then I order this brand.”*

Habitualization favors strong and well-established brands in voice shopping and limits browsing. Commodification focuses consumer attention on price considerations. Data collection shows that consumers often go for the cheapest and not for branded products. As expressed by Sabrina:

*“I always used to buy Pantene shampoo. But with Alexa I order a different shampoo. I also do not really know why. I think I just listen to the prices that Alexa tells me. And then I go for the cheapest one. Is there any difference between shampoos?”*

This quote illustrates how voice shopping diffuses consumer prior brand preferences and puts more emphasizes on price considerations.

Delegation refers to attributing more agency to the voice assistant in the purchase decision. Says Michael:

*“Alexa learns from algorithms. So she kind of brings an objective assessment to the purchase decision. So why shouldn't be the bestseller on Amazon also not be best for me? I basically almost every time take the first product that is suggested by Alexa.”*

Michael delegates the sensemaking in purchase decisions to Alexa based on his rationalization that such assistants yield superior decision making processes and outcomes.

Those three tactics allow consumers to engage in sensemaking in purchasing decisions without visual clues. The tactics work as a form of simplification heuristics that harness complexity in sensemaking by drawing on prior brand knowledge, focusing on price considerations and delegating control and agency to voice assistants. This consumer perspective yields interesting insights for brand management in the vocal age: Based on the preliminary results it is expected that consumers will browse less when voice shopping for FMCG goods. Further, strong brands at the top of the mind will reap the majority of the market and Amazon – through its humanized retail brand of Alexa – will have the power to mediate between FMCG brands and consumers.



## Mediation as a multi-dimensional process of brand-related interaction

### EXTENDED ABSTRACT

The paper departs from a view of brand as processual spatio-temporal constructions (Lucarelli and Hallin, 2015; Mühlbacher and Hemetsberger, 2008; Vallaster and von Wallpach, 2013; von Wallpach, Hemetsberger and Espersen, 2017). These constructions are continuously manifested, interpreted and re-interpreted via brand-related socio-material artefacts (e.g., brand-related images and text), in dynamic interactive assemblages (von Wallpach et al., 2017; Lury, 2004). Socio-material artefacts materialize, and perform, what is called the brand form. A form is the material of social interaction (e.g., websites, images, texts). Forms also have content (i.e., they manifest cognitive-symbolic representations; see Reckwitz, 2002). It follows that the form consists of materialized social interaction, which at a metaphysical level represents a processual social abstraction of shared meaning, involving shared world-views, realities and culture (Simmel, 2009). In its materialized manifestations, the brand form mediates brand-related social interaction by providing temporarily shared objectified and collective ways of seeing the world that continuously structure and re-structure the socio-material performing of brands (e.g., Laltheide and Snow, 1988).

The present paper thus proposes that mediation occurs dynamically as a multi-dimensional process of interaction. Brand form is identified as the locus of mediation. Socio-material artefacts perform shared cognitive-symbolic realities of brand form. The brand form, in turn, “directs and informs social activity” (Laltheide and Snow, 1988, p.194) in interrelated and dynamic brand assemblages, hence mediating brand-related social interaction. Manifesting as brand-related socio-material artefacts, brand-related interaction feeds back to the shared cognitive-symbolic realities of this brand form, shaping the shared meaning that underlies and further mediates the continuous social interactive processes constituting the brand.

To illustrate this theoretical conceptualization the authors discuss a case based on the branding of the city of Stockholm. Building on the work of Rose and Tolia-Kelly (2012) on visibility/materiality, the authors analyze socio-material artefacts as performances of cognitive-symbolic constitutions of multiple stakeholders’ shared realities. These cognitive-symbolic constitutions are materialized (i.e., objectified) in brand forms (i.e., brand-related socio-material artefacts), which are in turn interpreted and re-interpreted by others who interact in these brand forms (Rose and Tolia-Kelly, 2012). These multiple performances both constitute and represent the brand form, consciously or unconsciously.

The analysis proposed by Rose and Tolia-Kelly (2012) is appropriate for understanding how the brand form functions as locus of mediation in a multi-dimensional process of interaction, since it considers materialized social interaction (i.e., forms) and the shared cognitive-symbolic realities that comprise these materializations (i.e., socially shared and implicit ways of understanding; Reckwitz, 2002). First and foremost, by its cognitive-symbolic incorporation of brand-related socio-material artefacts, the authors engaged in a reflexive analysis of the co-constitution of continual dialogue; that is, based on multiplicity (e.g., parallel observations and performances among selected stakeholder groups), rather than singularity (sequential observations). Multiple parallel performances reveal an aggregation of shared brand-related cognitive-symbolic realities that may or may not be part of major clusters of aggregative experiences (e.g., the representational) (cf. Rose and Tolia-Kelly, 2012).

The analysis focuses on 183 brand-related socio-material artefacts of the city of Stockholm, comprising of images and text avail-

able across 108 web-pages accessed via the search engine Google (cf. Rose and Tolia-Kelly, 2012). Based on the empirical material, the authors propose that brand-related socio-material artefacts are a cognitive-symbolic articulation of performances of this brand form. The collective aggregation of these cognitive-symbolic performances materializing in socio-material artefacts dynamically expresses and constructs the brand form at a metaphysical level. The brand form, materialized in website design, images and text is loaded with shared cognitive-symbolic realities that are typically shared among the same stakeholder groups (e.g., municipalities, tourist agencies, consumers). These cognitive symbolic realities in turn mediate brand-related interaction, and constitute the continual becoming of brands.

Examples of mediation through the Stockholm brand form are related to language (Swedish vs. English), ideology (capitalism vs. Marxism), and geography (Copenhagen vs. Stockholm). Socio-material artefacts are loaded with brand-related elements in images and text expressing cognitive-symbolic realities, such as ironic, political, ideological and personal. In all of these brand forms or materializations (e.g., Stockholm as the capital of Scandinavia) the brand form acts as the locus of mediation in a multi-dimensional process of interaction. Importantly, the Stockholm brand form is not only mediating brand-related interaction in a positive way (e.g., Stockholm as the capital of Scandinavia), but also fosters rather negative performances, contributing to a view of the Stockholm brand as not being the true capital of Scandinavia. These negative socio-material performances often entail an element of influence and aim to pursue the intent of de-stabilizing an overall representational view of the brand. These views are also manifested in socio-material performances expressing cognitive-symbolic idiosyncrasies related to stakeholders’ perceptions of themselves (in relation to the brand) as being ‘open-minded’ and ‘progressive’, as opposed to what they expect Stockholm to be like. Even in these socio-material performances, the brand form of Stockholm as being the capital of Scandinavia still mediates idiosyncrasies of those who oppose to this representational view. That is, stakeholders make efforts to distance themselves from the representational brand form by resisting to what this representational form represents.

In conclusion, this paper proposes and empirically illustrates a conceptualization of mediation as multi-dimensional process of brand-related interaction. The findings suggest that the brand form, continuously preformed (e.g., materialized) via brand-related socio-material artefacts, mediates brand-related social interaction; which in turn feeds back into the the shared cognitive-symbolic realities of this brand form. This multi-dimensional process thus constitutes the continuous becoming of brands.

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# Attentional Biases in Comparisons for Both Happiness and Choice

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## Paper #1: Looking to the Front of the Pack: Perceptions of Ranked Lists

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Alixandra Barasch, New York University, USA

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## Paper #2: The Pros and Cons of Pros and Cons: Consumer Deliberation has Opposite Implications for Post-Choice Satisfaction and Consistency

Alexander DePaoli, Northeastern University, USA

## Paper #3: Social Attention Increases the Hedonic Impact of, Social) Comparison

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Meng Zhu, John Hopkins University, USA

Eva C. Buechel, University of South Carolina, USA

## Paper #4: How Incentive Framing Can Harness the Power of Social Norms

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## SESSION OVERVIEW

Given consumers' limited attentional resources, the spotlight of attention must be directed toward a subset of information (Cherry 1953). While prior work has examined how attention toward certain pieces of information may amplify its weight or importance (Towal, Mormann, and Koch 2013), or may affect consumer choice (Atalay et al. 2012), it has been relatively mute in regard to whether this may be a good or bad thing. However, it is possible that the specific subsets of information on which people focus are not always optimal. The goal of this session is to explore whether the information to which people attend optimizes their satisfaction with the decisions they make, the social norms they deduce, and the products they choose.

More precisely, when does concentrating attention on specific information work to consumers' benefit or detriment in purchasing decisions and social scenarios? Why do consumers focus on certain information in purchase and social contexts, and when and why is focusing on that information an aid or a hindrance? These questions serve as the cornerstone to this session. The first two papers in this session concentrate on cases in which consumers focus on specific information that is either uninformative or even detrimental to their happiness and satisfaction. Papers two and three explore how relative attention plays a role in happiness or decision satisfaction, in the cases of both product choice and experiences. Papers three and four transition into considering social contexts, as paper three examines social versus non-social counterfactuals, while paper four extends the consequences of attention to perception of social norms and subsequent behavior.

Specifically, **Weingarten, Barasch, and Davidai** present work suggesting that despite their equivalent diagnosticity, people overly focus on higher ranked competitors instead of lower ranked competitors. This asymmetry influences their choices about how to allocate resources and their overall happiness. Next, **DePaoli** showcases studies in which deliberative consideration of options leads people to attend to and overweight good reasons to make a purchase even if they don't like the choice. This decision process boosts commit-

ment to that choice while also reducing satisfaction with it. Third, **Morewedge, Zhu, and Buechel** present findings in which hedonic contrasts for an experience compared to its alternative may be larger in the case of social counterfactuals (i.e., another person experienced the alternative) versus not (i.e., a foregone alternative). The salience of focal experience moderates this effect, suggesting that greater attention to social comparisons drives the differences in hedonic contrasts. Fourth, **Lieberman, Duke, and Amir** highlight findings that drawing attention to an incentive for a behavior framed as a cost (versus a discount) leads people to perceive that behavior as more normative and to engage in healthier and more environmentally-conscious behaviors (e.g., using hand sanitizer, bringing a reusable shopping bag).

Overall, these papers demonstrate various ways in which biased attention processes can affect consumer happiness and choice in product choice, social, and environmental contexts. This session should therefore be of interest to those studying attention, judgment and decision-making, hedonics, social comparisons and counterfactuals, and retailing.

## Looking to the Front of the Pack: Perceptions of Ranked Lists

### EXTENDED ABSTRACT

Imagine participating in a spin class in which your class ranking is displayed on a large television in the front of the room. You spend thirty minutes in third place, eagerly trying to pass the person in second. But, just as the class approaches its ending, out of nowhere the person in fourth overtakes you, leaving you bewildered, and wondering how you didn't see it coming.

Many areas of life involve rankings or ordered lists—colleges and graduate schools, professional sports and fantasy sport leagues, wealthiest and most successful individuals, and so on. Knowing one's place in a ranking is important both for evaluating one's performance and informing future decisions, and individuals may look to higher and lower ranked others to get an accurate sense of how well they are doing. Of course, both pieces of information are important, with higher ranked competitors providing information about how to improve one's standing and lower ranked competitors providing information about how to avoid falling behind (Locke and Latham 1990).

But are lower ranked competitors given the same consideration as higher ranked competitors? People typically desire to advance towards something desirable such as the top of a ranking (Higgins 1987), believe that rising up in rankings is more likely than descending (Davidai and Gilovich 2015), and perceive changes in their abilities in terms of improvements rather than declines (Molouki and Bartels 2017; O'Brien and Kardas 2016). Similarly, we argue that people may focus disproportionately more on higher ranked competitors than lower ranked competitors, even when that is not necessarily more diagnostic. And, given that unfavorable comparisons can be detrimental to one's well-being (Lockwood and Kunda 1997; Rogers and Feller 2016), we argue that this asymmetry in attention can lead people to feel worse off about themselves. In nine studies (N = 1498), we demonstrate that this asymmetry in attention drives people's choices in what information to acquire, how happy they feel about their relative performance, and how they choose to invest their efforts to improve.



First, we demonstrate that participants are more interested in learning about the performance of higher ranked others than lower ranked others. In Studies 1a-1c ( $N_{1a} = 131$ ;  $N_{1b} = 142$ ;  $N_{1c} = 100$ ), participants completed four *Where's Waldo* search tasks as quickly as they could. Following, participants learned their own score and were informed that they had placed fifth out of nine participants but were not provided information about other participants' scores. They were then given the opportunity to learn how other competitors scored in the task and were asked to indicate their preference for which players' scores to reveal—the score of higher ranked participants or the score of lower ranked ones (e.g., do you prefer to learn the score of the 4<sup>th</sup> ranked participant or the 6<sup>th</sup> ranked participant?). In the first study, a vast majority of participants preferred to see information about the scores of higher ranked participants (i.e., 1<sup>st</sup>-4<sup>th</sup>) compared to lower ranked participants (i.e., 6<sup>th</sup>-9<sup>th</sup>; 87%;  $\chi^2(1, N = 131) = 71.82, p < .001$ ). We replicate this result in a second study (93%;  $\chi^2(1, N = 142) = 104.82, p < .001$ ) and conceptually replicate it with a different measure in which participants indicated their most to least preferred scores to reveal (85%,  $\chi^2(1, N = 100) = 49, p < .001$ ).

Studies 2a-2c show the negative effect of this upward focus on well-being. We show that participants' happiness was more affected by the performance of higher ranked others than lower ranked others. In three studies using both hypothetical (within-subjects; spin class scores or fantasy football league scores) and real (between-subjects; completing Jumbles) tasks ( $N_{2a} = 92$ ;  $N_{2b} = 84$ ;  $N_{2c} = 139$ ), participants were given feedback about their performance placing them in fifth place out of nine participants. We then manipulated how the scores of higher- and lower-ranked competitors were distributed and examined participants' happiness with their own performance. In all three studies, we find that the performance of higher-ranked others had a greater impact on participants' happiness compared to the performance of lower-ranked others ( $F(2, 91) = 4.91, p = .0095$ ;  $F(2, 83) = 7.95, p = .0007$ ;  $F(2, 136) = 3.18, p = .045$ ). That is, relative to a baseline set of scores and ranks, shifting the scores of higher ranked competitors upwards by 500 points had a greater (negative) impact on participants' happiness relative to a condition where the scores of lower ranked competitors were shifted downwards by the same amount.

Finally, Studies 3a-3c demonstrate an important implication of this upward focus. We find that people put more effort into surpassing higher ranked others (rather than ensuring they are not surpassed by lower ranked others), and therefore invest in categories that can achieve this goal. In three studies with binary choice tasks ( $N_{3a} = 99$ ;  $N_{3b} = 262$ ;  $N_{3c} = 449$ ) using multiple contexts (e.g., a Theme Park Simulator, Sim City), participants put more resources into improving themselves on categories (e.g., roller coasters or water parks) in which they were outperformed by higher-ranked others compared to categories in which they were outperformed by lower-ranked others (61.6%,  $\chi^2(1, N = 99) = 5.34, p = .021$ ; 64.9%,  $\chi^2(1, N = 262) = 23.22, p < .001$ ; 65.3%,  $\chi^2(1, N = 449) = 41.80, p < .001$ ). We show that these effort investment decisions may not be optimal for actual advancement in the ranking, and therefore reflect a sub-optimal distribution of resources.

Ultimately, nine studies provide evidence that people disproportionately attend to those above them in ranked lists compared to those below them, and that this difference affects both well-being and actual decisions about where to invest one's resources. These results suggest that there may be limitations to the practice of motivating competitors by focusing them on "stars" in the ranking: such upward comparisons may not always make people happier and may lead to non-optimal investments. The results also suggest a reason why individuals do not recognize the plight of worse-performing others: by focusing on climbing the social ladder, people may ignore the struggles of those lower-stats others.

## The Pros and Cons of Pros and Cons: Consumer Deliberation has Opposite Implications for Post-Choice Satisfaction and Consistency

### EXTENDED ABSTRACT

Deliberative pre-decisional reasoning about a choice set (i.e., thinking about or articulating arguments for or against each option) leads consumers to attend to reasons which help them to make more justifiable decisions, thus leading to choices they may not have otherwise selected (e.g., Shafir, Simonson, and Tversky 1993; Wilson et al. 1993). The current research proposes that these resulting choices are subject to paradoxical post-decisional outcomes. In keeping with literature that finds reasoning leads to lower satisfaction (Wilson et al. 1993), consumers will evaluate and rate their choices as less satisfying. Conversely, consistent with literature suggesting that effortful decisions increase product liking (e.g., Brehm 1956), consumers will tend to make subsequent choices consistent with their initial choice. In other words, reasoning will lead consumers to be simultaneously less satisfied with but more committed to their choices.

To test this, study 1 participants ( $N=424$ ) choose between two novelty coffee mugs either by first writing their reasons for or against choosing each one (Reasoning condition) or by making their decision normally (Control condition). After their choice, participants were assigned to either a Satisfaction or a Consistency condition. Satisfaction participants rated their post-decisional satisfaction on a series of five 0-100 point scales (Cronbach's alpha = .86). Meanwhile, Consistency participants made a second choice between their chosen mug and a third mug (presentation order of the three total mugs was randomized). As predicted, satisfaction ratings were lower in the Reasoning ( $M=81.86, SE=1.53$ ) than Control condition ( $M=86.37, SE=1.22$ ;  $b=4.51, t(214)=2.32, p<.022$ ) but choice commitment increased in Reasoning ( $M=77.78\%, SE=4.41\%$ ) versus Control ( $M=64.41\%, SE=4.43\%$ ;  $b=0.66, z(207)=2.07, p<.039$ ). Thus, there is an apparent preference reversal between satisfaction ratings and choice consistency.

Study 2a examined whether reasoning may decrease satisfaction while increasing choice consistency within the same consumer. Participants ( $N=215$ ) either reasoned or not in an incentive compatible choice between gift cards. They then completed both post-decision tasks: they rated satisfaction (as in study 1) and had the option to switch to a different gift card (from the original set of four). Reasoning led to lower satisfaction ratings ( $M=77.36, SE=1.74$ ) than control ( $M=83.75, SE=1.71$ ;  $b=-6.39, t(212)=-2.61, p<.010$ ), but increased commitment ( $M=97.22\%, SE=1.59\%$  for reasoning vs.  $M=88.79\%, SE=3.06\%$  for control;  $b=1.52, z(214)=2.29, p<.023$ ). Thus, the same participants were both less satisfied with and more committed to their choice after reasoning. This finding was replicated in study 2b using the mug stimuli from study 1 ( $N=341$ ).

I propose that this phenomenon is driven by the reasons and information to which consumers attend during the reasoning process. While these reasons determine what consumers choose, they are not informative when the chosen product is subsequently evaluated by itself (only the chosen product itself is). However, such reasons are both highly relevant and highly accessible in any subsequent choice involving the product. In this sense, the relationship of reasons to post-decisional judgments may be viewed in terms of evaluability or task compatibility (Hsee 1996; Nowlis and Simonson 1997): reasons generated in the context of choice are not diagnostic in the context of rating satisfaction, but are diagnostic in subsequent choice contexts. This was tested by manipulating reason types.

Research suggests that negative effects of reasoning on satisfaction may be attenuated by attending to "compatible" information



and arguments during reasoning, which leads to the same options being chosen as without reasoning (DePaoli, Khan, and Simonson 2017). For the hedonic novelty mugs and gift cards used here, this means attending to affective or feelings-based arguments rather than to the logic and justifiability-driven arguments elicited by a standard reasoning manipulation (Wilson et al. 1989). Compatible reasoning should lead to no differences in choice behaviors (vs. control), thus attenuating the effect of reasoning on satisfaction. However, compatible reasons remain diagnostic for choice, so the manipulation should still increase choice consistency. Study 3 participants ( $N=508$ ) were assigned to one of three conditions: Control (no reasoning), Reasoning (as in the above studies), and Compatible Reasoning (wherein they attended to their feelings for or against each option). Participants chose between two novelty mugs, then rated their satisfaction before making a choice between their chosen mug, a relatively more hedonic mug, and a relatively more utilitarian/justifiable mug. Replicating studies 1-2, Reasoning led participants to make different choices than Control ( $b=0.22$ ,  $z(450)=1.88$ ,  $p<.060$ ), leading to less satisfaction ( $b=-8.44$ ,  $t(506)=-7.95$ ,  $p<.001$ ) but more commitment ( $b=0.23$ ,  $z(506)=2.06$ ,  $p<.040$ ). Conversely, Compatible Reasoning and Control made the same choices ( $b=0.10$ ,  $z(450)=0.90$ ,  $p=.368$ ) leading to no drop in satisfaction ( $b=-0.04$ ,  $t(506)=-0.04$ ,  $p=.972$ ), but Compatible Reasoning still led to greater commitment ( $b=0.25$ ,  $z(506)=2.23$ ,  $p<.026$ ). This is consistent with the proposal that ratings depend on the chosen option while consistency depends on pre-existing reasons. Further evidence is suggested by participants who switched: if initial reasons inform subsequent choice, then participants should switch to alternatives favored by their initial reasons type. I.e., because they have constructed arguments favoring justifiability (Reasoning condition) or hedonicity (Compatible condition), they should tend to switch to products which meet these criteria. As predicted, Reasoning switchers tended to choose the utilitarian/justifiable alternative while Compatible Reasoning switchers preferred the hedonic alternative ( $b=0.24$ ,  $t(111)=2.19$ ,  $p<.026$ ).

A number of alternative explanations may exist for the finding, many of which propose some form of System 1 interference on either the ratings or choice consistency tasks (e.g., Kahneman and Frederick 2002). Study 4 aimed to rule these out broadly by having participants ( $N=361$ ) replicate study 2b with the addition of instructions to deliberate during the post-decisional tasks. This manipulation should generally drown-out System 1 interference, but should not impact the difference in diagnosticity of reasons in choice versus ratings. The findings replicate for both satisfaction ratings ( $b=-15.93$ ,  $t(359)=-6.82$ ,  $p<.001$ ) and choice consistency ( $b=0.11$ ,  $z(359)=2.17$ ,  $p<.04$ ), thus rejecting System 1 explanations.

Reasoning leads to both less satisfaction with and more commitment to choices. While paradoxical, this is parsimoniously explained by the differing diagnosticity of initial reasons in post-decisional ratings versus choice. The result has important implications both for the study of deliberative decision-making, as well as for marketers determining whether to emphasize evaluative (e.g., reviews) or behavioral (e.g., repurchase) post-purchase outcomes.

### Social Attention Increases the Hedonic Impact of (Social) Comparison

#### EXTENDED ABSTRACT

One dark side of variety is foregoing alternatives to our experiences. Choosing a job, marrying a spouse, or ordering a salad usually precludes us from having other jobs, spouses, and entrées. Comparing our experiences to these foregone counterfactual alternatives—experiences we could have had, but didn't—sometimes produces a

hedonic contrast effect. The comparison makes our experience subjectively better or worse (e.g., Cooke, Meyvis, and Schwartz 2001; Novemsky and Ratner 2003; Tversky and Griffin 1991). However, many alternatives to our experiences are not simply foregone. Another person experiences them. Another person is working in Barcelona, married our crush, or is eating the burger. These counterfactual alternatives are social comparison standards (Festinger 1954).

We suggest that when a standard of comparison is social, it induces a more potent hedonic contrast effect than if it is purely counterfactual (i.e., if no other person experiences it). We report the result of six experiments comparing similar social and counterfactual comparisons that find social comparisons induce larger hedonic contrast effects. Furthermore, process evidence via mediation and moderation by distraction, cognitive salience and perceptual salience support a social attention account of this difference. Social comparisons are more potent because people are more likely to attend to and consider an alternative when another person experiences it. This increased attention, in turn, magnifies their impact relative to similar counterfactual alternatives.

More formally:

*Hypothesis 1 A comparison standard induces a larger hedonic contrast effect on a focal experience when it is social (i.e., when consumers believe another person experiences it) than when it is merely counterfactual (i.e., when it is not experienced by another person).*

*Hypothesis 2 Social comparison standards induce larger hedonic contrast effects than similar counterfactual standards because consumers are more likely to orient attention and cognitive resources to social comparison standards than to counterfactual comparison standards.*

We report six experiments testing our two hypotheses. In Experiments 1 and 2, we tested H1 by examining whether happiness with a food or wage would be more affected by social than counterfactual comparisons. In Experiment 1, relative to controls who were provided with no standard of comparison, both counterfactual and social induced hedonic contrast effects. But the hedonic contrast effects induced by social comparisons were larger. Participants were less happy winning a smaller amount of chocolate if another person won the larger amount than if no other person won the larger amount. In Experiment 2, hedonic contrast effects influenced happiness with a wage more when alternative wages were social than counterfactual comparison standards. People were happier with the larger of two wages if the smaller wage was paid to someone else. This was true whether wages paid were contingent on or independent of each other.

In Experiments 3 - 6 we tested our proposed social attention mechanism (H2). Experiment 3 found that consumers allocate more attention to social than counterfactual comparison standards, and this difference in the orientation of attention mediated the larger hedonic contrast effects induced by social comparison standards. Experiment 4 manipulated attentional capacity by imposing an easy or demanding cognitive load on participants. According to H2, the demanding load should enact a larger reduction in the hedonic contrast effect for social than counterfactual comparison standards. Occupying participants' attention with a taxing cognitive load did more to reduce the hedonic contrast effects induced by social than counterfactual standards.

In Experiments 5 and 6, we further tested the attentional portion of our account by manipulating the relative cognitive and perceptual salience of the focal experience and comparison standards. Found that explicitly drawing attention to comparison standards in Experiment 5 had a larger effect on counterfactual than social comparison standards (to which participants should already have attended). Finally, we found that reducing the perceptual salience of both the target and comparison standard in Experiment 6 reduced the difference in contrast effects induced by social and counterfactual standards.

Consistent with our theory, a single-paper meta-analysis (SPM; McShane and Bockenholt 2017) of our studies estimated the interaction effect of comparison standard (social vs. counterfactual) and standard value (inferior vs. superior) at 1.14 (95% CI = 0.50, 1.78), suggesting that social standards induced larger hedonic contrast effects than did counterfactual standards across all experiments. Specifically, the same focal experience was more pleasurable when its alternative was an inferior than a superior social standard (simple effect estimated at 2.43, 95% CI = 1.96, 2.91), and when its alternative was an inferior than superior counterfactual standard (simple effect estimated at 1.29, 95% CI = .81, 1.77).

Comparison is a ubiquitous feature of social life, and social standards provide a rich source of information by which to calibrate judgment (Festinger 1954; Suls and Wheeler 2000). People deliberately and spontaneously seek out social standards to assess themselves (Dahl et al. 2012; Feinberg et al. 2002; Klein 1997; McFerran et al. 2010), even when those standards provide them with little diagnostic information (Gilbert et al. 1995; Mussweiler et al. 2004). The cognitive processes that underlie social comparisons are similar to those that underlie comparisons in other domains (De Brigard et al. 2015; Mussweiler 2003; Olson et al. 2000). Yet, we found that social attention, the propensity to orient the mind toward the experiences of others (Langton, Roger, Watt, and Bruce 2000), leads people to attend more readily to social standards and infuses them with a more potent impact.

### How Incentive Framing Can Harness the Power of Social Norms

#### EXTENDED ABSTRACT

How consumers behave is strongly influenced by what they perceive as the social norm (Ajzen and Fishbein 1980; Asch 1951). Accordingly, behavior change interventions often attempt to shift normative perceptions by offering explicit information about the normative behaviors of consumers' reference groups (e.g., 75% of guests in this hotel reuse their towels; Goldstein, Cialdini, and Griskevicius 2008). The current research offers a novel method of influencing perceived norms and, ultimately, behavior. Rather than directly stating the norm, we suggest that norms can be signaled indirectly by guiding consumers' attention to a common marketing tool: monetary incentives. Specifically, we propose that drawing attention to an incentive framed as a surcharge (vs. a discount) will lead consumers to perceive the incentivized behavior as more of an injunctive norm—what people ought to do—and more of a descriptive norm—what most people do (Cialdini, Reno, and Kallgren 1990, 1991). In response, we find that consumers display emotions consistent with a desire to conform, and, in turn, are more likely to engage in the incentivized behavior. This effect is especially pronounced among individuals with a greater sensitivity to social influence. Importantly, directing consumer focus toward these invoked norms has the power to influence behavior even after the incentive is removed.

In Study 1, participants considered whether to bring a reusable mug to a coffee shop, a behavior incentivized with either a surcharge

or a discount. Participants who read about a surcharge (vs. a discount) more strongly believed that customers at this shop should bring their own mug, an injunctive norm ( $M_{\text{surcharge}} = 5.73$ ,  $SD = 1.26$  vs.  $M_{\text{discount}} = 5.01$ ,  $SD = 1.44$ ;  $t(300) = 4.65$ ,  $p < .001$ ), and thought that significantly more customers would bring their own mugs, a descriptive norm ( $M_{\text{surcharge}} = 60.66$ ,  $SD = 21.72$  vs.  $M_{\text{discount}} = 49.53$ ,  $SD = 23.40$ ;  $t(300) = 4.28$ ,  $p < .001$ ). Participants who read about a surcharge (vs. discount) also anticipated feeling guiltier ( $M_{\text{surcharge}} = 3.20$ ,  $SD = 1.71$  vs.  $M_{\text{discount}} = 2.66$ ,  $SD = 1.75$ ;  $t(300) = 2.70$ ,  $p = .007$ ) and more embarrassed ( $M_{\text{surcharge}} = 3.631$ ,  $SD = 1.75$  vs.  $M_{\text{discount}} = 2.76$ ,  $SD = 1.75$ ;  $t(300) = 4.32$ ,  $p < .001$ ) for failing to bring their own mug. Importantly, participants who read about a surcharge indicated significantly higher intention to bring their own mug ( $M_{\text{surcharge}} = 5.44$ ,  $SD = 1.45$  vs.  $M_{\text{discount}} = 4.80$ ,  $SD = 1.68$ ;  $t(300) = 3.57$ ,  $p < .001$ ).

Study 2 tested whether exposure to a surcharge at one location increased intention to carry out the encouraged behavior at a nearby location with the same reference group, sans an incentive. Participants considered bringing a reusable bag to the grocery store, incentivized by either a surcharge or discount. As predicted, surcharge (vs. discount) participants perceived stronger injunctive and descriptive norms surrounding the incentivized behavior ( $ps < .001$ ) and anticipated feeling more embarrassed and guiltier ( $ps < .01$ ) for failing to bring a bag. Most critically, reading about a surcharge at the first shop influenced perceptions and behavioral intentions for a second local shop, where there was no incentive: significantly more surcharge participants believed that it was “the norm” for customers to bring a reusable bag to the second shop ( $M_{\text{surcharge}} = 47.83\%$  vs.  $M_{\text{discount}} = 32.34\%$ ;  $\chi^2(1, N = 602) = 15.03$ ,  $p < .001$ ) and reported significantly higher intention to bring a reusable bag themselves ( $t(600) = 2.26$ ,  $p = .02$ ), an outcome mediated by perceived norms and norm-related emotions.

Study 3 provides further support for our proposed norms-based mechanism by demonstrating that compliance under a surcharge is moderated by an individual's tendency to conform to peer norms. Study 3 also tests whether the effects remain different between conditions even when the incentives are roughly loss-equated (i.e., the discount is twice that of the surcharge; Abdellaoui, Bleichrodt, and Paraschiv 2005; Camerer 2005). Participants read about an incentive (surcharge vs. discount) to dress up for a themed race, after which they reported their intention to dress-up and completed a norm-conformity scale. Indeed, participants who read about the surcharge perceived greater injunctive and descriptive norms and anticipated stronger emotional reactions for not dressing up, relative to participants who read about a discount twice as large ( $ps < .01$ ). As predicted, there was also a significant interaction between condition and individual differences in norm-conformity ( $\beta = .18$ ,  $t(795) = 2.47$ ,  $p = .01$ ), such that participants' tendency to focus on social expectations significantly moderated the effect of incentive frame on their likelihood to conform.

Study 4 used a consequential, real-stakes design to assess whether exposure to a surcharge incentivizing a behavior at one point in time increased individuals' likelihood of carrying out that behavior after the incentive was removed. At the start of a laboratory session, participants were invited to purchase gum. They received a discount (vs. paid a surcharge) on the gum's price if they used (vs. did not use) hand sanitizer before purchasing. Thirty minutes later, upon exit, participants were invited to take a cookie from a table next to the hand sanitizer. With the incentive no longer in place, significantly more surcharge (vs. discount) participants spontaneously used the hand sanitizer (19.7% vs. 10.2%;  $\chi^2(1, N = 294) = 5.24$ ,  $p = .02$ ), even among participants who had not purchased gum in phase 1 and

thus merely observed the incentive but were not financially affected by it ( $p = .01$ ). This suggests that merely attending to a surcharge can influence social perceptions and significantly alter behavior thereafter.

In sum, merely drawing attention to differently framed incentives significantly changed social norm perceptions and consequential behaviors, even among individuals who were not financially impacted by the incentives. These findings suggest powerful implications in how simple incentive framing can effectively encourage behaviors, with important implications for academics, policymakers, and practitioners.

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# Understanding Prosocial Behavior: The Roles of Self, Others, Groups and Norms

Chairs: LeiLei Gao, The Chinese University of Hong Kong, China  
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## **Paper #1: Penny for Your Preferences: Leveraging Self-Expression to Increase Prosocial Giving**

Jacqueline R. Rifkin, Duke University, USA  
Katherine M. Crain, Duke University, USA  
Jonah Berger, University of Pennsylvania, USA

## **Paper #2: The Identifiable Donor Effect**

Yunqing Chen, The Chinese University of Hong Kong, China  
Leilei Gao, The Chinese University of Hong Kong, China

## **Paper #3: Burnishing Prosocial Image to Self vs. Others**

Minah H. Jung, University of California, Berkeley, USA  
Silvia Saccardo, Carnegie Mellon University, USA  
Ayelet Gneezy, University of California, San Diego, USA  
Leif D. Nelson, University of California, Berkeley, USA

## **Paper #4: Easy to Be Selfish: Comparing the Influence of a Social Norm and an Individual Example**

Zheshuai Yang, National University of Singapore, Singapore  
Yan Zhang, National University of Singapore, Singapore

### SESSION OVERVIEW

Consumers often engage in prosocial behaviors such as making monetary donations, tipping generously, purchasing environmental-friendly products, and resisting counterfeits. One type of situational antecedents involves people-related influences: who one is and what others do. Despite decades of work exploring how the presence of others (e.g. bystander effect, Darley and Latané 1968), considerations of the self (e.g. Aaker and Akutsu 2009, Brown and Smart 1991), and salience of groups and norms (Cialdini 2009) influence prosocial behavior, some fundamental questions remain open: How do people's self and other perceptions affect prosocial behavior? What are the roles of self, others, groups and norms in affecting their readiness of act prosocially and reactions toward help?

This session brings together four papers that explore people-related situational determinants of prosocial behavior. They each ask an interesting question, take a unique approach, and provide exciting findings.

*How is prosocial behavior mediated by the need to express one's self-identity?* The first paper, by Rifkin, Crain and Berger, demonstrates that framing prosocial behavior as an opportunity to express their identity can significantly boost people's tipping and donation amounts. In a novel setting, they frame the act of giving as a choice between two identity-relevant categories (e.g., cat vs dog person) and examine the effect of a dueling preferences approach.

*How does others' identity affect the effectiveness of prosocial behavior?* The second paper, by Chen and Gao, shows that revealing the identity, specifically, the name of the donor can lead to greater recipients' likelihood of making good use of the money received and working harder. We name it the identifiable donor effect.

*Which is a more important driver of prosocial behavior, maintaining a positive self-image or social-image?* The third paper, by Jung, Saccardo, Gneezy, and Nelson, compares the relative importance of self-signaling and other-signaling in driving prosocial behavior. Across nine studies, they demonstrate that neither self- or social-signaling has a single uniform influence on generosity. They suggest that self- and social-signaling may operate in the same direction to influence prosocial behavior instead of competing with each other.

*What are the differential effects of social norm and individual exemplar on people's selfish and unselfish behaviors?* The last paper, by Yang and Zhang, examines how prosocial versus selfish actions are influenced by others. They compare the effects of social norms and individual examples and show that while one individual example is less influential than a social norm in inducing prosocial behaviors, it is as influential as norm in inducing selfish behavior.

Taken together, the session examines situational antecedents of prosocial behavior. The findings of the four papers suggest that people's motivations to maintain a positive image to the self and to others, reciprocate the kindness of a specific individual, and interpretations of how others behave in similar situations have significant impacts on their prosocial behavior and reactions toward help. The session should be of great interest not only to those interested in help, altruism, moral behaviors and charitable donations, but also to anyone who is interested in self-perception, motivation, and decision-making.

## **Penny for Your Preferences: Leveraging Self-Expression to Increase Prosocial Giving**

### EXTENDED ABSTRACT

How can marketers motivate prosocial giving? Recently, scientists and practitioners have begun leveraging identity to motivate prosocial behavior (e.g., Aaker and Akutsu 2009; Gneezy et al. 2012). For example, organizations can increase prosocial giving by appealing to people who strongly identify with the organization (i.e., donated to them previously, Kessler and Milkman 2016) or by growing the set of people that view an organization as linked with their identity (Arnett, German, and Hunt 2003; O'Reilly and Chatman 1986). However, these approaches can suffer from constraints of scope (i.e., few people may strongly identify with an organization) and implementation (i.e., shifting identities can be challenging and costly).

We examine a novel approach that is increasingly popular among charitable and service organizations that leverages peoples' drive to express their identity while resolving some challenges and costs with prior identity-based appeals. Rather than simply asking people to tip or donate (i.e., a standard giving appeal), the *dueling preferences* approach frames the act of giving as a choice between two categories (e.g., cats vs. dogs; [imgur.com/a/tMDYU](http://imgur.com/a/tMDYU)).

People value and will pay for the opportunity to express their identities through their choices (Berger and Heath 2008; Escalas and Bettman 2003; Levy 1959; Tamir and Mitchell 2012; White and Dahl 2006, 2007). As such, we suggest that framing the act of giving as an opportunity to express one's self will enhance prosocial giving. Thus, while giving (e.g., tipping, donating) may already be somewhat self-expressive, we suggest that the dueling preferences approach provides an even greater opportunity to self-express, and, consequently, leads to more frequent and greater acts of prosocial giving. Four studies in the laboratory and field test this theory.

Study 1 ( $N = 88$ ) was a field experiment conducted at a local café. We varied whether cash-paying patrons encountered a tip jar (standard appeal condition; Figure 1) or a cats-versus-dogs duel (Figure 2) and observed tipping behavior. As predicted, compared to a standard tip jar, dueling preferences nearly doubled the number of customers who tipped ( $P_{\text{Duel}} = 77.3\%$  vs.  $P_{\text{Standard}} = 40.9\%$ ,  $p = .014$ ).

Study 2 tests the dueling preferences approach with a real donation opportunity. Online participants ( $N = 203$ ) were given an opportunity to donate to the American Red Cross, and we varied whether they were shown a standard appeal labeled “donations” or a chocolate-versus-vanilla ice cream duel. Participants then indicated how much of a \$0.10 bonus they wanted to donate. Consistent with Study 1, compared to the standard appeal (37.3%), dueling preferences (57.4%) led more participants to donate ( $p = .004$ ) and increased how much they donated ( $M_{\text{Standard}} = \$0.03$  vs.  $M_{\text{Duel}} = \$0.04$ ,  $p = .032$ ), ultimately raising 30% more money for the Red Cross.

If our theory is correct, duels should only increase prosocial giving when they provide a greater opportunity for self-expression. Study 3 tests this prediction by including a non-self-expressive duel. Participants ( $N = 172$ ) imagined ordering a beverage at a café. While at the register, they imagined viewing a standard appeal (single tip jar), a pre-tested expressive duel (Duke vs. UNC), or a pre-tested non-expressive duel (Hate vs. Love Licorice), depending on condition. Consistent with prior studies, compared to the standard appeal ( $M = 3.61$ ), the expressive duel ( $M = 4.51$ ) made people more likely to tip ( $p = .017$ ). Importantly, the non-expressive duel ( $M = 3.92$ ) did not boost tip likelihood relative to the standard appeal ( $p > .25$ ). Thus, in addition to supporting our theory about the role of self-expressiveness, this study also casts doubt on concerns that some other aspect of the duel format (e.g., novelty, attention-grabbing, or competition) drove the key effects.

Study 4 provides additional process evidence through both mediation and moderation. If our theorized mechanism (self-expression) is correct, duels should only change behavior among those who find it personally relevant. To test this, participants ( $N = 136$ ) imagined ordering a beverage at a café. While at the register, they imagined viewing a standard appeal (single tip jar) or a cats-versus-dogs duel. After indicating their tipping decision (yes, no), they rated how self-expressive the tipping opportunity was (3 items) and the extent to which pets are personally relevant to them. Supporting our prediction, in addition to a simple effect of appeal type ( $b = .93$ ,  $p = .016$ ), we found the predicted appeal type  $\times$  personal relevance interaction ( $b = .89$ ,  $p < .001$ ). As with prior studies, the duel increased tipping among people who rated pets as personally relevant (+1 SD;  $P_{\text{Duel}} = 78.8\%$  vs.  $P_{\text{Standard}} = 23.1\%$ ,  $p < .001$ ); however, this effect disappeared among people for whom pets were personally irrelevant (-1 SD;  $P_{\text{Duel}} = 27.5\%$  vs.  $P_{\text{Standard}} = 42.4\%$ ,  $p = .241$ ).

We also found the predicted appeal type  $\times$  personal relevance interaction on the mediator, self-expressiveness of the tip opportunity ( $b = .45$ ,  $p = .017$ ), and moderated mediation analysis indicated that the effects on tipping were mediated by self-expressiveness and moderated by personal relevance (index of moderated mediation = .20, 95% CI [.01, .51]). When pets were personally relevant (+1 SD), the duel made the tipping opportunity a greater opportunity for self-expression, which enhanced tipping ( $ab = .75$ , 95% CI [.28, 1.59]). When pets were personally irrelevant (-1 SD), however, these effects disappeared ( $ab = .02$ , 95% CI [-.48, .48]) because the duel no longer provided greater opportunity for self-expression and thus did not increase tipping.

Across a range of identities, duels, and giving contexts, these studies demonstrate that dueling preferences boosts prosocial giving by providing an opportunity for self-expression. This work also reveals a new, flexible, and easy-to-implement identity-based appeal. Rather than being restricted to the set of people that already hold a strong, relevant identity or exerting resources to grow that set, this approach can leverage *any* valued identity to motivate behavior. This research contributes to the literatures on self-expression and identity factors that influence prosocial behavior.

## The Identifiable Donor Effect

### EXTENDED ABSTRACT

Extant research has identified multiple situational factors that motivate people to donate money and provide help to those in need, such as physical appearance of recipients (Small & Verrochi, 2009), similarity to recipients (Small & Simonsohn, 2007), and number of bystanders (Darley & Latané, 1968). However, very little attention has been paid to situational factors that influence how people react to help provided by others (Fisher, Nadler, & Whitcher-Alagna, 1982). The present research explores the mere revelation of the help provider’s name as a situational factor that has significant impact on people’s reactions toward help. Specifically, we show that compared to an unidentified individual donor, merely revealing the individual donor’s name can lead to greater recipients’ likelihood to make good use of the money received and to work harder. We also show that the identifiable donor effect is driven by a greater sense of obligation activated by the donor specificity.

Research on reciprocation has established considerable evidence that people are motivated to repay in kind what others has done for them (Cialdini, Green, & Rusch, 1992; Cialdini et al., 1975). The norm of reciprocation is widely applied to different human behaviors and governs all human societies (Cialdini, 2009). Thus, people expect reciprocity in interpersonal relationships and a lack of reciprocity is often accompanied by negative affect (Cialdini, 2009). From an evolutionary perspective, reciprocal altruism is adaptive and contributive to collective survival and well-being (Ridley, 1997). As a result, the motivation to reciprocate is deeply rooted in our human nature; most people have an instinct tendency to reciprocate after receiving help, accompanied by a sense of obligation (Cialdini, 2009). However, for reciprocity to occur, it is important that the person who receives the benefit actually knows who the provider is (Whatley et al., 1999). If the helper is unidentified, it remains an unspecified target which is less likely to elicit the recipient’s sense of obligation to reciprocate. In our case, merely revealing the name of the donor (without providing any other information) can serve to increase target specificity and elicit the recipient’s sense of obligation. In our case where direct reciprocation is unlikely (e.g. a student receiving scholarship from a donor), we propose that the recipient is more likely to internalize the sense of obligation and adjust his/her decisions and behaviors in a positive direction to be a worthy person.

Four studies examined above propositions. In all studies, we manipulated whether the donor’s name was revealed to the help recipient while keeping all other information constant. Study 1 ( $N = 109$ ) provided an initial support for the identifiable donor effect. Participants were asked to imagine receiving a scholarship either from Prof. Elliot or a professor from their university (no name). Compared with those who received scholarship from an unidentified professor, participants who received scholarship from Prof. Elliot felt more obligated ( $p = .019$ ), and indicated that they would spend more money on study-related items ( $p = .041$ ). Besides, perceived obligation mediated the relationship between identification and money allocation (95% CI = [1.50, 12.24]). Alternative explanations based on perceived supervision, perceived generosity of the donor, psychological distance, and self-esteem were ruled out.

Study 2 ( $N = 530$ ) generalized the above findings to a situation with multiple donors. Besides the donor identified manipulation, we told participants that the scholarship was contributed by either one or five professors. We also included a condition where the participants were told that the scholarship was contributed by an organization, i.e., the faculty association of their university. Finally, to test if the effect was affected by the differential perceived cost to the donor

(relative to the total wealth of the donor), we told half of the participants that over the years the donor had contributed 10% of the personal wealth / total asset to the scholarship. The design was a 2 (control the cost vs. not)  $\times$  5 (one identified professor, one unidentified professor, five identified professors, five unidentified professors, the faculty association) between-subject design. Since the cost of total wealth had no effect, the data were combined and analyzed among the five conditions. As predicted, participants in the identified donor conditions (one and five identified donors) indicated that they would spend more money on study-related items than when the donor was unidentified or when the donor was an organization ( $p = .015$ ). Again, the effect on money allocation was mediated by perceived obligation.

Study 3 ( $N = 205$ ) tested donor specificity as the driver of the identifiable donor effect. We predicted that if the donor remains un-specific, even revealing the potential donors' names will not elicit a sense of obligation. Participants were instructed to imagine receiving scholarship from one of five professors. In addition to manipulating donor name revelation, we manipulated whether the participants knew which one out of five professors contributed money to their scholarship. As predicted, when participants didn't know which specific professor provided the scholarship, revealing the names of the professors no longer created a sense of obligation ( $p = .019$ ), nor made them allocate more money on study-related items ( $p = .011$ ).

Study 4 ( $N = 126$ ) examined the proposition in a different context with real behavioral data. Undergraduate students were recruited by a marketing professor (name either revealed or not) to participate in an extraordinarily well-paid lab study. Although in both conditions the participants were told that their identity would remain anonymous to the researchers, they worked harder (indicated by the number of words they wrote) when the professor's name was revealed than not ( $p = .018$ ).

Four studies consistently show that money recipients will respond more positively to aid from an identified (vs. unidentified) donor, even when all other information is kept constant. This research is among the first to examine prosocial behavior from the perspective of help recipients. Our findings advance current understanding of situational influence on prosocial behavior, and provide important real-world implication on increasing the effectiveness of prosocial behavior.

## Burnishing Prosocial Image to Self vs. Others

### EXTENDED ABSTRACT

Prior research has shown that people's kindness and generosity can be explained, at least partially, by image concerns; people want to signal to themselves that they are kind, in order to preserve a positive identity. Likewise, they want to signal their kindness to others, to maintain a positive social-image (e.g., Andreoni & Bernheim, 2009; Ariely, Bracha, & Meier, 2009; Dana et al., 2007).

Whereas there are situations where the two signaling motivations might operate in the same direction, self and social image concerns might also compete with each other. Gneezy, Gneezy, Reiner, and Nelson (2012), for example, has looked at how self-image concerns influenced economic behavior under pay-what-you-want. In one field study at a restaurant, people paid more when their payments were anonymous (vs. observed), suggesting that self-signaling motives are stronger when behavior is not observed. Other work shows that social signaling can backfire when people's generosity toward others directly benefit their own self-interest (Newman & Cain, 2014). We conducted eight field and one lab experiments in both for-profit and non-profit settings to investigate the dynamics of con-

sumers' self- vs. social-image motives under pay-what-you-want. Furthermore, we used these studies to examine potentially meaningful moderators.

In Study 1, visitors to an art museum paid what they wanted for their admission; contrary to the self-image signal hypothesis, payments were higher when done in public, versus anonymously. Perhaps visitors believed that, unlike in a buffet restaurant, admitting an additional person did not cost the museum more, and therefore paid less in the absence of social pressure. In Study 2 we used a product with a clear marginal unit cost to test image concerns in a lab setting. We also examined whether positive social interaction influenced the type and magnitude of image signaling; some participants had a pleasant conversation with an experimenter and were later asked to pay-what-they-wanted for a mug. Neither the social interaction or anonymity manipulation significantly influenced payments.

Studies 1 and 2 showed no evidence of self-signaling. In fact, the overall direction of the results was supportive of social-signaling; people paid more when their payment was observed by others. In Studies 3 and 4, we investigated consumers' signaling motives in a charitable giving context in which consumers are likely to be more sensitive to social-signaling. In both studies, we manipulated anonymity as well as the presence of an explicit charitable signal; customers saw products either with a commercial or charitable logo imprinted on it. We predicted that if self-signaling influenced behavior, customers would pay more for products with a commercial logo and when paying anonymously.

We conducted Study 3 at a local flea market. Customers saw reusable bags with a charity logo, the same logo with the charity name removed, or a commercial logo. Customers paid similar amounts whether their payments were observed or anonymous across the two charity logo conditions. But customers paid more paying anonymously in the commercial logo condition, showing evidence of self-signaling motivations. In Study 4, we tried to replicate the results of Study 3 with a larger sample size, selling coffee in a local farmers' market. Customers saw our coffee cups with either a charity or the coffee shop logo. Payments were higher in the charity logo condition. Payments in both logo conditions were not influenced by the payment anonymity manipulation.

The results of Studies 3 and 4 could have been driven by selection bias. Knowing that 50% of their payment going to charity attracted a particular type of customers that were less influenced by anonymity. To test this possibility, in Study 5 we removed the pricing information from our signs and randomly assigned customers to the conditions *after* they decided to purchase. We sold donuts at a campus location. Once customers decided to buy a donut, they were asked to select a piece of paper from a box that contained our pricing manipulation. Even in the absence of selection, customers paid similar amounts whether their payments were observed or anonymous.

The results in Studies 3-5 support neither the self- or social-signaling hypothesis. It is possible that our anonymity manipulation had an additional influence on customers' payments beyond simply allowing the "anonymity" of payments. For example, an envelope itself could have pressured people to put a generous amount. In Study 6, we tested signaling using a different social-signaling manipulation. We conducted Study 6 at a children's museum in the Bay Area. Visitors were asked to fill out a card to indicate their donation amount. Some visitors were asked to write their initials on their cards. Our results showed that payments were not influenced by the signaling manipulation. Study 7 replicated these results at the same museum.

In Studies 8 and 9, we tested how a signal of prosocial identity influenced payments with a different manipulation than the one used in Studies 3-5. In Study 8, we manipulated the signal of prosocial



identity by providing visitors an art museum an admission badge that said, "I am a supporter of [museum name]" before or after their payment. If visitors received a badge before their payment for admission, they have an opportunity to signal their prosocial identity consistent with the identity signal on the badge by paying more. But visitors who received the badge after their payment did not have the same opportunity. Visitors paid similar amounts regardless of paying before or after receiving a badge. Study 9 followed the same design, in addition to a manipulation of payment anonymity. Again, visitors paid more when their payment was observed but people paid similar amount before and after receiving a badge.

The results from nine experiments show neither self- or social-image signaling has a single uniform influence on payment. Across these experiments we occasionally see evidence for one, occasionally for the other, and frequently for neither. We observe slightly more evidence for social signaling, but the effect is not robust across the experiments. It is possible that self- and social-signaling may not necessarily compete to influence consumers' social preferences, but operate in the same direction.

### **Easy To Be Selfish: Comparing the Influence of a Social Norm and an Individual Example**

#### **EXTENDED ABSTRACT**

As social animals, we are inevitably influenced by others. Consider the following scenario: if you are told that most people have downloaded pirated music, would you do so as well? How about if you are told that a classmate has downloaded pirated music? In this research, we compare the strength of impact from two types of social influences: social norms and individual examples. The social impact theory proposes that  $N$  people are more influential than  $N-1$  people (Latané 1981), and this argument has been supported by much research (Babić Rosario et al. 2016). In our case, the social impact theory would predict that a social norm should be more influential than one individual example. However, we think that this can be an overly simplified view about the impact of social influences. We suggest that the impact of the two types of social influences may depend on whether these two social influences promote selfish or unselfish behavior.

Intuitively, a social norm telling people that many others have done something is more influential than a single social example. A social norm implies the legitimacy of a behavior and thus is usually more influential than one individual example (Cialdini 2009). However, this may be only true for behaviors that are not selfish. When facing the opportunity to reap benefits by behaving selfishly, people tend to find self-serving reasons to justify the behavior (Gino and Ariely 2012; Schweitzer and Hsee 2002). Interestingly, the justification can be easily found when people want to, and research finds that one bad apple can be rather contaminating (Gino, Gu, and Zhong 2009). Thus, a single example is sufficient to offer an excuse for the selfish behavior, making an individual example as influential as a social norm.

We tested these predictions in four experiments. Experiment 1 followed a 2(valence: unselfish vs. selfish) x 2(type of influences: social norm vs. individual example) between-participants design. Participants imagined that they liked a luxury wallet but found out that it was a counterfeit. Participants in the individual example conditions were told that a shopper claimed that (s)he would (selfish condition) or would not (unselfish condition) buy counterfeits. Participants in the social norm conditions were told that a survey found that 72% of local people would or would not buy counterfeits. Participants indicated how likely they would buy the wallet and the extent to

which they were willing to buy it on 1(not at all) to 9(very much) scales. Note that the impact of a social norm or an individual example should be calculated differently depending on the valence of the social influence. A higher purchase likelihood of the counterfeit implies a higher impact of the selfish influence, whereas a higher purchase likelihood of the counterfeit implies a lower impact of the unselfish influence. Therefore, we reverse coded the purchase likelihood to get the impact score for the unselfish conditions, so that a higher impact score implies a greater influence in all conditions. The analysis on the impact score showed a significant interaction between valence and type of influences,  $F(1, 208) = 5.94, p = .016$ . The unselfish social norm were significantly more influential ( $M = 7.94$ ) than the unselfish individual example ( $M = 7.18$ ),  $F(1, 208) = 4.04, p = .046$ . However, this difference was insignificant for selfish behaviors ( $M_{\text{norm}} = 2.33$  vs.  $M_{\text{individual example}} = 2.85$ ),  $F(1, 208) = 2.06, p = .153$ . If anything, the individual example seemed to be slightly more influential.

Experiment 2 replicated the results of Experiment 1 in the context of whether to download pirated music. The results showed a similar significant interaction between valence and type of influences,  $F(1, 261) = 4.38, p = .037$ . Participants in the unselfish conditions were influenced to a greater extent by the norm ( $M = 2.74$ ) than by the individual example ( $M = 2.19$ ),  $F(1, 261) = 4.54, p = .034$ , and this difference diminished in the selfish conditions ( $M_{\text{norm}} = 5.65$  vs.  $M_{\text{individual example}} = 5.86$ ),  $F(1, 261) = .67, p = .414$ .

One potential concern was that we asked participants' intention to commit selfish behaviors, and asking about their intention to commit unselfish behaviors might produce different results. Experiment 3 and 4 addressed this issue. Experiment 3 adopted a 2(valence: unselfish vs. selfish) x 2(type of influences: social norm vs. individual example) between-participants design, plus one control condition in which no social information was provided. Participants allocated \$20 between their partners and themselves. Thus, we didn't ask them whether to be selfish or unselfish. Since past research shows that most people tend to allocate 40% of the total money (\$8 in our case) to others (Piff et al. 2010), we choose \$10 as the unselfish behavior and \$6 as the selfish behavior. Participants in the individual example conditions were told that one previous participant allocated either \$10 or \$6 to the partner. Those in the social norm conditions were told that most participants who had finished this game allocated either \$10 or \$6 to their partners. We found that the unselfish social norm led to a higher allocation to the partner ( $M = 9.60$ ) than the individual example ( $M = 8.72$ ),  $F(1, 147) = 4.97, p = .027$ , but the selfish norm produced an allocation ( $M = 7.96$ ) similar to the individual example ( $M = 7.70$ ),  $F(1, 147) = .38, p = .538$ . Consistent with past findings, people in the control condition allocated \$7.81 to their partners.

Because the allocations in the control condition were close to those in the selfish conditions, it is not clear whether the selfish norm/example was effective at all. Experiment 4 lowered the selfish norm/example to \$3. We replicated the results from Experiment 3 (see the figure below). In all studies, the extent to which the norm was believable did not affect the results.

Taken together, four experiments provide corroborative evidence that while the impact of an unselfish social norm is much stronger than that of one unselfish individual example, one individual selfish example is almost as influential as a selfish social norm.

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# Competitive Papers—Full

## A Journey with no Return into the Animal Kingdom: The Role of Tattooing in the Construction of the Collective Identity of the Vegan and Vegetarian Movement

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### ABSTRACT

The purpose of this study is to understand how tattooing consumption shapes the formation of the collective identity of the vegan and vegetarian social movement. Tattooing is used as an instrument of social interaction and to establish and exhibit the ideological position that reflects the movement's collective identity.

### INTRODUCTION

One form of permanent voluntary body alteration is tattooing (Watson 1998). It is a radical consumption choice inspired by the desire to define and reconstruct one's identity (Langman 1991; Schouten 1991). Although Bengtsson, Ostberg, and Kjeldgaard (2005) observe that tattooing has gone mainstream, "the emergence of tattooing as a mass consumer phenomenon has received scant attention in consumer research" (Kjeldgaard and Bengtsson 2005, 172).

To the best of our knowledge, no previous study has been devoted specifically to explore jointly both tattooing and social movements' collective identity. This is surprising as the departure from the usual standards relates to both themes. While tattooing has long been associated with social deviation (Bjerrisgaard, Kjeldgaard, and Bengtsson 2013), the concept of collective identity "implies direct opposition to the dominant order" (Taylor and Whittier 1992, 110). In this study, we delve deep into the existing literature to understand how tattoo consumption shapes the formation of the collective identity of the vegan and vegetarian social movement.

Our study seeks to give continuity to the work of Patterson (2017) that sketches out "the process of tattoo in respect of wounding, healing, and the procurement of a mark" (p. 2), which implies the traditional "functions of tattoo in terms of decoration, ritual, identification, and protection" (p. 1). In our study, we address specifically the issue of identification, however our focus is not the tattooed individual per se, but the tattooed group, who, by sharing the same symbols on their skin, establish connections among themselves. The choice of deliberately not consuming animal products flies in the face of the mainstream practice of cultures with a strong meat-mindset, which is the context of the empirical fieldwork reported here.

### LABELED ON THE SKIN:

#### AN OVERVIEW OF TATTOO CONSUMPTION

For a long time in the Western culture, "tattoos have been considered socially marginal and risky consumption choice" (Watson 1998, 543). Nonetheless, tattoos became "fashionable" and thus mainstream from the 1980s onwards (Shelton and Peters 2006). "Having a tattoo has gradually become a mainstream consumption practice that can be found among people from all walks of life" (Kjeldgaard and Bengtsson 2005, 172). Today the artistic universe recognizes the art of tattoo artists (Kjeldgaard and Bengtsson 2005) so that many of the tattoos created are deemed pieces of art of high commercial value (Kjeldgaard and Bengtsson 2005; Sanders 2009).

"Irreversible forms of body decoration are used as a vehicle for human expression [...] and tattoos may signify a wide array of

meanings" (Velliquete, Murray and Creyer 1998, 461). The body, as something malleable, offers opportunities for modification and improvement (Kjeldgaard and Bengtsson 2005). The phenomenon of tattoo consumption is an example of the collapse of the mind-body duality (Firat and Venkatesh 1995), which alludes to the role of the body customization in the construction of stories, biographies, and identity (Kjeldgaard and Bengtsson 2005).

### METHOD

The empirical study was undertaken in Brazil, the third largest consumer market of beef in the world, with an average of 25.7 kilos per capita per year (OECD 2017). Our study started by exploring vegans and vegetarians and by doing so we noticed the significance of tattoos for them. We took part in 18 vegetarian events and made regular visits to five different vegan restaurants, in which we met people with tattoos related to veganism or vegetarianism who were invited to take part in the interviews. We conducted long interviews with six tattooed ovo-lacto vegetarians and 10 tattooed vegans (about 2 hours each, to a total of 30 hours). The interviews were filmed, audio recorded, and transcribed (totaling 475 pages). We took photos (327 in all) and field notes (302 pages) right after the interviews and during the observations of the events and in the restaurants. All of the interviewees had chosen to be vegetarian/vegan because of their love for animals and a desire to fight for animal rights. For the analysis we undertook a process of constant and systematic coding, categorizing, and abstracting the data, as indicated by McCracken (1988). The keywords and phrases with some thematic similarities were highlighted throughout the content of the interviews and field diary.

### MAIN FINDINGS

Tattooees often use their tattoos as a means of informing and transmitting a message about their uniqueness to the external world (Watson 1988). In the interviews and informal conversations at events and restaurants, the informants reported that their tattoos demonstrated their connection with the irrational animals, something that from their point of view sets them apart from most other people, making them unique. The narrative that best explains the connection of vegans and vegetarians with the animal kingdom is Alana's, by virtue of its singularity. Alana appropriated the zoomorphism, "the attribution of animal traits to human beings, deities, or inanimate objects" (VandenBos 2007, 1171) in choosing each of her 15 tattoos related to veganism. In the interview, Alana confided that she has two identities, because she secretly also considers herself a mermaid. In explaining the symbolism of her tattoo, Alana makes her alternative identity clear as the result of an extreme connection with irrational animals:

This is the most beautiful [tattoo]. It's a rhino-mermaid! I love mermaids! And I love rhinoceroses, I love all animals! I would not tattoo a mermaid, because I think I'm a mermaid. Would I then tattoo another mermaid? I will not tattoo myself! They [the

tattoos] are animals that I love, that represent me and they [the tattoos] are my connection with animals.

Due to her passion for irrational animals Alana appropriates the identity of the mythical animal “mermaid”, which is half human (rational) and half fish (irrational). Her identity is not just vegan; it is an animal identity, with the plural features of these two distinct animals’ worlds.

Besides the animal affiliation, the interviews make it clear that tattoos foster the connection of the tattooed with other people, whether they are known, unknown but who share common interests, or totally foreign to them. The decision of Nicole and her friends to tattoo exactly the same drawing (i.e., various animals and the word “vegan”) on their bodies shows the strong connection between themselves. Nicole describes her tattoos: “Each letter of the tattoo is an animal. If you take a look, the ‘v’ is a rabbit, the ‘e’ is a pig, and so on [...]. The tattooist did it on me, on my friend, and everyone in my group did this very same tattoo as well. We’re a group of vegan friends!”. They were acquaintances who became “a group of vegan friends” due to their shared tattoo, establishing a timeless and iconic representation on their bodies forever. For Blanchard (1991), there is a belief that the image of a tattoo is eternal. It seems that the pact of faithfulness to the animal kingdom is forever sealed when people decide to tattoo their own bodies to pay homage to the animals. In celebration of her three years as a vegetarian, Grace decided to tattoo the photo of the cow that, according to her, had persuaded her to become a vegetarian. She still visits the cow every year on her friends’ farm, and says that she expects to continue to do so in the long future.

People unknown to each other are able to recognize one another as members of the vegan and vegetarian movement because of the tattooed symbols. “I’m a vegan too!” is the common phrase used when vegans identify each other by looking at each others’ tattoos. Emily told us about her participation in what she calls the green blood donation campaign, a social campaign for blood donation by vegans. When the group that organized the campaign came across someone with the symbolic tattoo of veganism, who had come to the hospital to donate blood, it was a cause for rejoicing. In Emily’s words:

[The tattoo] is a way of identifying a vegan. When we were involved in the green blood donation campaign, we came across many people who had the vegan symbol, and when we saw the symbol everyone got happy and excited [...]. It’s a way to identify yourself in this world of so many people.

Symbols act as an important part of the discourse for communicating the identity of the individuals and their group (Velliquette, Murray, and Creyer 1998). Emily demonstrates, by what she says, how the tattoo is used by members of the vegan social movement, unknown to each other, for collective identification. The vegan symbol tattoo is not one that non-vegans would necessarily know, but a kind of ‘secret handshake’. Choup (2008) highlights the importance of the solidarity between members of the group (e.g., all for the sake of vegan blood donation) for establishing the collective identity and how this collective identity helps to bring together these members by indicating shared issues and the need for collective action. Thus tattooing can be seen as a manifestation of collective identity and becomes a tool that ratifies the communal goals of group members – in the case of a green blood donation campaign, the goal was to show that vegans are healthy and can donate blood as well.

Vegans and vegetarians use their tattoos as a collective opportunity to talk about veganism and vegetarianism, within or outside the social movement. The vegan tattoo was not an accidental choice for Olivia, it was rather a conscious choice to promote a social and collective interaction. Olivia chose to tattoo the word “vegan” in a conspicuous place (i.e., on her right arm) with the aim of demonstrating the identity of the group to which she belongs, to “outsiders”, which means people who consume products of animal origin. Olivia explains:

I did this tattoo when I was already vegan [...]; for this tattoo I chose three animals, I wanted a totem of animals, and I wanted the word vegan underneath, and why? Because it [the right arm] is a region that is clearly visible to other people. Many people have stopped me on the street asking what vegan means, if it is the name of someone in my family, or if it is my husband’s name, so it’s really cool because you can explain the meaning of vegan to them. It’s a way of making people curious and encouraging them to discover the meaning of “vegan”.

Olivia’s journey shows that tattooing “reflects our dynamic navigation of self and its society, of personal identity projects and commitments to the social” (Patterson 2017, 5), but also shows the utilitarian function of tattooing in drawing attention to the cause of animals’ rights, which is done by constant (re)negotiation with others (Sullivan 2001). Her tattoo acts as a collective identity’s political symbol for recruiting “outsiders” for her cause (Jasper and McGarry 2015). The same thing is true of Sara, an actress, who knew that her tattoo would be seen by many people when she performed on the stage. After going through the process of transformation into the vegan life, Sara felt she needed to externalize her story on her body (“[my tattoo] speaks of my soul, talks about my struggle in this life”) as this could influence a lot of people.

All the interviewees reported that they had transformed their bodies through tattooing into “living records of their life histories and consumption habits [...] situated in a field of historical and social relationships” (Thompson and Hirschman 1995, 151). Our conclusion is that tattooing has acted as a very important tool in shaping the collective identity of the vegan and vegetarian social movement. Reviewing the work of Taylor and Whittier (1992), Touraine (1985), and Melucci (1989) it can be seen that one essential element of the collective identity is that individuals see themselves as part of a group for which some shared characteristic becomes prominent, as creating a sense of solidarity and membership termed “we-ness”. The sense of “we-ness” is noticeable when vegans who have never met before say to each other after seeing their tattoos: “I am [a vegan] too!” It is further demonstrated by Nicole and her friends who chose to be tattooed with exactly the same symbol. Alana also highlights the sense of “we-ness” when she considers herself as half irrational animal, and half human. Her “we-ness” goes beyond the members of the vegan and vegetarian movement, whether they are your friends, acquaintances, or completely unknown people, to include the irrational animals themselves as part of her membership group. Another key component of collective identity, as pointed out by Taylor and Whittier (1992), is what Cohen (1985) denominates “consciousness”, something that members of the vegan social moment wanted to show when they honor the green blood donation campaign to create the awareness that vegans and vegetarians also can donate blood because they are healthy. Melucci (1989, 35) holds that “movements build submerged networks of political culture that are interwoven with everyday life and provide new expressions of identity that challenge dominant representations”, which is what both Olivia and Sara try to do when they deliberately leave their tattoos exposed to the outside world in order to attract attention to the animal cause they





**Figure 1: Pictures of the interviewees' tattoos**

The top left drawing is Emily's, the vegan symbol in a mandala. The bottom left drawing is the same vegan symbol but is Sara's. The image in the center of the figure is the cow tattooed on Grace with the words "vegetarian pro-life". The top right drawing represents the five animals that compose the vegan word tattooed on Nicole and a group of friends. The bottom right drawing is Olivia's and has the totem with three animals and the word vegan below it.

defend, or to show off their "struggle in life" as regards their vegan journeys. A tattoo is an extreme form of pre-commitment; there is no turning back. A vegetarian can change back to omnivore, but someone with a tattoo would have difficulty changing. Maybe tattooed vegans and vegetarians also get the tattoo to make sure that they could not change their minds.

### CONCLUSIONS

Collective identities continue to play a central role in the development of social movements (Klandermans 2014). In this study, tattooing is seen as a way to establish and present an ideological

position that goes against the prevailing cultural pattern and by doing so, goes beyond the function of aesthetic beauty to include not only the identification of an entire group with a cause (i.e., social identity), but also fulfills the function of the fellowship's credentials. We argue that when the symbol of a social movement is stamped on the body of its members, the movement is not only collectively passing on a message by means of that symbol; we argue that the collective body-stamped message serves as an "identity card" for its members, and therefore shapes the collective identity of the group.

One means by which vegans and vegetarians present to the outside world the personal transformation that they have undergone

when they said no to the consumption of animal products are the tattoos on their physical bodies. The tattoo can be used as an instrument of social interaction and as a political manifestation, which expresses an irreversibly strong connection with the animal kingdom. Being and “surviving” as a vegan or a vegetarian within a meat culture is a message that many vegans and vegetarians like to embrace as part of their individual, social and collective identities. In this study, we find that the tattoo functions as a means of communication of a whole community’s way of life. We, therefore, argue that the establishment of the collective identity is another function of the tattoo consumption, thus complementing Patterson’s discussion (2017).

**Table 1: Summarizing the empirical results**

Coding Categories	Main findings
Connection with the animal kingdom	Vegans and vegetarians feel they have a strong connection with irrational animals, so that they put themselves on the same level of importance as them. Their tattoos symbolize this connection, intended to last forever.
Symbols of the collective identity	Unknown people are able to recognize each other as members of the vegan and vegetarian movement because of the tattooed symbols. To position a tattoo on a conspicuous part of the body calls for a deliberate decision that serves to identify their ideological position to others.
Activating relationships and promoting social interaction	Vegans and vegetarians use their tattoos as a collective opportunity to talk about veganism and vegetarianism, whether within or outside the social movement. It is, therefore, a tool for social interaction.
The sense of “we-ness”	The tattoo represents the unity of the social movement and intensifies the sense of belonging to it. Vegans and vegetarians not only use their tattoos to identify themselves to others both within and outside the movement, they also use them as a symbol of their unity. Vegans, specifically, further enhance the sense of “we-ness” among the members of the vegan group by tattooing the official vegan symbol on their bodies.
Emotional investment	The tattoo acts as a historical landmark of the time when present vegans and vegetarians stopped being meat eaters or consumers of animal-derived products to start a new way of life anchored in their respect for animals. They invest in their tattoos emotions resulting from this process of transformation. The tattoo is then revealed as a means of transformation to a new identity.

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# Trust the Polls? Neural and Recall Responses Provide Alternative Predictors of Political Outcomes

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## ABSTRACT

Given the lack of public trust in opinion polls, we propose novel approaches to supplement existing methods of predicting political outcomes. Neural similarity and recall of candidates in a televised presidential primary debate accurately forecasted election results. Additionally, the neural data predicted changes in the opinion polls following the debate.

## INTRODUCTION

Even though most voters do not trust public opinion polling (Jackson & Sparks 2017), what alternatives do we have? For most of human history, we could only know what others were thinking by asking them to report it. This subjective account, even when given in earnest, suffers from many shortcomings and biases (Nisbett & Wilson 1977, Griffin & Hauser 1993), and these issues recently gained notoriety as political opinion polls predominantly failed to foresee the United Kingdom's vote to leave the European Union (the "Brexit") and the election of Donald Trump as President of the United States. Complicating matters further, scholars have linked political preferences to irrelevant events occurring close to election day (Healy et al. 2010), unconscious feelings about the physical appearance of the candidate (Todorov et al. 2005), and even our genetics (Fowler & Dawes 2008). Thus, decoding political preferences is a challenging task requiring further research (Mauser & Kopel 1992, Bartels 2002, Lakoff 2008, Hall et al. 2013).

Consumer research, neuroscience, and other fields have provided many methods to passively assess preferences, emotions, and decision-making processes (Berka et al. 2007, Levy et al. 2011, Jost & Amodio 2012, Ely et al. 2015). Given that political campaigns spend billions of dollars on messaging, there is growing interest among practitioners in measuring the effectiveness of these techniques (Aron 2007). Recent work on attention and mind-wandering (Mason et al. 2007) has shown that content that can recruit similar brain activity (e.g., activate the same regions or circuits simultaneously) is associated with engagement (Barnett & Cerf 2015, Hasson et al. 2008). Simply put, a measure of engagement can be derived by assessing the similarity between multiple brains (Hasson et al. 2004).

We measured responses to a live televised presidential primary debate in a natural environment (i.e., a large auditorium, as opposed to a traditional laboratory setting). Unlike prior studies on engagement that focused on neutral or positive stimuli (Hasson et al. 2008, Boksem & Smidts 2015, Barnett & Cerf 2017), we studied reactions to candidates with whom the participants generally disagreed. Also, in general, politics can be controversial, generating strong emotional responses among individuals (Haidt 2012). We theorize that elevated neural similarity will reflect collective, engaged disagreement with the content. When participants already predisposed to opposing the candidates exhibit especially strong, aversive engagement, we hypothesize that the population that prefers those candidates will also be more engaged in voting for them. For example, if Trump makes Democrats' brains more alike—perhaps driven by shared aversion—

our hypothesis suggests that Trump will also be more memorable to Republican brains and ultimately increase his likelihood of earning their votes.

We test neural similarity, survey recall and its sentiment, and continuous ratings of subjective agreement as predictors of both public polling changes and population-level voting results. Unlike polls, which typically interview over a thousand individuals, we present these refined techniques that accurately extrapolate from just dozens to predict the behavior of tens of millions. We report the strength of these predictions and also combine the neural and subjective data to form multivariate model estimates.

## METHODS

### Participants

Twenty-nine participants (7 female) viewed the January 14, 2016 Republican presidential primary debate in a large auditorium. Participants were asked to refrain from talking and excessive movement during the viewing and were paid \$60 for their time.

To select participants who would likely disagree with some or all of the presented content, we screened for candidate preference with a pre-survey. Immediately prior to the debate, the three leading Republican presidential candidates, according to opinion polls, were (in descending poll rank) Trump, Cruz, and Rubio, collectively representing nearly two thirds (65.7%) of the sample population; thus, we only accepted participants that preferred other candidates (i.e., not Trump, Cruz, or Rubio).

### Subjective and Neural Data Collection

On the day of the debate, the participants answered a pre-debate survey regarding demographic information as well as their detailed opinions on each individual candidate and a variety of selected topics (e.g., abortion, gun control, taxes).

Eleven participants were fitted with high performance EEG systems (BrainVision, Morrisville, NC) to measure their neural activity. Sampling was performed at a rate of 250 Hz from sixteen channels, high-pass filtered at 1 Hz, low-pass filtered at 50 Hz, and processed via Independent Component Analysis (ICA) (Delorme et al. 2007, Hyvärinen & Oja 2000) using EEGLAB in MATLAB (Delorme & Makeig 2004). Additionally, for redundancy, headband EEG systems (Muse, Toronto, Canada) with a lower sampling rate and fewer channels were assigned to ten additional participants; however, none of the main acquisition systems failed, so only the BrainVision data were ultimately used.

All of the participants used an online application to continuously report their agreement/disagreement with the content throughout the debate ("How much do you agree with what is being said?" presented on a sliding scale as in many focus groups; cf., Kamberelis & Dimitriadis 2005). Immediately following the debate, a post-debate survey was administered, which assessed political views and candidate recall. Two research assistants independently coded the recall sentiments for each candidate (e.g., favorable/unfavorable).



**Calculation of Neural Similarity**

We calculated neural similarity across every pairwise combination of participants as performed in related techniques with both fMRI (Hasson et al. 2004, 2008) and EEG data (Dmochowski et al. 2012, 2015; Barnett & Cerf 2015, 2017). We used a Fast Fourier Transform (FFT) to select neural data in the alpha frequency spectrum (7.5-12.5 Hz), which has been linked to attentional modulation and engagement (Barnett & Cerf 2015, Boksem & Smitsds 2015, Falk et al. 2012, Ki et al. 2016). We determined the maximally correlated pair of components for each pair of participants (Dmochowski et al. 2012, 2015), and then averaged the correlation levels across all participant pairs to obtain a single value for a 30-second window. We repeated the process for each successive second (i.e., rolling 30-second windows) to obtain a time series of neural similarity throughout the debate.

An underlying assumption with measures of neural similarity is that the relevant correlations are due the simultaneous exposure of a stimulus to multiple brains. If the assumption holds, then data correctly synchronized across subjects would be statistically different than randomly aligned data. We tested this assumption with bootstrapping; we correlated 100-second segments of raw EEG data, again pairwise across participants, but with a random starting point for each subject (i.e., misaligning the data). We found that indeed the assumption holds: the real neural similarity value was significantly higher (1.2 standard deviations, SDs; Z-test:  $p < .01$ ) than the mean of the values computed for 1,000 randomly shuffled segments.

The neural similarity that we attribute to a given candidate (or the moderators or commercials) is assessed in a related way. We compared the correctly aligned data with 1,000 random shuffles (matched in duration); higher z-scores reflected greater neural similarity generated by that candidate.

**RESULTS**

Subjective and neural responses varied significantly over the course of the debate (144 minutes). We analyzed moment-to-moment responses to each of the seven candidates, the two moderators grouped together, and the television commercials. We also studied survey data before and after the debate as well as public opinion polling (aggregated by HuffPost Pollster, 2016 National Republican Primary) and population-level vote totals in the primary elections.

**Engagement with Candidates vs. Other Stimuli**

Since a political debate centers around the candidates, we expected that they would induce greater engagement than the neutral moderators. Indeed, each of the candidates generated higher neural similarity (by .15-2.54 SDs) than the moderators. However, the candidates produced significantly less neural similarity (by 2.42-4.81 SDs) than the comparatively non-controversial and widely engaging television commercials, which were 4.96 SDs more engaging than the moderators.

**Forecasting Changes in Public Opinion Polls**

From the day before the debate (January 13) through the first primary contest (February 1), three of the seven candidates rose in the public polls ( $1.57\% \pm 1.42\%$ ), while the other four fell slightly ( $-.65\% \pm .44\%$ ). On average, a candidate’s poll support changed  $0.30\% \pm 1.47\%$ .

Neural similarity during each candidate’s debate answers forecasted these changes in popular opinion levels ( $r = .67, p = .10$ ). Additionally, the two candidates yielding the highest neural similarity (Rubio and Cruz) showed greatest improvement in public support (3.20% and 0.70%, respectively). However, unlike neural similarity, none of the subjective responses were correlated with with subsequent changes in the candidates’ poll standings ( $p > .70$ ; see Table 1).

**Forecasting Election Outcomes**

Over the course of the Republican presidential primaries (February-May 2016), over 30 million votes were cast for the seven candidates analyzed in this study. Trump’s rival candidates suspended their campaigns (effectively dropping out of the race) at various times. To normalize by campaign length, we divided a candidate’s total votes received by the number of days after the debate (January 14) to the date he suspended his bid for the nomination (or, in Trump’s case, when he had no more rivals after Kasich suspended his campaign on May 4). Christie received the fewest average votes per day of active campaigning (2,135) whereas Trump received the most (126,270). The typical candidate received  $45,813 \pm 43,748$  votes per active campaign day.

*Neural Similarity and Voting Results*

Neural similarity during the debate was strongly predictive ( $r = .79, p = .03$ ; see Table 1) of votes received in the first primary contest (Iowa caucuses, February 1). Additionally, neural similarity was positively linked to candidates’ overall future campaign performance ( $r = .37, p = .41$ ). Statistical significance was reduced by Trump’s vote total being a distinct outlier. Excluding Trump, neural similarity was highly correlated with average votes per active campaign day ( $r = .78, p = .07$ ; see Table 1) over the entire primary season.

*Subjective Responses and Voting Results*

Participant recall of candidates following the debate was closely linked ( $r = .83, p = .02$ ) with eventual voting results throughout the primary campaign. Partitioning the recall data by subjective valence, we observe that this result is predominantly driven by unfavorable recall ( $r = .91, p < .01$ ; see Table 1) as opposed to favorable memory of the candidates ( $r = -.09, p > .80$ ; see Table 1). To wit, aversive memorability among participants who oppose the candidates reliably forecasts population-level voting outcomes.

Furthermore, recall was positively correlated with votes received in the first primary contest ( $r = .69, p = .08$ ), albeit to a lesser degree than its correlation with the aggregate results over all pri-

**Table 1: Correlations of Various Predictors and Political Outcomes.**

Significant predictions were asterisked: \*, \*\*, and \*\*\* denote  $p$  less than .10, .05, and .01, respectively. Trump’s data point was removed as an outlier in one correlation analysis (†).

Predictor	Collection Period	Correlations with Predictor		
		Change in Poll Standings	Results of Iowa Caucuses	Votes Per Active Campaign Day
Neural Similarity	During Debate	.67*	.79**	.78*†
Subjective Disapproval		.06	.60	.44
Total Recall	Following Debate	.00	.69*	.83**
Favorable Recall		.17	-.23	.03
Unfavorable Recall		-.13	.87**	.91***

maries. Again, we attribute this finding to the level of unfavorable recall ( $r = .87, p = .01$ ; see Table 1) versus favorable recall, which was not correlated ( $r = -.23, p > .60$ ; see Table 1) with the results of the Iowa caucuses. Similarly, real-time subjective disapproval of the candidates was associated with higher vote totals on February 1 ( $r = .60, p = .15$ ; see Table 1) and on average throughout the campaign ( $r = .44, p = .33$ ; see Table 1).

**Combining Metrics for Improved Forecasts**

Multivariate models achieved even greater predictive power over voting outcomes (see Figure 1). We performed linear regressions of this form:

$$[Expected\ Votes] = \beta_0 + \beta_1 \times [Unfavorable\ Recall\ (\%)] \dots + \beta_2 \times [Relative\ Neural\ Similarity\ vs.\ Moderators\ (SDs)]$$

This model, which combines subjective and neural data, predicted the results of the Iowa caucuses with notable accuracy ( $r = .98, p < .01$ ;  $\beta_0 \approx 18,388, \beta_1 \approx 1,706, \beta_2 \approx 11,364$ ; see red circles in Figure 1). The regression of the same form was also predictive of votes per day during the primary season ( $r = .91, p < .01$ ;  $\beta_0 \approx 5,425, \beta_1 \approx 4,896, \beta_2 \approx -1,490$ ; see blue diamonds in Figure 1). Note that the model for the Iowa caucuses is weighted heavily by neural similarity whereas the model for the full primary season is more dependent on unfavorable recall.

**DISCUSSION**

We found alternative predictors of three examples of political outcomes: (1) changes in poll standings following the debate, (2) votes received in the Iowa caucuses, and (3) average votes received per active campaign day, which each had a different time scale (on the order of days, weeks, and months, respectively). The recall measures, in particular, improved with longer time; aggregate recall was not at all correlated ( $r = .00, p \approx 1.00$ ) with poll changes, positively associated ( $r = .69, p = .08$ ) with Iowa results, and highly predictive of daily votes over months ( $r = .83, p = .02$ ). Since neural similarity was closely linked ( $r > .67, p < .10$ ; see Table 1) with all three of the political outcomes, its relative effectiveness over the self-report data was greatest in predictions immediately following the debate (e.g., the changes in public opinion polls).

Most of our analysis focuses on candidate-versus-candidate election predictions, but the observation that commercials generated significantly higher neural similarity (more than 2 SDs above the candidates and moderators) is worthy of future study. Of course, commercials are designed to appeal to common denominators and promote consensus around an advertised product, whereas a debate, by definition, presents conflicting viewpoints.

Additionally, in prior studies, neural similarity was linked to collective engagement with neutral or pleasing stimuli, such as movies and advertisements, but our results with contentious content suggest that, regardless of valence, neural similarity is a meaningful measure of engagement. In particular, strong, shared brain responses and self-reported feelings on one side of the political spectrum corresponded with similarly strong behavioral responses on the other side in the form of polling support and votes.

**Limitations**

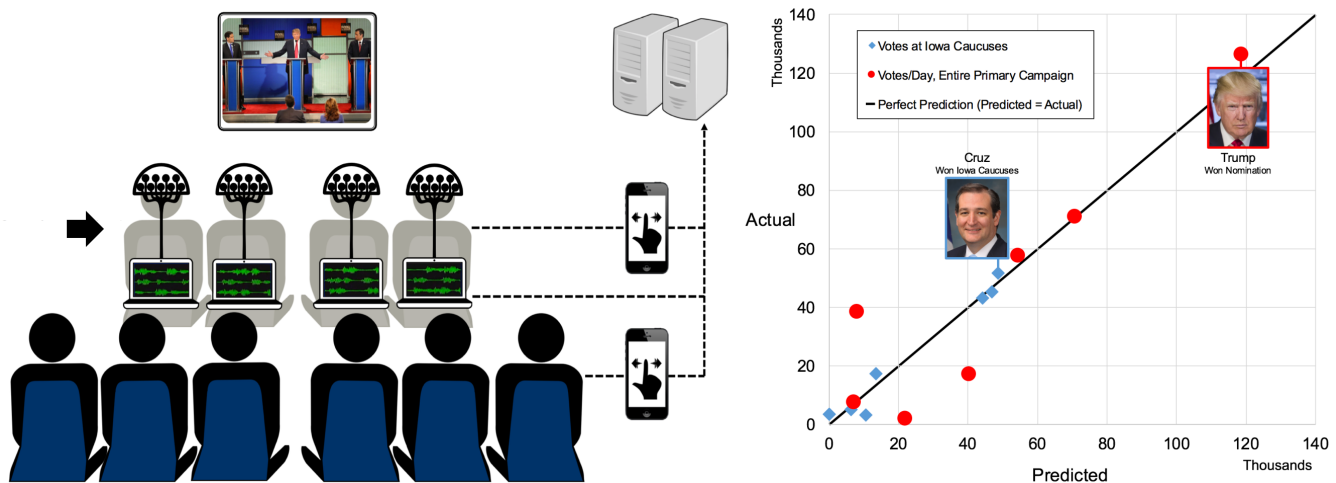
Our use of a live debate enhanced the naturalistic aspects of the participants' experience, but it also meant that we had no control of the stimulus. While seven candidates in a primary debate is a large number in its political context, it is a small number of data points. Similarly, free recall responses are true-to-life, but vary with effort and memory abilities. Furthermore, these responses required manual coding, and although this was performed independently by two individuals, the process introduces subjectivity.

**CONCLUSION**

Elections impact us profoundly, which is why we still pay attention to opinion polls despite not trusting their predictive power. This work demonstrates that certain neural and recall responses can serve as additional predictors of political outcomes. Voters, candidates, policymakers, and consumer researchers all stand to benefit from an increasingly robust set of election forecasting tools, and our proposed techniques contribute to that end.

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**Figure 1: Neural Similarity and Unfavorable Recall During Televised Debate Collectively Predict Election Outcomes.**

Left: Schematic of experimental design. All participants provided real-time subjective ratings while viewing the debate; a subset (denoted by an arrow) of these also underwent EEG recordings. Right: Actual versus predicted votes for each candidate. Blue diamonds illustrate performance in the Iowa caucuses and red circles depict the full primary results (normalized by each candidate's campaign length). Prediction models achieved high accuracy ( $r > .90, p < .01$ ).

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# The Effects of Subjective Knowledge and Naïve Theory on Consumers' Inference of Missing Information

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## ABSTRACT

Consumers form inferences to estimate the missing product information. Three experiments are conducted to investigate how consumers' subjective knowledge influence the inference base used to make an inference and to reveal the correction effects of their naïve theory on the inferred results. The correction effect is noticeable on knowledgeable consumers.

## INTRODUCTION

Consumers are constantly faced with missing product information in advertisements or labels, so they tend to rely on experience or simple cues to infer the quality of the missing attributes of the product in order to decide on a purchase. Past research on this process of inference is mostly focused on the determinants of the results of inferences, but few studies have concentrated on the basis of consumers' inferences, such as a category base or a correlation base. Because consumer's subjective knowledge of products (hereafter referred to as knowledge) affects their belief and decision-making confidence, knowledge may also influence the bases of their inferences. This paper explores how consumers' knowledge affects their bases of inference and subsequent decisions. In addition, when consumers' knowledge level is high, they have confidence in their personal experiences and decision-making; consequently, they may tend to use their naïve theory—that is, people's belief and common sense—to correct their estimation of missing information.

## LITERATURE REVIEW

### Inference and inference basis

Inferences are people's beliefs which are generated through elaboration when they are unfamiliar with or lack information of a product's attributes (Fishbein and Ajzen, 1975). Jaccard and Wood (1988) found that people replaced missing values with the average value of an already known product, and then integrated the known information with the inference to make an overall assessment. However, because of the uncertainty of missing values, this assessment also tended to be adjusted negatively.

Ross and Creyer (1992) proposed that consumers inferred missing product attributes through two approaches. First, consumers estimated the quality or value of the missing attributes by assuming the same attributes as other brands. Second, consumers inferred missing attributes by using other known information of this product. Pechmann and Ratneshwar (1991) proposed that the basis of consumer's inferences for the unknown attribute of a product in comparative advertising were as follows: 1) brand-based inferences, where consumers made inferences based on their beliefs about a particular brand; 2) category-based inferences, where consumers made inferences based on their beliefs about the category of product; and 3) correlation-based inference, where consumers used two relevant attributes to make an inference. Ross and Creyer (1992) further indicated that consumers generally preferred to estimate the missing attribute by using the same attribute of other brands. When the perceived variation of one attribute among different brands was small, consumers believed that their estimation based on the same attribute of other brands was accurate. However, when consumers perceived a high variation on the same attribute of other brands, they had less confi-

dence about their inferences based on other brands. To avoid the risk of inaccurate estimation, they might estimate the missing attribute by using other information known about the focal product—which is a correlation-based inference. Furthermore, some studies found inferences over missing attributes decreased the tendency to choose none of the options and increased purchase intentions (Gunasti and Ross, 2008, Gunasti and Ross, 2015). Based on the above literature, this study proposes the replicated following:

*Hypothesis 1 Consumers tend to use category-based inferences more with missing attributes when the perceived variation of the attribute among other brands is small than when the perceived variation is large.*

### Subjective product knowledge

Consumers used information gleaned from memory and experience when they tried to infer some quality regarding a missing attribute; thus inference was related to a consumer's product knowledge (Brucks, 1985; Park and Lessig, 1981). Brucks (1985) compared consumers' subjective and objective product knowledge and found that subjective knowledge corresponded to a consumer's consciousness about their own product knowledge level, which in turn was related to confidence and the inhibition of seeking other opinions.

Because consumers with low product familiarity considered external cues as easy to understand and use, they preferred to apply external cues for inferences regarding a product's missing attribute. However, consumers with a high degree of familiarity of a product are more confident using internal cues to infer the missing attribute of a product (Park and Lessig, 1981). Rao and Monroe (1988) further found that consumers with high product familiarity have more confidence in using internal cues to draw inferences and they also assume they are able to distinguish the diagnostic value of external cues for their inference. Therefore, consumers with a high product familiarity not only use internal cues to estimate inferences on quality, but also use external clues to make inferences. Based on the above mentioned, this study proposes the following:

*Hypothesis 2 Consumers with high subjective product knowledge use more types of bases for their inferences to estimate missing attributes than consumers with low subjective product knowledge.*

### Subjective product knowledge and naïve theory

When consumers used their beliefs or a known relation between two attributes, they had to rely on their naïve theories. Deval, Mantel, Kardes, and Posavac (2013) define naïve theory as the belief and common sense that exists in people's minds, which is then used to explain and infer events that occur in their daily lives. Therefore, this naïve theory could affect people's judgments and decision-making. For example, one naïve theory could be that "a valuable product is superior in quality to one with a low price" or the opposite one that "quality goods should be expensive."

Petty, Wegener, and White (1998) and Deval, Mantel, Kardes, and Posavac (2013) found that people used their naïve theory as the correcting basis for judgments. Consumers with high levels of subjective knowledge of a product had strong confidence, so they could



use their naïve theory based to correct their inferences (Deval, Mantel, Kardes, and Posavac, 2013; Handley et al., 2009; Petty, Wegener, and White, 1998). As Ross and Creyer (1992) suggested, consumers tend to use correlation-based inferences to estimate a missing attribute when they perceived a high variation on the same attribute of other brands. Thus, when attribute variation is large, both consumers with high or low subjective knowledge will use correlation-based inference to the estimate missing attribute. But consumers with high subjective knowledge also adopt naïve theory to correct the result of inferences.

*Hypothesis 3* When consumers perceive the attribute variation as large, consumers with high subjective knowledge are more likely to use naïve theory to correct the results of their inferences regarding the missing attributes than consumers with low subjective knowledge.

## STUDY 1

### Method

A total of 87 undergraduate students participated in Study 1. Contact lenses were selected as the focal product. The students were randomly assigned to one of four conditions in a 2 (subjective knowledge: high or low)  $\times$  2 (attribute variation: large or small) factorial experiment. Knowledge was measured on a four-item four-point scale. Participants were divided into high and low knowledge groups based on median split. Attribute variation was manipulated by varying oxygen permeability from 149 to 155 DK/t and maximum continuous wearing days from 10 to 18 days.

All participants received an experimental booklet in which the first page provided an article about disposable contact lenses by *Consumer Reports*. The manipulation was presented in an information table with five brands and five product attributes, including product type, continuous wearing days, oxygen permeability, water content, and price. Among these attributes, oxygen permeability affects maximum wearing days; therefore, the positive relationship between these two attributes was designed for the correlation-based inference.

After participants read the article, they were asked to estimate the maximum wearing days of a new disposable contact lens that Johnson & Johnson recently launched. This new product had all other attribute information except the wearing days. Then, participants were requested to write down their reasons for their estimation concerning this missing attribute. Finally, participants answered a series of questions that measured subjective knowledge and manipulation checks.

### Results

Based on the inference classification by Pechmann and Ratneshwar (1991), plus the price-based inference that commonly existed in people's naïve theory, the participants' inference reasons were classified into four inference bases: brand-based inferences, category-based inferences, correlation-based inferences, and price-based inferences. Then, participants' inference reasons were coded, and calculated the total number of inference bases used.

When attribute variation was small, 43% of participants used a category-based inference to estimate the missing attribute. When attribute variation was large, only 23% of participants used a category-based inference (see Table 1). The result of a Chi-square analysis indicated that participants preferred to use a category-based inference on the missing attribute more when the attribute variation was small as opposed to high ( $\chi^2_{(1)}=3.89, p=.049$ ).  $H_1$  was supported.

There was no significant difference on the average amount of inference bases used between high and low knowledge participants ( $M_{\text{High Knowledge}}=1.43$  vs.  $M_{\text{Low Knowledge}}=1.30, t_{(85)}=1.14, p=.258$ ). Hypothesis 2 was not supported.

### Discussion

Study 1 supported the expectation that consumers prefer to use category-based inferences on missing attributes when they perceive the attribute variation in the market is small rather than large. However, the influence of consumers' subjective knowledge on the inference basis was not verified. There were two possible explanations for this unexpected result. First, the brand of the newly launched product was Johnson & Johnson, which is famous and participants with high product knowledge tend to use more brand-based inferences, which interfered with the results. Second, the relation between oxygen permeability and maximum wearing days in the manipulation was too strong to be ignored. So, even participants without knowledge could use it to infer the missing value.

## STUDY 2

### Method

Study 2 was similar to Study 1, with some alterations to overcome previous weakness. In the product information table, the correlation coefficient between the oxygen permeability and maximum wearing days was reduced from .94 to .68, and Johnson & Johnson was replaced with a fictional new brand.

Furthermore, the estimated wearing days was designed to signal the inference bases. When participants inferred the maximum wearing days was 18 days or more, it implied they might use the correlation between oxygen permeability and the maximum wearing days to draw their inference. When participants estimated the maximum wearing days were 14 days, it was likely that they would use the average maximum wearing days of the product category, which is category-based inference.

### Results and discussions

Participants were comprised of 107 undergraduate students. The proportion of participants using category-based inferences was higher when the attribute variation was small rather than large ( $M_{\text{Small Variation}}=35\%$  vs.  $M_{\text{Large Variation}}=14\%, \chi^2_{(1)}=7.06, p=.008$ , see Table 1). In addition, the amount of inference bases used by participants with knowledge was significantly higher than those without knowledge ( $M_{\text{High Knowledge}}=1.38$  vs.  $M_{\text{Low Knowledge}}=1.16, t_{(105)}=2.27, p=.025$ ). Both  $H_1$  and  $H_2$  were supported.

When the attribute variation in the market was large, participants with a low knowledge level inferred more wearing days than those with a high knowledge level ( $M_{\text{Low Knowledge}}=17.03$  (sd=2.04)  $>$   $M_{\text{High Knowledge}}=15.20$  (sd=2.02)) significantly ( $t_{(57)}=3.464, p=.001$ ). Further analyses revealed that less knowledgeable consumers used more correlation-based inferences (66%) than other bases. High subjective knowledge consumers not only used correlation-based inferences to estimate the missing value (60%), but also they used price-based inferences to correct the estimation ( $M_{\text{High Knowledge}}=53\%$  vs.  $M_{\text{Low Knowledge}}=21\%$ ).  $H_3$  is supported.

In sum, Study 2 reconfirmed  $H_1$  and  $H_2$ . It also found that consumers who had a high level of subjective product knowledge and more confidence used more correlation-based inferences. They also used their naïve theory to correct the inference for the missing attribute. However, Study 2 did not provide the correction effect of consumers' naïve theory directly. Consequently, Study 3 manipulated

**Table 1: The frequency of inference bases used by different levels of subjective product knowledge and attribute variation in three Studies**

	Inference Base	Attribute Variation			Inference Base	Attribute Variation				
		Small	Large	Total		Small	Large	Total		
Study 1	Low Knowledge	Brand	2	4	6	High Knowledge	Brand	5	7	12
		Category	12	5	17		Category	7	5	12
		Correlation	10	15	25		Correlation	14	15	29
		Price	3	5	8		Price	6	4	10
		Basis amount	27	29	56		Basis amount	32	31	63
		Sample size	22	21	43		Sample size	22	22	44
		Average	1.23	1.38	1.30		Average	1.45	1.41	1.43
Study 2	Low Knowledge	Brand	1	2	3	High Knowledge	Brand	1	4	5
		Category	7	4	11		Category	10	4	14
		Correlation	15	19	34		Correlation	15	18	33
		Price	5	6	11		Price	9	16	25
		Basis amount	28	31	59		Basis amount	35	42	77
		Sample size	22	29	51		Sample size	26	30	56
		Average	1.27	1.07	1.16		Average	1.35	1.40	1.38
Study 3: Without Naïve theory/Manipulation	Low Knowledge	Brand	5	5	10	High Knowledge	Brand	4	6	10
		Category	7	5	12		Category	14	6	20
		Correlation	4	13	17		Correlation	9	19	28
		Price	5	4	9		Price	3	6	9
		Basis amount	21	27	48		Basis amount	30	37	67
		Sample size	20	21	41		Sample size	24	21	45
		Average	1.05	1.29	1.17		Average	1.25	1.76	1.49
Study 3: With Naïve theory/Manipulation	Low Knowledge	Brand	6	8	14	High Knowledge	Brand	3	7	10
		Category	10	8	18		Category	14	6	20
		Correlation	5	10	15		Correlation	8	11	19
		Price	8	1	9		Price	4	4	8
		Basis amount	29	27	56		Basis amount	29	28	57
		Sample size	21	23	44		Sample size	22	20	42
		Average	1.38	1.17	1.27		Average	1.32	1.40	1.36

the naïve theory directly and revealed the correction effect of naïve theory explicitly.

### STUDY 3

#### Method

In Study 3, the naïve theory “quality goods should be expensive” was activated in participants to reveal the stronger correc-

tion effect by consumers with a high knowledge level versus a low knowledge level. The activation of the common naïve theory “quality goods should be expensive” could make it more accessible and applicable on inference correction. A total of 172 undergraduate students participated in Study 3. The students were randomly assigned to one condition of a 2 (Knowledge: high or low) × 2 (Variation: large or small) × 2 (Naïve theory: yes or no) factorial experimental setting. Naïve theory was activated by a short passage. Also, the new

focal product with a low-profile brand, Hydron, was given a relatively low price, so the correction effect of the naïve theory could be revealed on the fewer wearing days attribute.

Participants were invited to participate in two unrelated experiments. First, participants read a passage about travel and then completed a reading test. The passage had two versions: one was about how travelers might encounter many problems if they sought a cheap travel package; this was done in order to activate the naïve theory, “quality goods should be expensive.” The other passage was an article about travel with neutral attitudes. After completing the reading test, participants were invited to continue the second experiment which was the same as Study 2.

## Results and discussions

This study supported  $H_1$  and  $H_2$  again. Participants used more category-based inferences when the attribute variation was small ( $M_{\text{Small Variation}} = 52\%$  vs.  $M_{\text{Large Variation}} = 29\%$ ,  $\chi^2_{(1)} = 8.87$ ,  $p = .003$ , see Table 1). Furthermore, knowledgeable participants used more inference bases than novice participants ( $M_{\text{High Knowledge}} = 1.43$  vs.  $M_{\text{Low Knowledge}} = 1.22$ ,  $t_{(170)} = 2.00$ ,  $p = .047$ ).

A three-way ANOVA indicated a significant interaction effect among participants' subjective product knowledge, attribute variation, and naïve theory on the estimation of maximum wearing days ( $F_{(1, 164)} = 4.133$ ,  $p = .044$ ). In the group without naïve theory activation, participants inferred more wearing days when the attribute variation was large rather than small ( $M_{\text{Large Variation}} = 16.74$  ( $sd = 2.31$ ) vs.  $M_{\text{Small Variation}} = 14.05$  ( $sd = 1.36$ )). This difference suggested that participants used more correlation-based inferences when attribute variation was large ( $M_{\text{Large Variation}} = 76\%$  vs.  $M_{\text{Small Variation}} = 30\%$ ). Conversely, participants used more category-based inferences when attribute variation was small rather than large ( $M_{\text{Small Variation}} = 48\%$  vs.  $M_{\text{Large Variation}} = 26\%$ ).

When participants' naïve theory was activated and faced a small attribute variation, they estimated the maximum wearing days was 13.98 ( $sd = 1.03$ ), almost equal to 14, whether they were knowledgeable or novices. This estimation implied that participants tended to use category-based inferences (56%). When the attribute variation was large, knowledgeable participants inferred less wearing days than novice ones ( $M_{\text{High Knowledge}} = 14.75$  ( $sd = 2.20$ ) vs.  $M_{\text{Low Knowledge}} = 16.70$  ( $sd = 1.74$ )). Since knowledgeable and novice participants both used correlation-based inferences more than other bases, 30 and 23 counts respectively, the estimated fewer wearing days made no sense unless it was due to the correction effect of their naïve theory.

## GENERAL DISCUSSIONS AND IMPLICATIONS

The contributions of this paper are twofold. First, when consumers noticed a small attribute variation in the market, they preferred to use category-based inferences to estimate the missing attribute. On the contrary, when consumers perceived a large attribute variation, they tended to use correlation-based inferences to form the estimation. The current results coincided with Ross and Creyer (1992) and further found that knowledgeable consumers used more types of inference bases to estimate the missing value.

Second, this paper disclosed the correction effect of naïve theory on inferences. When the naïve theory, “quality goods should be expensive,” was activated in knowledgeable consumers, they used it to correct the inference of missing attribute. Conversely, the correction effect was not observable on less knowledgeable consumers because their naïve theory was not strong enough. Future research may try to use other products requiring different levels of product knowledge to make a purchase decision to confirm the effect of naïve theory on inference.

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# How Regional Diasporic Consumer Experiences Produce Transnational Imaginary

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*“Because we are people from the same region,  
we are from the same country,  
we do share the same mentality as a Middle Easterner”  
Informant #024*

## ABSTRACT

This paper examines individual experiences of regional diaspora consumers and how they combine to produce a transnational consciousness and belongingness in the marketplace. In-depth interviews with Middle Eastern diaspora identify five emotions to construct a transnational imagined Middle Eastern world through three elements of re-enactment. Implications for marketing are discussed.

## INTRODUCTION

In the wake of globalization migration has risen sharply, resulting in large diasporic consumer groups who possess cultural identities distinct from their host country and maintain powerful attachments to their home culture (Fernandez et al., 2011; Takhar et al., 2012). As the quote above indicates, individuals can imagine themselves as belonging to a transnational community and home culture that extends beyond their national origin. For example, Maha may originate from Yemen, yet living in Australia can connect to a sense of imagined home through media from the greater Middle East region. Her consumption of television programs from Egypt, foods from Lebanon, and imported brands from Turkey all serve as mediators of a shared consciousness and belongingness to a transnational Middle Eastern world. Understanding the consciousness and belonging of growing diasporic communities like in Maha's case is important because these connections are a known determinant of consumer's lifestyle and consumption practices (Vadakepat, 2015; Figueiredo, 2015; Cappellinim and Yen, 2016).

However, while a growing body of marketing and consumer research examines the nature of individuals originating from a national homeland, to migrate and settle in another location (Mehta and Belk, 1991; Kumar and Steenkamp, 2013), the specific ways through which consumers engage with these experiences to construct their transnational experience have not been directly studied. As such this research adopts a transnational view of regional diaspora consumers and how their experiences combine transnationally (Figueiredo and Uncles, 2015; Chelekis and Figueiredo, 2015). That is, how individuals from separate national homelands enact strong connections to an imagined community of people who feel belonging to the same region, despite not being born in the same country. Understanding transnational communities such as the Middle Eastern diaspora is important in marketing because they reflect large consumer segments that need to go beyond an emotional connection to their national homeland to cultivate a sense of shared consciousness and belonging at a higher, transnational, level (Craig and Douglas, 2006; Cayla and Eckhardt, 2008).

## THEORETICAL BACKGROUND

In this paper we draw from Appadurai's (1990; 1996) theoretical insights on globalization, transnational identity and self-imagining to better understand the sense of consciousness and belonging of regional diaspora and how their individual experiences combine to construct transnational connections. This corresponds with Ander-

son's (2006) concept of 'imagined communities', whereby various commercial mediums (i.e. books, cinema, brands) allow individuals who may never meet to 'imagine' themselves as being part of the same group. Prior literature in consumer research has highlighted the importance of imagined communities for transnational brands and those targeting ethnic markets (Cayla & Eckhardt, 2008; Wu et al., 2013), but has not discussed how consumers create and maintain emotional bonds with these imagined communities. Adopting the Australian-Middle Eastern community as a research context, our aim is to understand *how the sense of consciousness and belonging of Middle Eastern diaspora's help foster a Middle Eastern imaginary.*

Prior research in consumer research has recently taken increased interest in diasporic communities as consumers (Takhar et al., 2012; Dey et al., 2017). Many of these studies focus on how forms of media can speak to a diaspora by conveying a sense of national imagined community. For example, Takhar et al., (2012) examined how Bollywood films from India conveyed a sense of Indianness to Indian diaspora in the UK, including reaffirming pride in Indian heritage and reinforcing family values. From an acculturation standpoint, Dey et al., (2017) investigated the lifestyle and cultural identity of South Asian diaspora communities in Brittan and ways individuals exhibit multiple cultural identities between their respective national origin and place of living. However, these existing studies are inadequate for understanding how individual experiences of a regional diaspora combine to establish a sense of shared consciousness and belonging to a transnational community. Cayla and Eckhardt (2008) come close, having explored how brand managers contribute to creating a shared belonging and consciousness in the Asian region by placing emphasis on the globalization of Asia and market-mediation work performed by brands. But, their study focuses on the material produced by brands, and therefore does not provide insight into how the transnational imagination is emotionally experienced, which is surprising given the amount of work relating emotional experience with a sense of belonging and collective consciousness (Cova and Cova, 2002; Gentile et al., 2007). Hence, this paper builds on these prior constructs by focusing specifically on how the emotional experiences of a diverse Middle Eastern diaspora helps create a sense of transnational belonging and consciousness to a Middle Eastern imaginary.

## METHODOLOGY

Our study took a phenomenological approach (Moustakas, 1994) to understand the individual experiences of Middle Eastern diaspora and how they combine as a transnational imagined community. We conducted semi-structured in-depth interviews (Belk et al., 2012) ranging from 35 to 95 minutes with 30 individuals (12 female) from diverse countries in the Middle East living in Melbourne, Australia. Informants were selected based on being first generation migrants that self-professed to maintain connection with their home culture at some level. Informants originated from various homelands in the Middle East, including Iran, Saudi Arabia, Jordan, Yemen, United Arab Emirates, Lebanon, Egypt, Turkey, Iraq and Morocco and had lived in Australia for less than 10 years. Prior to each interview, informants were asked to take photographs of items in their possession from their homeland that held particular significance to them. During interviews, questions were asked regarding the informant's experiences with the stimuli depicted in the photos. Data



analysis involved an iterative reading strategy to develop a holistic understanding of each interview transcript (Thompson et al., 1989). The first author identified significant statements yielding insight into how the sense of consciousness and belonging of each individual's experience combined as transnational. Statements were then triangulated with the second and third authors and subsequently categorized into themes (Spiggle, 1994).

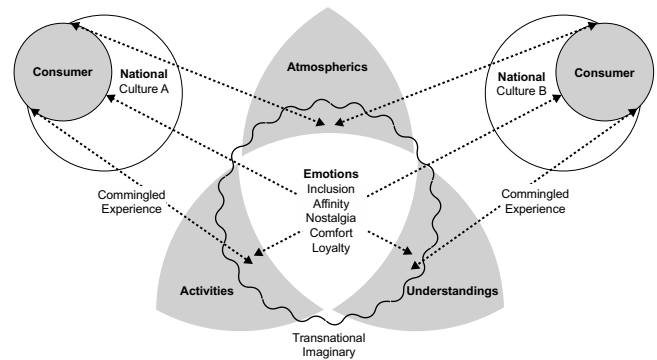
## FINDINGS AND DISCUSSION

From our interviews with Middle Eastern diaspora, we found the transnational experience manifests as a double consciousness (Du Bois, 1903) in reverse, which we call 'commingled-experience'. Double consciousness is an established concept in social philosophy that refers to the inward "twoness" experienced by African-Americans because of their racialized oppression and devaluation in a white-dominated society. In the commingled-experience, the twoness is not necessarily oppressive; instead it expresses itself as a capacity to be aligned both with a national culture and a transnational imaginary. In this sense, the term 'commingled' functions as a metaphor for describing how the individual experience of a diverse regional diaspora blends as Middle Eastern consciousness. Having an understanding of the role of emotions in fostering these commingled-experiences is important as it can help brands serve as an emotional and experiential platform for diverse diaspora groups to maintain transnational ties to an imagined regional homeland. Thus, we shift the focus of the analysis to emotions constituting the commingled-experience of a transnational imaginary, and the specific re-enactment components by which they exist.

The data analysis revealed five emotions that help create a sense of transnational belonging and consciousness to a Middle Eastern imaginary. The emotions were identified as: 1) *inclusion* (belonging and kinship); 2) *affinity* (rapport and like-mindedness); 3) *nostalgia* (longing for what was lost); 4) *comfort* (contentment and eased tension) and 5) *loyalty* (commitment and support). Each emotion does not follow any ordered hierarchy and thus may at times overlap and intertwine. In their experiences, these emotions emerge through three elements. The first element, *atmospherics*, performs emotions of the transnational imaginary via sensory representations. The second element, *understandings*, performs emotions of the transnational imaginary by re-enacting social comprehension and cultural values. The third element, *activities*, performs emotions of a transnational imaginary through the re-enactment of behaviours and everyday tasks. Since the Middle East takes imaginary form and is not a given, these elements of re-enactment become necessary, as Sökefeld (2006) points out that people need to be mobilized through certain events and practices to construct these imaginings (See Figure 1).

### Atmospherics

The first element to re-enact the transnational imaginary is *atmospherics*, which have previously been discussed as representational 'cues' composed of "any component within an individual's perceptual field that stimulates one's senses" (Milliman and Fugate, 1993, p.68). These cues may include temperature, noise, decoration, and scent, to name a few. *Atmospherics* are important in consumer research for creating value perceptions (Schmitt, 1999), and operationalizing pleasure and arousal (Babin and Dardin, 1995). In our interviews, informants described experiencing different emotions toward the Middle Eastern imaginary, such as *inclusion*, through sensory forms of representation. For instance, a female respondent from Saudi Arabia felt personal sense of belonging and kinship to patterns and other design elements embedded in the visual aesthetics of an Australian fashion brand (Table 1, Quote A). Note she describes her



**Figure 1: Framework for how regional diaspora consumer experiences produce transnational imaginary**

experience with the brand's visual aesthetics as representative of the person she is and her own life story. While she had previous experience with the designs from Saudi Arabia, their material presence on the brand mobilized a sense of kinship to a transnational identity beyond her national origins, such as the greater 'Arab' community. In addition to fostering *inclusion*, several informants expressed emotions of *loyalty* to a transnational imaginary through re-enacted experiences with atmospheric representations in diaspora. For example, an Iraqi man shared his experience visiting a Turkish mosque in Australia (Table 1, Quote B). Observe how the mosque's unique architecture and design creates a strong sense of commitment and *loyalty* to return there even though it is not convenient, due to certain *atmospherics* from another nation helping to mobilize a transnational connection akin to his homeland. These findings on *atmospherics* help contribute to our understanding of sensory consumer experiences (Gentile et al., 2007; Schmitt, 1999) by showing how different national forms of representation can use material similitude to leverage emotions associated with the transnational imaginary.

### Understandings

The second element to re-enact a sense of Middle Easternness is *understandings*, which have been described as "discourses, cultural tropes, or value systems" (Woermann and Rokka, 2015, p.1498) comprehended through social interaction. *Understandings* are important for activating shared knowledge (Gupta, 2008) and reflecting cultural values of intended audiences (Zubcevic and Luxton, 2011). Our informants described experiencing emotions such as *comfort* within the Middle Eastern imaginary as emerging from re-enacted ways of comprehending their commingled-experience. For example, a Yemeni informant describes how being in the company of others from the Middle East community makes living in diaspora easier (Table 1, Quote C). Notice here that he was able to experience a sense of *comfort* and eased tension through having common *understanding* through his interactions with other Middle Eastern nationalities such as Iran and Kuwait. Informants also experienced emotions of *affinity* to the transnational imaginary as re-enacted through shared *understandings*. For example, a Moroccan informant spoke about the 'Angry Arab' persona, saying it helped him connect and build a sense of rapport and like-mindedness with an Iraqi friend living in Australia (Table 1, Quote D). Here we see the 'Angry Arab' persona extends beyond any one specific nation, being transnationally acknowledged and understood. There is a level of comprehension and 'getting one another' that mobilizes this sense of *affinity* to an imagined community that goes beyond his own country. While *atmospherics* provide sensory experiences through material forms of representation, *understandings* are more phenomenologically experienced being intellectually and socially transmitted through interaction. Hence, *understandings*

Table 1: Findings

		Elements of Re-enactment		
		Atmospherics	Understandings	Activities
Emotions	<b>Inclusion</b> Emotion of belonging and kinship	<b>QUOTE A.</b> Informant #021: "This is the shop that it's left me that, they have a Arab design. It reminds me that this is me, this is my life. This is where I grow up and I'm proud of that. When you see something that reminds you of this places, you feel like 'this is me' more than anything else."	Informant #006: "There are a lot of things that are similar actually, it is important for me, because it is my branding at first, also I think that if I live without my culture, you can't live...if you live without your culture you live without branding, so you will live without anything. But Islamic culture, Middle east culture...that's the main thing, my culture is important for me."	Informant #23 "...Once I was even at a barber shop, I just remember this, and the guy was Iraqi, and he was using a gel that is manufactured in Lebanon. I was like, "Do you know if that is made in Lebanon?" He was like, "Oh, is it?" I was like, "Yeah, I used to use that product on my hair."
	<b>Affinity</b> Emotion of rapport and like-mindedness	Informant #010: "Sitting in there, the scenario, the decoration and the atmosphere there, just prompts you to bring up memories and remember and tell about your life (homeland)... the other person is the same. So everyone, it brings up memories."	<b>QUOTE D.</b> Informant #016: "You know there is this very funny stereotype that Arab men are angry. I don't have to be politically correct because I am one of them, so you know, it kind of takes the edge off me. ...he (Iraqi friend) showed up late one time, we were having lunch with him, and I pretended to be angry at one point, looking at my watch in a demonstrative Arab guy kind of way, and that goes by easily because he knows where I am coming from."	Informant #015: "I usually call my friend over and we have dinner together, or sometimes we go out together to eat, and we go to a Middle Eastern place, like on Sydney road there are a lot of Middle Eastern places".
	<b>Nostalgia</b> Emotion of longing for what was lost	Informant #005: "Being in Australia right, it's nice to see something like that, and they also made it axiomatizing, or a Middle Eastern thing where it was like a tent kind of thing..."	Informant #004: "I saw a mother and her little son, when I saw that woman I remember my mother, and I saw a family...they were together and the father played with his little girl. And their connection was similar."	<b>QUOTE F.</b> Informant #027: "There is a "Best Foods" in Brunswick... I love going there, because not only Turkish things, they have all Middle Eastern ingredients and things and cultural things, for example coffee cups. I love them".
	<b>Comfort</b> Emotion of contentment and eased tension	Informant #003: "It makes me feel comfortable, it makes me feel calm...it feels like I am there. We are not Muslims actually, but mosques, for us...because they are common in that culture, I remember when I was young I went with my grandfather there...and it feels very comfortable there".	<b>QUOTE C.</b> Informant #008: "I am actually living with Iran and Kuwait guys, so yeah, we do totally feel connected to that... we can find it much easier to interact with people from the same cultural background, yeah its much easier...majority I think, like almost 90% of things we have in common, its just a little bit of differences, which is unnoticeable".	Informant #17 "...the things that are handmade in Iran, like, we got these, you might have seen it in the Middle East, we have these tiny cups that they drink tea in it. I asked my parents to bring it for me but they forgot, but I really want to have one in here."
	<b>Loyalty</b> Emotion of commitment and support	<b>QUOTE B.</b> Informant #012: "I go to the Turkish mosque I see more and feel like my country more... I am back in my home country. It is strong feelings to remember my country. But the places here in the city that are close, they don't have this. But the Turkish mosque...similar to my country, they have this kind of architecture or design...the first time I was crying to be honest."	Informant #024: "The music I think its the Middle Eastern, could be music almost the same... especially in Iraq, most of Iran music came from Turkey and beyond. When we meet people from the same region, we are friends from the same country because we are from the same region. We do share the same mentality as a Middle Easterner."	<b>QUOTE E.</b> Informant #018: "I can't drink any other type of coffee in the morning, it has to be this coffee, it is Turkish in origin, but we get 'home'. It comes in small cups of powder and you boil it. It has to be my morning coffee".

help contribute to furthering Gentiles et al. (2007) cognitive and relational components of consumer experience concerned with thinking process and social relationships (Woermann and Rokka, 2015) by demonstrating how shared forms of comprehension can help re-enact commingled-experiences of a transnational imaginary.

**Activities**

The third element to re-enact the emotions of a Middle Eastern imaginary is *activities*, made up of actual behaviours such as tasks performed by someone like preparing dinner or putting on clothes (Dayal et al., 2013). In consumer research, such *activities* are described as practical acts of doing things, and are known to be important for enhancing user experiences (Gentile et al., 2007) and better understanding behavior (Brakus et al., 2009). In our interviews, informants described experiencing commingled emotions such as *loyalty* to Middle Easternness through the re-enactment of particular tasks from their homeland. For example, an informant from Jordan detailed his morning ritual (Table 1, Quote E). Here the informant expresses loyalty to Turkish coffee, discussing it as giving a feeling of 'home' despite his homeland being Jordan. Many of our informants from around the region described similar situations where they prepared things like coffee in similar way. Informants also discussed experiencing emotions of *nostalgia* to a transnational imaginary (Rahman and Cherrier, 2010). For example, a Turkish informant talked about her love for visiting stores that allow her to cook familiar foods and purchase items from the greater Middle East region (Table 1, Quote F). You will notice here that items such as ingredients and cups allow her recreate a sense of home that was lost in diaspora that extend

beyond her home nation. While *atmospherics* provide sensory experiences through ways of representing and *understandings* provide phenomenological experiences through ways of comprehending, *activities* tend to be more practical and based on everyday tasks and behaviors (Gentile et al., 2007, Brakus et al., 2009). *Activities* help contribute to understanding of the pragmatic and lifestyle components of consumer experiences by showing how the Middle Eastern imaginary can be mobilized through shared behaviors.

**IMPLICATIONS AND CONCLUSION**

Two significant implications stand out. First, our findings extend current knowledge of diaspora marketing by explaining commingled-experience, a concept specific for helping cultivate the double consciousness of the transnational imagination. For example, the experiences of individuals from diverse nations in the Middle East may be able to combine to produce a sense of belonging and kinship (*inclusion*) to a larger Middle Eastern community through elements of re-enactment such as certain decorations and other *atmospherics* used in store environments. Second, by examining how the individual experiences of regional diaspora allow them to think beyond their own nation, without rejecting their national cultures, this research contributes toward a better understanding of diasporic consumer experiences in the global marketplace. Even more specifically, understanding the transnational imagination of migrant consumers like the Middle Eastern diaspora helps advance prior work on transnational consumption (Bardhi et al., 2012), because it reveals the role of shared material designs, understandings and activities in helping instil emotions that support the transnational imaginary. Ad-

ditionally, this study can also contribute to the literature in customer experience (Lemon and Verhoef, 2016) by adding extra layers of understanding to the creation of transnational experience of diaspora consumers. However, due to limited space we could not develop this line of research further.

This paper has investigated how the consciousness and belongingness of individuals from a Middle Eastern diaspora can connect to produce commingled-experiences of Middle Easternness outside the Middle East. We identified five distinct emotions in the commingled-experiences of a transnational imagined Middle Eastern world that are performed through three elements of re-enactment. Explanations of each finding helps to benefit prior work in diaspora marketing (Kumar and Steenkamp, 2013) and transnational consumption (Bardhi et al., 2012) by showing how the commingled-experiences of diaspora co-create the transnational imagination.

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# A Beautiful MIN(D): The Multiple-Identity Network as a Framework for Integrating Identity-Based Consumer Behavior

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## ABSTRACT

It is now established that individual consumers have multiple identities that drive consumption behavior. Although multiple-identity research is growing, it has yet to adopt an integrative framework. Drawing on classic social-cognitive theories, the present research offers a simple, unifying model: the Multiple-Identity Network. Extant and future research are discussed.

## KEYWORDS

Identity, Self, Self-Concept, Cognition, Association, Categorization

## INTRODUCTION

Consumer self-concept has a profound impact as a driver of consumption behavior (Belk, 1988). Recent marketing research has begun to systematically review the work on consumer identity. This work reveals two main bases for identity-based consumer behavior: identity-congruent consumption (A. Reed, Forehand, Puntoni, & Warlop, 2012) and compensatory consumption (Mandel, Rucker, Levav, & Galinsky, 2017). Importantly, identity research has also acknowledged that consumer self-concept is comprised of multiple distinct identities (for a review see Kang & Bodenhausen, 2015). For example, a consumer may have a gender identity (e.g., female), a national identity (e.g., American), a cultural identity (e.g., Asian), and occupational identity (e.g., Mathematician), or a lifestyle identity (e.g., Athlete; see figure 1). An important question looms large following the recent reviews of consumer identity research: How do consumers manage the complex processes required for both congruent and compensatory consumption behaviors across their multitude of identities? Answering this question calls for identification of a framework in which to synthesize consumer identity research, going beyond the taxonomic approach used in prior literature. Such a framework allows for more systematic advancement of the literature. This is the primary focus of the present research.

## IDENTITIES AND THE MULTIPLE IDENTITY NETWORK

What is an identity? Reed et al. (2012) suggest a definition of identity that is inclusive enough to consolidate streams of literature conducted in different domains, but also distinguishes an identity from other concepts such as a simple self-view or a self-association. They define identity as “any category label to which a consumer self-associates, either by choice or endowment” (A. Reed, et al., 2012, p. 312).

Reed and colleagues go on to say that a category label evokes a clear mental representation of the prototypical category member: their appearance, attitudes, behaviors, etc. Thus, each self-associated category label, or identity, has its own subset of associations that includes behaviors, attitudes, beliefs, norms, goals, and other associated concepts (Coleman & Williams, 2013; Oyserman, 2009). Following this, one can say that at the fundamental level, identities are groupings or collections of self-associated concepts<sup>1</sup> (McConnell, 2011; A. Reed, et al., 2012).

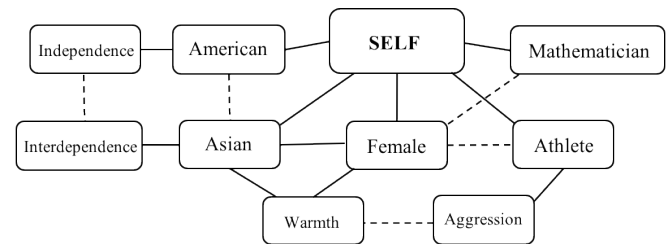
<sup>1</sup> To be clear, an identity is not a single self-association, but a collection of self-associations. It is similar to the concept of a “social category.” However, social categories imply that identifying a group of similar individuals is requisite for category formation, and this assumption is not present in the current paper’s conceptualization of identity.

**Definition 1: Identity.** A collection of self-associated concepts.

Focusing on identities as collections of self-associated concepts allows us to more clearly draw comparisons between identities and other theoretical constructs in the study of social cognition. For example, consumers store collections of concepts (i.e., categories) like “dogs,” “chairs,” “Apple users,” or “Nike products” in memory in associative networks (Bagga, Noseworthy, & Dawar, 2016; Lajos, Katona, Chattopadhyay, & Sarvary, 2009; Noseworthy & Goode, 2011; Noseworthy, Wang, & Islam, 2012; Rosch, Mervis, Gray, Johnson, & Boyesbraem, 1976). If identities are also collections of self-associations, then it follows that *identities are also cognitively stored within an associative network* (Greenwald et al. 2002; McConnell 2011). We refer to the associative network of consumer identities as the Multiple-Identity Network.

**Definition 2: Multiple-Identity Network.** The associative memory network that contains a consumer’s multiple identities.

**Figure 1: Multiple-Identity Network of a Hypothetical Consumer**



Note: Dashed lines represent negative associative relationships

Below, we integrate consumer identity research within this framework, describing how identity congruence, discrepancy, and resolution can be represented in the MIN. We also identify areas for future research.

## MULTIPLE-IDENTITY CONGRUENCE

### Bipolar Identity Paradigms

Investigating identity-relevant behavior in multiple-identity paradigms is an area in need of further research (Kang & Bodenhausen, 2015). Current work in the area shows that consumers generally behave congruently with an active identity despite the existence of an alternate identity with a different pattern of consumption behavior (Coleman & Williams, 2013; LeBoeuf, Shafir, & Bayuk, 2010; Luna, Ringberg, & Peracchio, 2008; Mercurio & Forehand, 2011; Zhang & Khare, 2009).

These paradigms often use the context of bicultural identity (e.g., Asian vs. American identity), and they generally use bipolar opposition to assess outcomes following identity activation (Briley, Morris, & Simonson, 2005; Lau-Gesk, 2003; Mok & Morris, 2013). For example, purchasing an interdependent product that signals group membership is behaving congruent with Asian-identity priming. This is inherently avoidance of an independent product that signals distinctiveness, congruent with the alternate (non-primed) American identity. Given the notion of the MIN, these bipolar paradigms may be masking a richer pattern of effects.



### Future Directions: Alternate-Identity Effects

Following a basic tenet of associative network theory (Collins & Loftus, 1975; Dimofte & Yalch, 2011; Lei, Dawar, & Lemmink, 2008; Morrin, Lee, & Allenby, 2006), identities within the MIN may be positively or negatively associated with one another (or not associated at all: “dissociated”).

Let us suppose that our Asian-American consumer’s Asian identity is positively associated with her Female identity because both are associated with the traits of interpersonal warmth (Fiske, Cuddy, Glick, & Xu, 2002; Fournier & Alvarez, 2012). Spreading activation (e.g., Dimofte & Yalch, 2011) would predict that activation of the Asian identity would also activate the Female identity because the two are positively associated. Therefore, the consumer may have increased likelihood to purchase products from Asian brands as well as products targeted toward females. In other words, a consumer primed with identity A might also approach identity B. This dual-approach effect is underexplored in identity priming research, and would be obscured by a bipolar paradigm.

Let us also suppose that the consumer’s identity as an Athlete is associated with the trait of aggression (Coleman & Williams, 2013). Aggression may be considered a bipolar opposite to warmth. The athlete-aggressive association may thus be negatively associated with the female-warm association. Activating the Female identity may therefore lead consumers to avoid Athlete-targeted products. This type of downstream consequence is also underexplored in identity research.

Taken together, it becomes clear that future work should explore alternate-identity effects of identity priming given the existence of inter-identity relationships within the MIN.

## MULTIPLE-IDENTITY DISCREPANCY

### Self-Discrepancy

Mandel and colleagues (2017) describe six types of self-discrepancy in their review: intelligence, personal freedom, power, social exclusion (i.e., belongingness), system threat (i.e., control), and group exclusion. These self-discrepancies can be readily integrated into the MIN to situate the current work and identify areas for future research.

Group exclusion may be conceptualized as discrepancy between one’s actual and desired level of group affiliation (Mandel, et al., 2017). Group exclusion may thus be represented in the MIN by a salient negative association between the self and a group-identity.

In the present definition of identity, identity content can include attributes. Each of the remaining forms of self-discrepancy can therefore be conceptualized in the MIN as negative associations between the self and the desired attributes. Seminal conceptualizations of self-discrepancy (Higgins, 1987) describe these collections of desired attributes as “ideal self” (i.e., the attributes one ideally would like to have) and “ought self” (i.e., the attributes one ought to have). Within the MIN, we can refer to these as “ideal identity” and “ought identity.” Taken together, ideal identity, ought identity, group identities, and their subassociations are sufficient to integrate the extant self-discrepancy work within the MIN. This allows us to more readily proceed to exploring areas of future research.

### Future Directions: From Discrepancy to Inconsistency

Per Higgins (1987) seminal research, the notion of discrepancy within the self was initially described by prior work that was largely focused on cognitive inconsistency, such as cognitive dissonance (Festinger, 1957) and imbalance (Heider, 1958). The MIN allows us to reconsider self-discrepancy more broadly, beyond the level of at-

tributes or subassociations. Instead, we can consider inconsistencies between the identities themselves.

Consider our hypothetical consumer in a department store: the athletic department may activate her aggressive-athlete identity, and the women’s department may activate her warm-female identity. Which identity will her behavior follow? By defining identities as collections of self-associated concepts, one can clearly see that this represents a consumer simultaneously holding two inconsistent associations. In this instance, there is no discrepancy between the self and a desired attribute (i.e., self-discrepancy). Rather, there is *inconsistency* between the two identities themselves following from their oppositional identity content (aggressive vs. caring). This is referred to in prior literature as *identity conflict*, and researchers have called for additional work that explores its antecedents and consequences (Hirsh & Kang, 2016; Hollenbeck & Kaikati, 2012; Horton, Bayerl, & Jacobs, 2014; LeBoeuf, et al., 2010; A. Reed, et al., 2012).

Two more identity inconsistencies need additional consumer research. First, inconsistency can occur between two group identities (group-group inconsistency). For example, membership in one group (e.g., Females) may be negatively associated with membership in another group (e.g., Mathematicians) following from a negative stereotype about women and mathematics (for reviews see Pennington, Heim, Levy, & Larkin, 2016; Spencer, Logel, & Davies, 2016). Indeed, consumer research on stereotypes is an area in need of further exploration (Grau & Zotos, 2016; Mirabito, et al., 2016). Second, inconsistency can also occur between a group identity and an attribute (e.g., University students are not good at recycling; White, Simpson, & Argo, 2014). Few studies in consumer research have investigated this topic (White, Argo, & Sengupta, 2012).

In sum, self-discrepancies can be represented in the MIN as negative associations between the self and an attribute or between the self and an identity. Additionally, we propose that further identity inconsistencies may be described in the MIN as occurring between an identity and an attribute (e.g., group-identity threat), between two identities’ attributes (e.g., identity conflict), or between two identities themselves (e.g., stereotypes). These latter three are relatively understudied in consumer research.

## MULTIPLE IDENTITY RESOLUTION

### Compensatory Consumption

In their review of self-discrepancy, Mandel and colleagues (2017) also identified methods of resolving inconsistencies. The MIN can describe these in terms of associations.

Take for example a consumer feeling “unathletic” after skipping a workout. She may compensate for this discrepancy symbolically by purchasing athletic apparel (Shalev & Morwitz, 2012; Ward & Broniarczyk, 2011), or directly with a longer workout on her next gym visit (Soo & Gal, 2014). Both of these behaviors would help reinforce a positive association between the self and the identity.

Rather than approaching a positive self-association, the consumer may also respond by reinforcing a negative self-association with the identity (Dalton & Huang, 2014; White & Argo, 2009). For example, if feeling unathletic, the consumer may respond by disidentifying with the athlete identity by avoiding athlete-congruent behavior below baseline. This effect may be more prominent for consumers lower in collective self-esteem (White & Argo, 2009) and also when approaching the identity seems less feasible (Dimofte, Goodstein, & Brumbaugh, 2015).

Rather than positive or negative reinforcement of a given association, the consumer may seek a different, “neutral” route. For example, the consumer may engage in escapism (Kim & Rucker,

2012), where they intentionally focus on domains that are irrelevant to the discrepancy (Mandel, et al., 2017). Alternatively, the consumer may instead reinforce a different, unrelated identity. This type of fluid compensation may manifest as the consumer reinforcing her Asian identity after feeling “unathletic.”

In sum, the five compensatory consumption strategies discussed by Mandel et al. (2017)

– symbolic and direct resolution, dissociation, escapism, and fluid compensation – can be parsimoniously described by the MIN: reinforcing a positive self-association, reinforcing a negative self-association, or engaging in “neutral” behaviors that reduce the salience of the discrepancy.

### Future Directions: Principles of Multiple-Identity Management

While a taxonomic approach to cataloging the various sources of identity inconsistency and resolution provides an important contribution to consumer research (and Mandel, et al., 2017; e.g., So, et al., 2015), a critical question arises: *when* will consumers engage in the different behaviors? We argue that an important next step toward contributing to this literature lies in arriving at common processes, or principles, that guide multiple-identity management. Below, we offer an initial set of three such principles.

**Principle 1: Identity Maintenance.** Consumers want to maintain associations with their identities.

Models of self-evaluation maintenance (Tesser & Campbell, 1982), self-verification (e.g., vanDellen, Campbell, Hoyle, & Bradfield, 2011), coping (e.g., So, et al., 2015), and self-affirmation (Steele & Liu, 1983) all contend that a fundamental human motivation is to maintain a favorable self-view. This suggests that consumers’ first response is to approach the identity inconsistency in order to reinforce a positive association with the desired identity (i.e., identity-reinforcement; Americus Reed & Forehand, 2016). This notion is augmented by the next principle.

**Principle 2: Inconsistency Evaluation.** Consumers seek to identify the specific nature of an inconsistency.

When University students were told that their student body was bad at recycling, they engaged in sustainability behavior that reflected well upon the group, but not behavior that only reflected well upon themselves individually (White, et al., 2014). Consumers also responded to a self-status threat by reinforcing their personal status (Lee & Shrum, 2012), a self-group (exclusion) threat by reinforcing their group membership (Mead, Baumeister, Stillman, Rawn, & Vohs, 2011), and a threat to their personal control by seeking products that reinforce boundaries (Cutright, 2012). These findings suggest that consumers examine the exact nature of the threat to focus their behavior on addressing the specific inconsistency (So, et al., 2015). The MIN becomes particularly useful given this principle. Articulating threats in terms of inconsistencies between different identities or different subassociations very clearly suggests that consumers will respond by reinforcing the associations in question. The foregoing two principles are balanced by the next principle.

**Principle 3: Behavioral Evaluation.** Consumers engage in a means-end assessment of available identity-relevant behaviors.

When consumers have less self-regulatory resources, consumers engage in less identity-reinforcement (Steele, Spencer, & Lynch, 1993; White & Argo, 2009). The same occurs when identity-rein-

forcement appears unapproachable (Dimofte, et al., 2015). Similar resource-based effects play out with general self-verification as well, where self-reinforcing behavior may be less prominent when resources are low (Park & Maner, 2009; vanDellen, et al., 2011). Each of these effects suggests that consumers must be engaging in some expected value assessment of the available identity-relevant behaviors, where lower expected value begets behavioral avoidance. This principle is useful in that it helps identify which resolution strategy consumers might utilize for a given inconsistency. Taken together, these three principles begin to answer the question of when consumers might engage in the different identity-relevant behaviors.

### CONCLUSION

Using a social-cognitive approach, the present research moves the literature on consumer identity forward by offering a parsimonious framework in which to integrate extant and future work. We delineate how identity-congruent and compensatory consumption are described within the MIN as self-associations. We also identify three broad areas for future research: 1) alternate-identity effects of identity-congruent priming, 2) consequences of multi-level identity inconsistencies, and 3) principles of multiple-identity management. We offer initial suggestions of new theoretical propositions that may guide this future work, as well as suggesting some novel, unexpected results that this work might uncover. In sum, the MIN provides a practical tool for advancing consumer identity research within the burgeoning paradigm of multiple consumer identities.

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# 'But Screw the Little People, Right?'

## Case of the Commercialization of Reward-Based Crowdfunding

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### ABSTRACT

This paper contributes to the research on hybrid economy as we study how tensions resulting from co-existence of commercial and social systems of exchange and blurred boundaries between actors are formulated and reinforced. Study illustrates how actors are trying to make sense of the hybrid context by splitting into subgroups.

### INTRODUCTION

A number of studies focused on the development of collaborative (or sharing) economy (Belk, 2014; Scaraboto 2015; Bardhi & Eckhardt, 2012, etc.) Consumer research in particular suggests distinctions between such forms of exchange as sharing, access, renting, borrowing, gift-giving, and commercial exchange (Belk, 2014; Belk, 2010; Eckhardt and Bardhi, 2012). Many companies operating under the umbrella of the collaborative economy meet challenges when social and commercial motivations of actors co-exist. However, there is lack of understanding of what is happening when actors fail to negotiate contradictions caused by co-existence of various forms of exchange. In this paper, we explore case where co-existence of two systems of exchange cause conflicts and disharmony.

In the reward-based crowdfunding, funders provide financial support for commercially oriented projects without getting any equity rights or monetary rewards in return. Thus, reward-based crowdfunding creates a special context where social and commercial motivations of actors co-exist.

The research question we address in this paper is 'How tensions are formed and reinforced when social and commercial modes of exchange co-exist in reward-based crowdfunding?'

We illustrate how tensions are formed by inherent structural contradictions and mixed messages and how they are reinforced by reaction formation and splitting.

### METHOD – CASE STUDY

We conduct an in-depth case study of a seminal crowdfunding project - the case of Oculus Rift. We used qualitative analysis and followed case's development from August 2012 until August 2017. We analyzed 2617 funders' comments from Kickstarter commentary as well as 7 publicly available founder's interviews, and number of funders' blogposts and tweets.

In this study, we focus specifically on tensions and reinforcing cycles signified by contradictory definitions of success and purpose of the project as well as by blurring boundaries between funders and founders' roles.

### FINDINGS

'Join the revolution, make a pledge, and help us change gaming forever' – declares the closing of Oculus' promotion video on Kickstarter. This message appealed to funders, resulting in the massive support of the project. The project – Oculus Rift – was funded on Kickstarter in August 2012, receiving 2 million USD from 9522 funders. Few days after the end of the crowdfunding campaign, Palmer – Oculus' founder – thanked funders and claimed that 'we would not be able to do it without the community, it always been a community project from the start' (electricity, 2014). Funders, on the other hand, endorsed this community feeling and felt proud to 'be part of the gaming history' and to 'contribute to something big'.

After the launch, project went through few difficult periods. The most disturbing event happened in September 2014, when project was acquired by Facebook for 2 BN dollars.

Commercialization of the project revealed tensions and contradictions in actors' perception of the mutual rights and obligations towards each other. Many funders considered this commercialization of the project as the betrayal of the community and break of unwritten crowdfunding contract ('Facebook is not evil, it's a company. A company that invested 2 billion dollars in Oculus. Don't fool us. Even if you don't admit it today, you've lost your freedom. You've lost your soul. You annihilated every single beautiful ideas your project carried. But you're rich now').

In this paper, we focused particularly on how tensions are formed and reinforced. As the formal contract between funders and founders is rather ambiguous, funders make sense of their rights and expectations based on the messages received from founders. Mixed messages denote inconsistencies between statements or between verbal and nonverbal responses that appear during social interactions. Mixed messages communicated by founders provoke mistrust and feeling of betrayal. At the same time, crowdfunding platform does not provide necessary regulations or mechanisms of conflict's resolution. We identify inherent structural contradictions built into the system of reward-based crowdfunding. Therefore, we observe tensions caused by the inherent structural contradictions and mixed messages.

We also identify reinforcing cycles such as reaction formation and splitting. When the conflict arises, actors are trying to make sense of the context by placing themselves into more familiar and clearly defined roles. In the focal case, funders start to identify themselves as customers, investors, or philanthropists in order to justify arising demands and perceived rights in the ambiguous context of the hybrid economy.

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# Trust in the Holy or the Material: The Combined Impact of Religiousness and Materialism on Life Satisfaction

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## ABSTRACT

The current research examines relationships between life satisfaction trust placed in religious beliefs and that placed in material possessions. Findings indicate that the impact of materialism and religiousness on life satisfaction is qualified by an interaction evidencing circumstances in which religiousness and materialism combine for counterintuitive outcomes.

## INTRODUCTION

Religious and material values are deeply embedded in many cultures worldwide. Though seemingly antithetical on the surface, these values have long been argued to be mutually constitutive. Max Weber (1905) most notably argued a strong connection between Protestantism and the “spirit” of capitalism whereby the pursuit of profit is virtuous in itself, and scholars have made similar claims from Judaism (Sombart 1911) to Islam (Rodinson 1966). Further, individuals are capable of exhibiting both values, leading lifestyles reflective of their religious beliefs while also “treating” themselves to the latest goods.

Literatures in consumer behavior, religion, and psychology have examined the individual influences of religiousness and materialism on life satisfaction (Hackney and Sanders 2003, Dittmar *et al.* 2014). Although both religious and materialist values seek to improve life in the long term, albeit, in vastly diverse ways, there have been limited examinations in the literature on the relationships among materialism, religiousness, and life satisfaction. Exceptions can be found in Baker *et al.* (2013) and Rakrachakarn *et al.* (2015); however, these studies focused more on differences among religions than on different dimensions of religiousness. This study seeks to fill that gap, offering a substantial contribution to the religiousness-materialism-well-being literature through exploration of the impact that materialism has on the relationship between life satisfaction and religiousness by deconstructing religiousness into intrinsic and extrinsic factors, permitting for investigation of complement between distinct facets of religious values and materialism.

## Life Satisfaction

Life satisfaction, a component of well-being, captures long-term levels of contentment, opposed to short-term happiness. Subjective well-being is typically conceptualized as a function of two components: a state factor, or short-term emotional reactions to present circumstances, and a long-term trait factor, or enduring and comprehensive evaluations of life (Diener 2000). Well-being scholars distinguish between happiness as the more dynamic state and life satisfaction as the relatively stable evaluation (Diener *et al.* 2003).

Life satisfaction is related to behaviors, attitudes, and myriad other person-specific concepts. Life satisfaction has been found to be influenced by personal goals (Palys and Little 1983, Emmons 1986, Brunstein 1993) and essential to the achievement of such goals are resources (e.g., money, social skills, physical attractiveness). Having resources needed for goal attainment is an accurate predictor of life quality (Diener and Fujita 1995); specifically, with financial resources, one can fulfill basic human needs while also directing resources to more advanced desires. Additionally, social support, the feeling that one is cared for and valued within a social network, is associated with life satisfaction (Diener and Oishi 2005).

## Religiousness

Although there is not a universally accepted definition, it is agreed that religion is a multidimensional construct (Spilka *et al.* 1985) that impacts multiple aspects of life, at the individual and societal level (Hill 2002, Mittelstaedt 2002, Prati *et al.* 2007, Vitell 2009, Jamali and Sdiani 2013). Modern scholars agree that religiousness is distinct from being religiously affiliated in that religiousness includes a level of commitment to religious beliefs and values whereas affiliation does not (Worthington *et al.* 2003). Further, though often conflated, contemporary understandings of spirituality and religiousness are viewed as related though distinct concepts (Zinnbauer *et al.* 1999), with religiousness relating to institutions and rituals and spirituality relating to personal experiences and finding purpose (Kapusinski and Masters 2010).

The current investigation adopts Pargament’s (1997, p. 32) conceptualization of religion as “a search for significance in ways related to the sacred.” Thusly, religiousness is the degree to which one holds this search central to one’s life. This conceptualization removes restrictions affiliated with specific religious dominations and permits for consideration of diverse faiths and pathways to the numinous, including ways of thinking, behaving relating, and feeling (Pargament 2002).

Gordon Allport’s operationalization of religiousness represents the backbone of modern empirical research on the psychology of religion (Wenger and Yarbrough 2005, Piedmont and Friedman 2012) and is the most widely used measure of religiousness in consumer behavior literature (Vitell 2009). Allport and Ross (1967) posited that religiousness is composed of two dimensions: an extrinsic dimension that is externally focused, and an intrinsic dimension that is internally focused. People with a dominant extrinsic orientation value religious belief for its associated personal benefits (e.g., comfort and protection), or its associated social rewards (e.g., friendship and status). People with a dominant intrinsic dimension value religion as a method to achieve spiritual objectives, leading to the internalization of religious prescriptions that ultimately serve others. This orientation approaches religious belief not as a means to an end, but as an end in itself. Flexible in its design, the original Allport and Ross (1967) scale of religiousness permits the dimensions to be examined as a single measure or two orthogonal ones.

## Religiousness and Life Satisfaction

Religiousness has been consistently found to be correlated with higher life satisfaction (Mathras *et al.* 2016), with some suggesting that the relationship stems from the positive social and personal contributions religiousness can impart. Findings in settings that parse religiousness into its two dimensions reveal distinct and oftentimes contradictory outcomes for life satisfaction (Swinyard *et al.* 2001). Intrinsic religiousness has been related to greater subjective well-being, happiness, and life satisfaction (Maltby and Day 2004), while extrinsic religiousness has been related to lower levels of those outcomes (Maltby and Day 2000). Higher levels of extrinsic religiousness may also be related to greater insecurity and a resulting need to use religion as a substitute for relationships or to bolster social successes and standing (Allport and Ross 1967). Thus, the best evidence and logic suggest:

*Hypothesis 1A* Intrinsic religiousness will have a positive association with life satisfaction.

*Hypothesis 1B* Extrinsic religiousness will have a negative association with life satisfaction.

## Materialism

Materialism has multiple dimensions, including achievement of happiness through acquiring possessions. Richins and Dawson (1992, p. 307) assert that materialism “reflects the importance a person places on possessions and their acquisition as a necessary or desirable form of conduct to reach desired end states, including happiness.” Sirgy *et al.* (2013) posit materialism has positive and negative consequences and clarify that they are the result of the nature of aspirations and motivations.

People turn to materialism to cope with uncertainty about their identities; they display status through material objects to project desirable self-images, to conform to groups, and to maintain positive selves (Chang and Arkin 2002, Kasser 2002). Low self-esteem has consistently been found as an antecedent to materialism (Chaplin and John 2007). “Materialists” are in a search for happiness and are hoping to achieve peace and compensate for feelings of insecurity by owning, consuming, and displaying (Richins 2017).

## Materialism and Life Satisfaction

The nature of the relationship between materialism and life satisfaction is actively debated. Although some researchers have shown that satisfaction with material life is positively related to overall life satisfaction (Diener and Fujita 1995, Diener *et al.* 2010), others have shown materialism and the belief that acquiring possessions leads to fulfillment are linked to negative consequences such as lower well-being (Wright and Larsen 1993). Extant results have shown negative consequences of inordinate value placed on possessions to individual subjective evaluations of well-being (Burroughs and Rindfleisch 2002). Consistently, findings in consumer behavior research suggest material values or “materialism” as a guiding force for life satisfaction will fail to meet this important human need.

Although we acknowledge evidence of instances in which materialism has a positive impact on life satisfaction, these instantiations often rely upon intervening factors. When considered in isolation, placing inordinate value on acquisition of possessions is consistently found to have negative impact. Thus, we posit:

*Hypothesis 2* Materialism will have a negative association with life satisfaction.

## Materialism, Religiousness, and Life Satisfaction

While to our knowledge there has not been an explicit examination in the literature on how materialism impacts the relationship between intrinsic and extrinsic religiousness and life satisfaction, researchers have looked at relationships among similar variables. As mentioned, these examinations have produced disparate results. Many studies have found a positive association between religiousness and well-being and a negative association between materialism and well-being (Swinyard *et al.* 2001, Baker *et al.* 2013, Rakrachakarn *et al.* 2013). This coincides with Burroughs’ and Rindfleisch’s (2002) conflicting values perspective: people who hold opposing values, such as materialism and religiousness, experience psychological unease and decreased well-being. While the two previous investigations of these relationships operationalized religiousness as a

unidimensional construct, we deconstruct religiousness into intrinsic and extrinsic factors to account for possible synergies with materialism, allowing for the possibility of complementary or contradictory values.

The conflicting values perspective (Burroughs and Rindfleisch 2002) suggests that the coexistence of the opposing values of intrinsic religiousness and materialism should bring about psychological unease and decreased life satisfaction. Intrinsically religious people internalize religious values as a framework to live life by and strive to “transcend all self-centered needs,” (Allport 1966, p. 455). Materialistic individuals embrace material values as a framework to project a desirable self-image, to advance the self socially, and to maintain a secure identity.

Conversely, the conflicting values perspective suggests that the shared external aspects of materialism and extrinsic religiousness should have a synergistic positive influence on life satisfaction. Those who are extrinsically religious use religion for its personal (e.g., protection, solace) and social (e.g., gain status, community) benefits. Similarly, materialistic people have an external focus, believing the route to happiness is through acquiring possessions, and making continuous social comparisons of standards of living. Based on our previous discussion of relevant literature we posit:

*Hypothesis 3A* Materialism will moderate the relationship between intrinsic religiousness and life satisfaction such that when combined with high levels of religiousness, higher levels of materialism will attenuate perceptions of life satisfaction.

*Hypothesis 3B* Materialism will moderate the relationship between extrinsic religiousness and life satisfaction such that when combined with high levels of religiousness, higher levels of materialism will augment perceptions of life satisfaction.

## METHOD

Three hundred and fifty-seven residents of the United States completed an online questionnaire in exchange for small financial rewards. U.S. population statistics were used to guide the collection of a nationally representative sample. The order of presentation of scales, as well as the items within each scale, was randomized.

Respondents completed scales that measured religiousness, materialism and life satisfaction. Religiousness was measured using Allport and Ross’s (1967) Religious Orientation Scale (ROS). Twenty statements measured on 5-point Likert scales were presented; 11 of which comprise the original extrinsic subscale, and 9 of which comprised the original intrinsic subscale.

Materialism was measured using the abbreviated version of the Material Values Scale (Richins and Dawson 1992) validated by Richins (2004). Five-point Likert scales were used to measure agreement with each of the 9 items on the scale.

Life Satisfaction was measured using Diener’s (1985) Satisfaction with Life Scale (SWLS). The SWLS is a 5-item, 5-point Likert scaled instrument used to assess global life satisfaction.

## Results

A multiple moderation model conducted with the PROCESS procedure (Hayes 2013) was used to test the presented hypotheses. Age, gender, education level and household income were included as covariates.



The moderation model is significant (adj.  $R^2=.18$ ,  $F_{(9, 347)}=8.33$ ,  $p<.001$ ). There are marginal direct effects of both religiousness orientations on life satisfaction. Substantiating hypothesis 1A, respondents who reported higher levels of intrinsic religiousness also reported higher levels of life satisfaction ( $\beta=.09$ ,  $t_{(1,347)}=1.69$ ,  $p=.09$ ). Respondents who reported higher levels of extrinsic religiousness also reported higher levels of life satisfaction ( $\beta=.13$ ,  $t_{(1,347)}=1.64$ ,  $p=.10$ ); these results fail to provide support for hypothesis 1B. Results also fail to support hypothesis 2. In isolation, there is no significant, direct effect of materialism on life satisfaction beyond that of religiousness ( $\beta=-.07$ ,  $t_{(1,347)}=-.94$ ,  $p=.34$ ).

Central to the current investigation is the interaction between religiousness and materialism. There is no evidence in support of hypothesis 3A; rather than working in opposition, there is no interaction between intrinsic religiousness and materialism ( $\beta=-.01$ ,  $t_{(1,347)}=-.22$ ,  $p=.83$ ; See Figure 1). Conversely, there is evidence to support hypothesis 3B. The direct effect of extrinsic religiousness is qualified by an interaction with materialism ( $\beta=.16$ ,  $t_{(1,347)}=2.03$ ,  $<.05$ ; see Figure 1). More specifically, life satisfaction is bolstered when respondents have an external religious orientation AND value material possessions.

The Johnson-Neyman technique (Hayes 2013) identified a response of 2.96 on the 5-point materialism scale as the turning point in the interaction (Krishna 2016). At values of materialism below this point, there are no differences reported life satisfaction, without regard to level of extrinsic religiousness. At values of materialism above this point, reported life satisfaction increases as extrinsic religiousness increases.

Results suggest that covariates household income and education impact life satisfaction ( $\beta=.08$ ,  $t_{(1,347)}=5.09$ ,  $p<.01$ ;  $\beta=.05$ ,  $t_{(1,347)}=1.92$ ,  $p=.06$ ). Other demographic covariates, age and gender, did not.

**DISCUSSION**

The current investigation revisits the religiousness-materialism-life satisfaction relationship. We demonstrate that contrary to most perceptions of religious teaching, materialism and religiousness are not antithetical. In fact, they can work in complement to provide feelings of a satisfied life. Moreover, there does not seem to be combinations in which the coexistence of both values is a detriment.

Without regard to the specific motivation, we found that those who value religious practice experience greater life satisfaction. As expected, the intrinsically religious, those who place more value on religious practice as a method to achieve spiritual objectives, report increased levels of life satisfaction. Surprisingly, the extrinsically religious, those who value religious practice for its associated benefits and social rewards, also enjoy increased levels of life satisfaction. Materialism seems to have no direct effect, neither positive nor negative, on life satisfaction.

Results indicate that the relationship between materialism can be a beneficial addition to the religiousness-life satisfaction relationship. As predicted, materialism has a decidedly positive influence on life satisfaction for those who have an extrinsic religious orientation, which suggests that valuing material possessions as a way to lead a fulfilling life can also lead to a satisfying life if this behavior is in alignment with closely held personal values. Yet, counter to the conflicting values perspective (Burroughs and Rindfleisch 2002), when materialism is not aligned with other closely held personal values, it does not have a deleterious impact on life satisfaction.

**Limitations and Future Research**

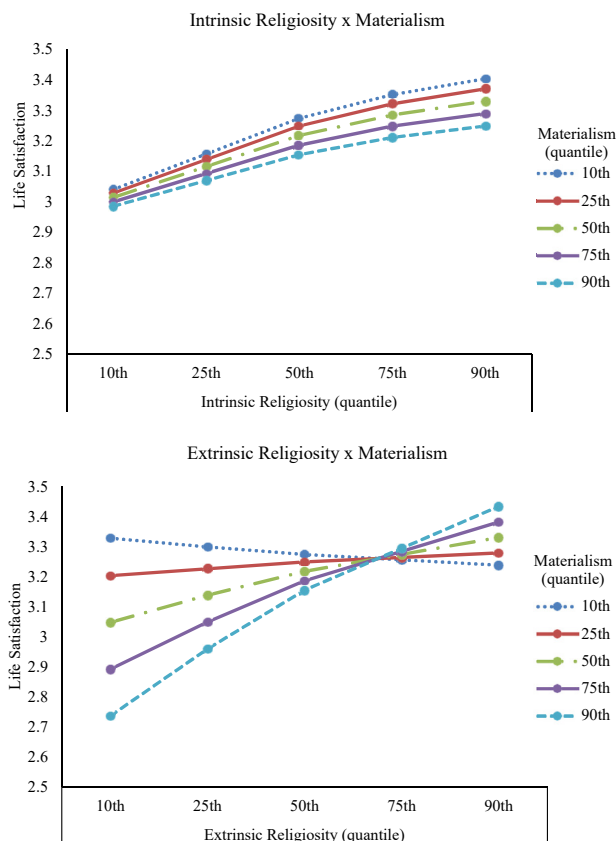
Ultimately, living in a consumer culture unconsciously and strongly impacts our development of identity, values, and search for life purpose, and the constructs religiousness, materialism, and life satisfaction offer fertile ground for continuing research in the consumer culture domain. Consideration of macro-level variables related to cultural context would permit for a more complete understanding of the role of religiousness in determining life satisfaction. A similarly sophisticated approach may be called for when researchers examine the role of micro-level variables, including materialism and personality. Like religiousness, the underlying dimensions of materialism need to be examined in effort to shed light on when it can be advantageous versus deleterious. Further, introducing the Five-Factor Model (FFM) of personality in future studies might yield new insights. Lastly, in effort to address some of the limitations of the current work, future research should endeavor to more closely map onto the contemporary Universal Intrinsic/Extrinsic scale, (Chen and Tang 2013, Gorsch and Venable 1983).

**CONCLUSION**

The current work contributes to a body of literature that is concerned with consumers' well-being and intervening factors. Our results show that relationships across materialism, religiousness, and life satisfaction are not as simple as previously thought, offering new ways of viewing their individual and combined influences on consumption behaviors.

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**Figure 1**

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# From Country-of-Origin (COO) to Country-of-Consumption (COC): The Institutional Journey of Consumer Trust in Food

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## ABSTRACT

This study finds that multiple Country-of-origin cues collectively contribute to building trust in food through institutional food regulation of each country involved in the globalised food provisioning. Country-of-consumption is newly identified as equally important in trust building while a gap of trust may exist between countries of different food regulations.

## INTRODUCTION

Previous studies reveal that Country-of-origin (COO) could be influential to trust in products and services (Jiménez & San Martín, 2010; Michaelis, Woisetschläger, Backhaus, & Ahlert, 2008). However, these studies treated COO as one of the variables to impact trust and little is known about the relationship between COO and trust (Michaelis et al., 2008). In the context of food consumption, intensive work has studied how COO may impact food preference and purchase intention (Dinnie, 2004) while little research has linked COO with consumer trust in food. Furthermore, although the importance of institutional and social structures is noted respectively in research on COO (e.g., Jiménez & San Martín, 2014) and on trust in food (e.g., Kjærnes, Harvey, & Warde, 2007), little work has been done to particularly investigate the institutional processes and mechanisms by which COO may impact trust in food. Given that multiple countries may involve in food production in the globalisation era, further exploration on how food-related institutional structures associated with different COO may impact the dynamics of trust in food is worthy of scholarly and practical attention.

This work aims to explore how COO may influence consumer trust in food in the globalisation era by investigating the role of institutional food regulation of multiple countries. To avoid the common methodological concerns in previous research regarding the manipulation of COO stimuli in experimental settings (Usunier, 2011; Verlegh & Steenkamp, 1999), an actual consumption scenario, i.e., infant formula consumption in China, was selected as the context of this study. Being in the world's largest and fastest-growing market of formula milk (Euromonitor, 2015), Chinese parents consume a wide range of infant formula products sourced from, manufactured in, and sold in different countries. They are exposed to various COO cues in decision-making, and trust is essential in this process due to previous food safety incidents such as the 2008 Melamine Scandal which killed six and sickened 300,000 babies (BBC, 2010). Therefore, infant formula consumption in China is a suitable context to reflect the globalisation of food and a sensitive context to examine the relationship between COO and trust in food.

This study may contribute to a further understanding of the COO effect on trust in food by addressing the impact of institutional food regulation of different countries involved, and shed lights on building consumer trust in the international food production and consumption practice.

## THEORETICAL BACKGROUND

### Trust

In social science trust is generally accepted as one's positive expectations of the ability and goodwill of the trusted individual or

institution in the face of risk (Barber, 1983; Hart & Saunders, 1997; Rousseau, Sitkin, Burt, & Camerer, 1998). There are two distinctive types of trust, namely, interpersonal trust which is based on familiarity and emotional bonds between the two parties (Lewis & Weigert, 1985; Misztal, 1996), and institutional trust which requires necessary impersonal social institutions and structures to enable one to act in anticipation of a successful outcome (McKnight & Chervany, 2001; Zucker, 1986).

### Trust in food

Consumer trust in food has been studied from both interpersonal and institutional approaches (Zhang, Xu, Oosterveer, & Mol, 2015). Interpersonal approach emphasises the intimacy and familiarity between individuals and food chain actors, while institutional approach centres the institutional operation of food provisioning in trust-building. For example, comparatively studied across six European countries, Kjærnes et al. (2007) argue that consumer trust in food varies significantly across countries due to institutional and structural differences. However, little is known about how institutional food regulation of the home country as well as other countries may influence consumers' trust in food, when more than one country is involved in food provisioning.

### Country-of-origin (COO)

COO, usually recognised as the "made-in" or "manufactured-in" labels, functions as an extrinsic cue for consumers to evaluate products (Bilkey & Nes, 1982; Hong & Wyer, 1989). Since the 1960s, intensive work has been conducted to measure the occurrence, magnitude and significance of COO effects on product evaluation across various categories (Verlegh & Steenkamp, 1999). The emergence of multinational companies and hybrid products have resulted in a wide range of COO cues such as country-of-design, -manufacture, -assembly, and brand origin (BO), etc., as well as debates regarding the relevance and accuracy of the effects of these COO cues on consumer behaviours (Josiassen & Harzing, 2008; Samiee, Shimp, & Sharma, 2005; Usunier, 2006). As such, COO "remains a fuzzy, contingent, and evasive international marketing concept" and more in-depth investigation is necessary (Usunier, 2011, p. 486).

### Theoretical approach

Viewing COO effect as an outcome of cognitive processing, plenty research has engaged in identifying antecedents and mediators that might affect such processing of COO effect, for example, ethnocentrism and animosity (Jiménez & San Martín, 2010; Kaynak & Kara, 2002). Nevertheless, cognitive approaches are insufficient for the holistic understanding of the relationship between COO and trust because they neglect the power of social and institutional structures in shaping the way how consumers may make sense of the reality in which they live. According to Giddens (1990), in modern societies where interactions are commonly mediated through institutions and organisations, institutional trust has to be the predominant type of trust in social life. Therefore, this work adopts an institutional approach to investigate the impact of COO on trust in food by looking into how consumers associate the institutional assurance of food with different COO cues.



## RESEARCH METHOD AND DATA COLLECTION

Prior COO research is considered to insufficiently reflect the nature of consumer intention and behaviour by manipulating selected stimuli in experiments rather than observing in the actual consumption (Dinnie, 2004). Qualitative in-depth interviews are particularly suitable when one is interested in complexity or process, or where an issue is controversial or personal (Smith, 1995), thus is adopted by this study. Twenty-eight prospective mothers living in urban China were recruited by snowballing. In contrast to Western mothers who seldom buy infant formula until necessary, all participants of this study had bought, or were planning to buy, infant formula when interviewed. These participants, 25 of whom were in their first pregnancy, were mostly inexperienced mothers with no direct experience of any infant formula brand at the time of interview, making trust even more important for their purchasing decisions. Their detailed experience of choosing and purchasing infant formula, and how they developed trust in any brands or products was documented. All interviews lasted for 45-90 minutes, were audio-taped, and translated from Chinese into English. Inductive thematic analysis (Boyatzis, 1998) was conducted to identify and categorise key themes from empirical data.

## FINDINGS

In interviews, participants acknowledged that they felt secure, although to different extents, to feed their babies with the infant formula they had bought or planned to buy, and held positive expectations regarding the products' future performance. A certain level of trust has therefore been demonstrated even before gaining any actual feeding experience with these products. Participants frequently referred to various COO cues as their trust was developing in specific infant formula brands and products. Three themes have emerged from data analysis.

### COO effects on trust: from production to consumption

Many agreed that ingredients (raw milk) matter to the quality of infant formula and more trust was placed in products sourced from "better" country-of-ingredients. Country-of-manufacture also played a critical role as *"it's not the place of milk source that determines the processing line and the final products, any mistake in processing may lead to non-qualified products at the end"* (MENG). Participants believed that products manufactured in different countries may be different in quality. More noteworthy, when products are manufactured then transmitted to target markets for sale, country-of-consumption (COC) becomes relevant to trust. COC, seldom studied in previous research, here refers to the country where the products are sold and consumed. Many participants preferred infant formula sold in overseas markets to domestic or imported products sold in China, as they believed the former is safer than the latter. For example, one claimed that *"the most secure way is that I can see my friend buying this infant formula from a supermarket in Holland and mailing it to me. This is the most secure way to me, and I don't really trust any others"* (PENNY). So it is evident that, from ingredients to manufacturing and consumption, all COO cues relating to countries involved in the food provisioning process collectively contributed to the establishment of participants' trust in infant formula products.

### Institutional structures behind COO

More trust was found in infant formula from developed western countries than from participants' home country due to institutional reasons. For instance, one participant stated that *"New Zealand has very strict requirements of baby formula. It has been doing well in protecting its babies and women. So I trust the policy of this coun-*

*try, and trust that the policy will regulate companies. ... In foreign countries, the policy would be enforced and implemented, and it can make the company close down if the company doesn't comply.... Therefore, trusting this company may be mainly because of trusting in the policy of this country, as it indeed pays attention to protecting its babies"* (PING). This comment, together with other similar articulations, highlights the institutional mechanism behind COO cues through which participants' trust is built. The institutional food regulation, including the establishment and enforcement of food-related rules and laws, and the punishment of non-compliance, was accounted by participants to evaluate the safety and quality of infant formula at each stage from ingredients to consumption relating to all countries that have involved in such process. Therefore, the institutional structures of food regulation at a country level are the foundation for COO to impact participants' trust in infant formula.

### The "gap of trust"

In the journey from the farm to the consumer, infant formula moves from regulation of one country to another as the product crosses the border between countries. A gap of trust was found when the institutional food regulation in one country was not perceived to be as sound as another in this journey. This gap of trust was most significantly observed if participants held less positive or even negative perceptions of the food regulation of their home country as the country-of-consumption. For example, participants worried that *"after entering into China, no matter what the brands are, they might lower the requirement of themselves (SKY)"*, because the food standard in China was considered lower than western countries. Some even felt that *"as long as China is involved in any part of the process, there might be some danger"* (ENYA). Food products, despite their origins, are supposed to reach the threshold set by the food regulation system of a country in order to be sold in that country. So many participants believed that *"some domestically manufactured products which are to export to Europe may be subject to a higher standard than those for domestic markets"* (SUNNY). Therefore, this gap of trust is actually the gap of perceived soundness of the institutional food regulation between countries. COC accounts for the overall level of trust in food as it informs the level of soundness of the institutional food regulation which is the ultimate safeguard before the food products are consumed by consumers of this country. Participants might draw on other resources to fill this gap and obtain trusted infant formula, such as asking a trusted overseas contact to buy and send the product back directly from foreign countries.

## DISCUSSION AND CONCLUSION

This study reveals the institutional mechanism of COO effect on trust in food through the experience of Chinese mothers with infant formula. When multiple countries are involved in the journey from ingredient sourcing to food processing and the destination of consumption, COO cues of these countries collectively provide institutional safeguards for consumers to develop trust in food, through the food regulation of each country. While there are arguments that some COO cues, such as manufacturing origin, have become largely irrelevant to product evaluation (e.g., Pharr, 2005; Samiec, 2010; Usunier, 2006), this study demonstrates that in food evaluation, all COO cues could be relevant and collectively impact on consumer trust and food choice. The reliance on institutional and structural assurances to build trust in food is also in line with Zucker's (1986) observation that people were enabled to trust by regulations and institutions which were in place to make sure the other was either afraid of, or punished for, doing harm to the trustor.

In particular, the newly identified COO cue, COC, significantly impacts trust in food when consumers have access to food products sold in other countries via cross-border businesses. As contemporary consumers are greatly detached from farming and food processing (Meijboom, Visak, & Brom, 2006), they have little control over food provisioning and have to rely on institutional food regulation to ensure food safety and quality. The food regulation of the country where the food products are sold and consumed functions as the final safeguard to stop the unsafe or unqualified food from entering the market, so that consumers' interests are secured. Therefore, COC is an essential cue for consumers to develop trust in food given that food provisioning and consumption is increasingly globalised.

Although COO cues collectively contribute to trust in food, the soundness of food regulation of each country may be perceived differently by consumers. Consequently a gap of trust may be generated between countries due to the differences in perceived-soundness of food regulation. Especially at the stage of consumption, when consumers' home country is perceived as weak in food regulation, food products sold and consumed in other countries with stronger food regulation may gain more trust from consumers.

This study concludes that multiple COO cues, especially COC, are important for consumers to develop trust in food based on institutional and structural assurances. Behind the COO cues, institutional food regulation of multiple countries collectively contributes to building consumer trust in food in the globalisation age.

### CONTRIBUTIONS AND IMPLICATIONS

This empirical work provides an institutional explanation of COO effect on consumer trust in food and reveals that COC may play a particularly important role when consumers are seeking institutional assurance in food. The identification of COC broadens current COO knowledge by extending the discussion on the origin of product design or manufacture to the destination of product consumption in the rise of cross-border business. For policymakers, attention shall not only be paid to food regulation system of their home country, but also to the collaboration with other countries so that the international institutional assurance network can be advanced to facilitate trust in food globally. For food brands and food producers, attention needs to be paid to minimise the "gap of trust" and maximise overall consumer trust in food by synthesising the institutional food regulation of multiple countries which are involved in food provisioning.

### LIMITATION AND FUTURE RESEARCH

As an exploratory work, this study discussed the relationship between COO and trust in food only within the context of one product category in one country. This may compromise the generalisability of the role of COC in other settings. Thus, it is suggested that future research may test how COC may work in other product categories across countries and cultures.

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# The Production and Consumption of Retro Brands Beyond Meaning Revival

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## ABSTRACT

While past research articulates retro branding predominantly as brand meaning revival, our findings from a historical analysis of the production and consumption of retro brands in Germany reveal how these commercialized representations of the past operate also via brand meaning inversion (retroversion) and brand meaning invention (retrovention).

## INTRODUCTION AND CONCEPTUAL BACKGROUND

Previous consumer research highlights the ideological functions served by commercialized representations of the past, how consumers and producers frequently expropriate them for competitive or ideological gains, and the moral conflicts that are variously negotiated through them (e.g., Brunk, Giesler, and Hartmann 2018; Brown, Hirschman, and Maclaran 2000; Brown, McDonagh, and Shultz 2013; Luedicke, Thompson, and Giesler 2010; Penalzoza 2000; Press and Arnould 2011; Thompson and Tian 2008). One vital market resource for the negotiation of commercialized representations of the past is given by retro brands, or “relaunched historical brands with updated features” (Brown, Kozinets, and Sherry 2003).

However, while recent research highlights the importance of politicized memory-making that undergirds the negotiation of commercialized representations of a past (Brunk et al. 2018), existing research on retrobranding still frames this process purely in terms of *revival* of past meaning (Brown et al. 2003; Cattaneo and Guerini 2012). Consequently, important cultural, historical, political, and ideological dimensions are currently not sufficiently considered in Western retro-branding processes.

In this article, we explore the production and consumption of retro brands, which we call brand retrofication, as a cultural branding practice orchestrated by consumers, commercial actors, and other important cultural actors. When we analyzed retro brands in Germany over time, we found evidence for Brown et al.’s (2003) brand meaning revival. However, our longitudinal approach with emphasis on popular memory dynamics and conflicts also revealed that retro brands are much more politicized than previously acknowledged. Once the political dimension is considered, it becomes evident that retrofication can go beyond reviving prior brand meanings (i.e. *retrorevival*). Instead, it is a more complex cultural process, whereby commercialized representations of the past also are negotiated and enacted through *retroversion* (retro brand meaning inversion) and *retrovention* (retro brand meaning invention).

To conceptualize these types of retrofication strategies alongside Brown et al.’s (2003) meaning revival operating via ‘aura’, ‘allegory’, ‘arcadia’, and ‘antinomy’, we bring to bear a cultural branding perspective (Holt 2002; 2004; 2005) on the negotiation of commercialized representations of a past via retro brands. Consequently, we suggest that retrofication operates through allegorizing, articulating, assembling, and antinomizing. *Allegorizing* refers to reconstructing the past by rendering a brand as a locus of virtuous feelings and traditions that can serve as a powerful anodyne for the cultural anxieties facing consumers who are ambivalent about their position in the present. *Articulating* denotes the enunciation of compelling historical identity dramas and narratives presented to enact and verify the narrative claim of revitalized utopian past (community). The brand

articulates a specific ideological memory conflict and gains meaning only through politicized popular memory-counter-memory dynamics. *Assembling* describes how brand owners assemble and animate their brands and its core values in such a way as to offer a (unique) aura instrumental to resolving a moral contradiction highlighted by a given popular memory tension. Through assembling, a brand can act as an authentic identity salve by offering an indexical and/or iconic link to an (imagined) past. *Antinomizing* entails the systematic contradiction of the proposed past to old products’ concrete material qualities and attributes such as form, function, or flavor by negotiating how a brand builds its enchanting paradox that manifests at consumption-level.

## METHODOLOGICAL APPROACH

### Analytical approach

Our research approach was two-fold. Following calls for the increasing need to historicize (Brown, Hirschman, and Maclaran 2001) and to attend to the context of context (Askegaard and Linnet 2011), our first analytical step *zooms out* from our research phenomenon to contextualize the nature of retro brand emergence. Here we take advantage of the power of unique contexts to generate theoretical insights (Arnould and Thompson 2005; Arnould, Price, and Moiso 2006) and contextualize retro brand emergence in East Germany against the backdrop of the socio-historic and cultural changes surrounding the German reunification. In our second analytical step we then *zoom into* our research phenomenon to analyze two cases of negotiating a commercialized representation of a past via retro brands previously left untouched (Brown et al. 2003). In doing so, our approach leverages macro, micro and individual levels of observations to expose the production and consumption of retro brands beyond meaning revival, whereby contributing to existing literatures on retro branding.

### Data collection

We explore the meaning making process central to retrofication in its empirical context and collected a combination of qualitative empirical material: (1) historical data including statistics, documentaries and other culturally relevant material from mass media; (2) 15 one-on-one interviews with consumers; (3) visits to and observations in retailscapes; (4) netnography including consumer and interactive brand sites (Brown et al. 2003; Kozinets 2002; 2010).

### Data analysis

To analyze our data, we opted for a hermeneutic approach (Thompson 1997), including coding and recoding, constant comparison, and iterative inter-researcher discussions. Coding and analysis became increasingly specific as the analysis progressed. We started with a general focus on the meaning making processes surrounding retro brands in East Germany against the backdrop of our socio-historic context data. This was followed by comparing and contrasting these emerging processes with those identified by Brown et al. (2003).

## HISTORICIZING RETRO BRAND EMERGENCE IN EAST GERMANY

The fall of the Berlin Wall in 1989 finally opened the gates to Western prosperity and a consumer society of material wellbeing



that had always served as a contrasting point of comparison to the East (Landsman 2005; Merkel 2006). Continuous exposure to—although forbidden—West German TV and advertising as well as social contacts with relatives and their care packages sent from the West established a perception of Western brands as *echt* (the real thing) and East German products as *ersatz* (inferior surrogate) (Bach 2002; Veenis 1999). Because of their poor quality and inferiority, frequently reaffirmed by West German market research and corporate discourse, East German products were ridiculed as symbols of antiquated socialist economies, inefficiency, and backwardness (Berdahl 1999; Boyer 2001; Merkel 2006). The overall aesthetics, packaging, and product design was highly simplistic and reflected the GDR's struggle with production. Due to a lack of access to Western currency and the subsequent challenges to import the necessary raw materials and resources for production, essential product ingredients had to be replaced with low-grade substitutes, impairing product quality and taste. For example, chocolates were filled with a mixture of peas, sugar and aroma; candied lemon peel was replaced by green tomato; and the national car Trabant was manufactured out of recycled cotton waste (Der Spiegel 1991).

While in the West the range of shiny and attractive brands promising a happy life in prosperity was continuously increasing, East German consumers became progressively frustrated with their own reality of empty shelves and subordinate brands and products. Thus, when the German reunification finally facilitated the long-desired access to Western brands, instantly discarding the *ersatz* for the *echt* was the norm for East Germans. In the years that followed, East Germans engaged in historically unparalleled hyper-consumption of Western brands. Not only did East Germans no longer purchase East German products, they moreover purged their houses and exchanged entire interiors to rid themselves of any reminders of their previous supposedly primitive life (Berdahl 1999; Merkel 2006; Veenis 1999).

Given their historically rooted aura of inferiority and related consumer rejection of anything East German, East German products were destined for the necropolis and entirely disappeared from the retail landscape. Yet, contrary to conventional retro-branding wisdom (Brown et al. 2003), which implies that reviving such negative brand meanings is destined for failure, we witness the emergence of previously disliked and discarded East German retro brands not as revivals, but as inversions of their former selves (retroversion) and newly invented 'past' East German brands that never existed as brands back then (retrovention). How do these types of retrofication work and why?

## RETROFICATION ANALYSIS

Our retrofication analysis reveals how commercialized representations of the past are negotiated and enacted through retroversion and retrovention using two illustrative cases (see table 1).

### Retroversion and the relaunch of the 'Simson Schwalbe'

One prominent relaunched historical brand of East German origin that has undergone an inversion of original brand meaning is the recently relaunched moped brand 'Simson Schwalbe'. While 'Simson' began making bicycles in 1896, it became a household name for mopeds made in the GDR. To respond to increasing mobility needs, the GDR regime introduced the moped 'Schwalbe' (German for swallow) in 1964 and sold over a million exemplars until its termination in 1986 (VDI 2015). Consumers in the GDR valorized the Schwalbe as an old-fashioned, raw, smelly, loud, unpretentious, simple, aesthetically displeasing, and purely functional, easy-to-repair, inexpensive, and ordinary means of transportation—a prototypical socialist, standardized, and rationalized *ersatz* mass-product.

In 2016, the Schwalbe was re-launched by GOVECS as an e-scooter, a progressive lifestyle brand located in West-German Munich. While back then in the GDR, even its designers had stark reservations about the aesthetics of the original Schwalbe, the brand caters now to individualist urbanist identity myths and hedonic consumption desires with slogans like: "The Schwalbe makes you smile. Not only because she looks good and makes you look good on her. The cult e-scooter also sweeps you away with its outstanding performance [and is] quiet, clean and sustainable" (myschwalbe.com). Statements like these represent an attempt of inverting the Schwalbe's original brand meanings as an ordinary and ugly *ersatz* mass-product, now rendering it as an extraordinary and good-looking individualized identity salve in Germany's post-reunification capitalist consumer culture. This inversion on the level of brand meaning goes beyond the naturalized updating processes retro brands undergo: Brown et al.'s (2003) old and new Beetle share personality, values, and cultural narrative forming a moral and functional allegory. However, the new Schwalbe is the antitheses of the moral qualities, values, and cultural narrative of the original brand. Through this *allegorizing*, the Schwalbe and its East German heritage are rendered as a locus of virtuous feelings which serves to resolve identity stigma by inverting West-German stereotypes of the East as backwards, displeasing hinterland (Brunk et al. 2018). Through *articulating* this popular memory conflict, the new Schwalbe brand romanticizes and proclaims an idealized (national) western consumer culture through inverted brand meanings which gain their value only from the context of this conflict. Through *assembling* these (inverted) core values, the new Schwalbe brand presents an iconic-authentic identity salve rather than an indexical-authentic link to a past. Thus, through *antinomizing*, producers and consumers render the brand into a systematic contradiction in itself, in moral and functional terms, which becomes an enchanting paradox that can manifest on a consumption level.

### Retrovention and the launch of the 'Ampelmann'

One prominent case of a commercialized representation of the past that is negotiated and enacted through retrovention is the Ampelmann brand. Retrovention refers to the invention of retro brand meanings, whereby a cultural, originally non-commercial and public token of the past then becomes commercialized, marketed and consumed as a 'born retro' brand: while the Ampelmännchen originally referred to the distinctive little man displayed in the pedestrian traffic lights all across the GDR, it was commercialized and launched as a 'neo-retro' (Fort-Rioche and Ackermann 2013) design brand by Markus Heckhausen in the mid 1990s. The inception of the Ampelmann brand was built on critiquing the replacement and devaluation of East German Culture by West German Culture, rendering the Ampelmann a symbol of political resistance, endurance and continuity.

Refashioning the Ampelmännchen from an ordinary and public traffic sign to a cult brand universe including flagship stores, cafés, children traffic safety and regular fashion, tech products (speakers, headphones), food (chocolate, coffee) and other accessories (golf balls, umbrellas, bags, home-décor) extends Brown et al.'s (2003) scope of brand meaning revival and updating. Through *allegorizing*, the brand draws on larger already existing memory narratives of everyday life in GDR's cityscapes to form an iconic parable that can soothe present-day cultural anxieties of consumers. Here, by *articulating* a memory conflict in the moralistic nostalgia frame (Brunk et al. 2018), the Ampelmann brand universe presents a compelling identity drama of saving and savoring a cultural icon as a place-holder for many East German life trajectories to enact and verify the narrative claim of a revitalized utopian past (Duckenfield and Calhoun 1997). When it comes to *assembling*, brand managers can

**Table 1: Summary of illustrative empirical material for Retroversion (Simson Schwalbe) and Retrovention (Ampelmann) strategies**

	Illustrative Data	Analytical category
<b>Retroversion</b> (Simson Schwalbe)	“I remember the old Schwalbe well. My grandpa drove one. Every day, rain, snow, no matter what weather, he drove it 20 km to work, sometimes breaking down because the spark plug got soaked or other issues. I remember mostly older people driving them. We (younger people) actually looked at this thing and made fun of it. It just looked so old-fashioned and primitive, like from another time, the shape (leg protection!), the horrible colors, the clunky shape. We all wanted to drive something more sportive and most of us actually got a S51, which in comparison to western mopeds still looked bad but not as bad as the Schwalbe. I remember my best friend was forced to drive a Schwalbe, because her father considered it more safe, I felt so sorry for her. She was so embarrassed! We were even joking that she would never find a boyfriend driving around in this thing! So she would try to ride with me whenever there was a chance in order to not be labelled as backwards and old-fashioned.” (Interview)	Historicization (inferiority; negative brand meanings)
<b>Retroversion</b> (Simson Schwalbe)	“The Simson bird series and especially the swallow I associate very much with my father and my grandfathers. They all drove Schwalbe. This makes it part of my own family history. The Schwalbe also fascinates me as a strong relic of the Iron Curtain and because of its presence in the present as a vehicle with a high degree of customization on our roads. [...] In times of global merchandise trade and completely anonymous products, a large group of people is growing up, consciously seeking clear contrasts. In addition, I am personally always pleased when a discarded object is transformed by my work into a desirable object.” (netnography)	Articulating Allegorizing Assembling Antimonizing
<b>Retrovention</b> (Ampelmann)	“AMPELMANN products are reminders of their varied history and their triumphal procession from the eastern part of the city through the whole of Berlin. The Ampelmännchen are one of the very few relics of the former GDR to have survived, with our help!” (Ampelmann website)	Allegorizing
<b>Retrovention</b> (Ampelmann)	“To some, the lamp man is a symbol of a simpler, happier past. He is a relic from an inhumane regime that in retrospect seems in some ways more human than the capitalist regime East Germans have joined.” “The Ampelmännchen [...] are an example of Berliners’ ability to recognize the good parts of their past—amid all of the atrocities—and to preserve them.” (popular media)	Articulating
<b>Retrovention</b> (Ampelmann)	Heckhausen holds the copyright to the iconic Ampelmann design alongside its original creator, Karl Peglau, who was sceptical of Heckhausen’s project at first. But after getting to know the artist he was soon on-board, becoming not only a shareholder, but also a father figure in the company until his death in 2009. Together they (...) made the Ampelmann into something East Germans could be proud of. Ossi, a term for people living in the GDR, “was such an insult. But the Ampelmann started to change that as it was something more positive,” the father-of-three said. As interest grew, Heckhausen said that he began to realize the green man was “a symbol that the GDR was more than just the Stasi.” (popular media)	Assembling
<b>Retrovention</b> (Ampelmann)	“(The Ampelmann) Brings out a unique part of East Berlin that is both historic and current. A great shop for souvenirs.” (netnography) “The conflict between Euro and regional is part of the wider conflict between global and local. The lamp man alternately blinks ‘stop’ and ‘go,’ and thus may be a modern symbol of our ambivalence about progress.” (popular media)	Antimonizing

thus not build on existing brand-level aura, core values, brand essence as suggested by Brown et al. (2003). Rather, assembling in the case of retrovention includes a collective effort by various actors in consumer culture who animate the brand and its core values in the light of a given counter-memory to act as an iconic-authentic identity salve. Consequently, in the case of Ampelmann, *antinomizing* refers predominantly to the systematic contradiction of the brand existing simultaneously as both, a public good (traffic light) and a commercialized representation of a past.

### CONCLUDING DISCUSSION

By using a cultural branding perspective on the emergence of retro brands in East Germany, we demonstrate how the production and consumption of commercialized representations of the past via retro brands can only partly be explained with the revival of brand

meaning but includes also the inversion of past brand meanings (retroversion) and invention of retro brand meanings of born retro brands (retrovention). Our development of these two types of consumer brand retrofication by tailoring Brown et al.’s (2003) four As of retro brand qualities into processes of allegorizing, articulating, assembling, and antinomizing has the following implications.

Our work is formulaic about the importance of commemorative culture and its various participants as the larger social setting for the production and consumption of retro brands via retro-revival, retroversion, or retrovention. Commercialized tokens of the past produce and reproduce specific commemorative templates that are joined and enacted by historians, journalists, celebrities, artists, musicians, entrepreneurs, marketers, and consumers who act as co-creators of a specific past, themselves selectively crafting, consuming, and variously interpreting commercialized representations

of the past. The marketplace mythology of commemorative culture postulates a balanced image of the GDR past but does not determine where the truth ends and the revisionism begins. Consequently, retro brands are far more political and collective entities than previously acknowledged and should not only be seen primarily as devices for consumer enchantment as past research suggests but must also be understood as market-mediated ideological resources in popular memory conflicts as well as collective and individual identity dramas.

Moreover, Brown et al. (2003) argue that retro brands reanimate a powerful sense of authenticity. From this perspective, retro brands such as Star Wars sequels or Volkswagen's "New Beetle" draw on a fundamental brand essence from an earlier epoch that is revitalized by marketers by "piecing it together from pop culture and retro references." In contrast, we propose that, if a brand's allegory or quality of resolving a specific moral contradiction is never a given, neither can be its authenticity in doing so (Brown, McDonagh, and Shultz 2013). While this applies also to retrorevival and retroversion, it is particularly pertinent in the case of retrovention where no commercial track record of the brand's past exists, because it never existed as a brand. Instead, its meanings are entirely culture-based. Commercializing tokens of a culture's past might ultimately be seen as a consumer-cultural mechanism of the survival of culture (Firat 1995).

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# How Employees Relate to Their Brand Online: A Critical Visual Analysis of Hollister

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## ABSTRACT

This study aims to investigate the role of employees as co-creators of brand meaning on social networking sites. Analysis focuses on the fashion brand Hollister and their employees' visual practices. In particular the findings shed light on visual practices of employees that intersect with identity assemblages of the company.

## INTRODUCTION

Every single day, 95 million pictures are uploaded and shared on Instagram (Aslam 2018). Due to the visual nature of Instagram (Marwick 2015) and its continuous growth, novel visual practices within this social network where various actors constantly interact, negotiate and exchange meanings become particularly important for brands (e.g. Kedzior et al. 2016; Rokka and Canniford 2016). While contemporary consumer research provides valuable knowledge on how consumers visually perform brands on Instagram, for example via "brand selfies" – i.e. consumer images featuring and tagging brands (Presi, Maehle, and Kleppe 2016; Rokka and Canniford 2016) –, the role of other important stakeholders for brand building, such as employees, has thus far received limited attention. To address this theoretical gap, this study investigates how employees relate to their brand online, and more specifically, how employees co-create brand meaning via new forms of visual practices.

Prior research has emphasized that employees take an important role as meaning-makers as they constantly produce and project brand meanings towards customers, colleagues, and friends (Kärreman and Rylander 2008; Rokka, Karlsson, and Tienari 2014; Schultz and de Chernatony 2002). The digital age has further accelerated employees' meaning co-creation. Employees' online engagement has the potential to be useful but also damaging for the brand (Fournier and Avery 2011; Rokka et al. 2014). Due to multiple or shifting roles employees can adopt and embody online (Vallaster and von Wallpach 2013), we currently lack theoretical understanding about which roles they take, and how they contribute to brand co-creation online. Additionally, most research on online brand co-creation or electronic word of mouth has been textually, rather than visually based (Rokka and Canniford 2016). This is striking given that Instagram – one of the leading online branding platforms –, for example, is above all a visual communication platform.

Prior research recognizes that in social media environments such as Instagram, consumers use brands in multiple ways, and especially as an instrument for self-presentation and accumulation of attentional capital, "instafame", and in attempts to becoming micro-celebrities (Arvidsson and Caliandro 2016; Marwick 2015), even to an extent that it has the potential to destabilize brands (Presi, Maehle, and Kleppe 2016; Rokka and Canniford 2016). How employees re-assemble images and expressions of their employer brand as part of their own identity assemblages remains unknown, so far.

Taking the perspective of internal/employer brand members, we theorize the role of employees as co-creators of brand meaning on social networking sites. Our empirical analysis focuses on the fashion brand Hollister and their employees' visual practices. In particular, the findings shed light on visual practices of employees that intersect with identity assemblages of the company. We describe and discuss how employees mimic, pick and neglect assemblages of their brand in online environments, point out limitations of the study and offer future research possibilities.

## ASSEMBLAGE THEORY

Drawing on assemblage theory (Canniford and Bajde 2016; Rokka and Canniford 2016), we build up on the assumption that brands are composed of mobile and dynamic arrangements of heterogeneous elements (DeLanda 2006), including expressive and material, rather than being comprised of stable or standardized constituents. Multitude of elements including people, but also physical, narrative, and visual elements, as well as digital technologies allow access to and constantly perform a brand (Parmentier and Fischer 2015). The concept of socio-materiality assumes that material and social elements are inseparable, which means that brands are being constructed by and realized through social interactions of various people that comprise material artefacts. These theoretical underpinnings shape our understanding of brands. Brands cannot be understood from choosing or looking at one single stakeholder, brands derive from complex networking dynamics among all actors.

Assemblage theory allows to explore the complex cultural understandings of brands by considering the material and expressive components of visuals (Presi, Maehle, and Kleppe 2016; Rokka and Canniford 2016). Material elements are tangible elements, such as physical objects including consumers, physical products, retail spaces, and media spaces (Lury 2009; Parmentier and Fischer 2015). Expressive components refer to communicative elements, such as brand narratives, mythologies, consumer's gestures that signal class, gender and heritage (Alexander 2009; Beverland 2005; Rokka and Canniford 2016). A further advantage of assemblage theory is its sensitivity towards processes of stabilization and destabilization processes of brands (Parmentier and Fischer 2015; Presi, Maehle, and Kleppe 2016; Rokka and Canniford 2016).

This study is grounded on assemblage theory's dual interest in the material and the expressive in brand elements to investigate visual brand meaning co-creation processes of a brand and its employees online. Assemblage theory also draws attention to territorial boundaries, or the degree to which the elements of an assemblage draw on a homogeneous repertoire. We, therefore, sample employer as well as employee visuals, in order to analyze how brand visuals resonate with the visual identity assemblages of employees.

## METHODOLOGY

This study builds upon data retrieved from Instagram, as it is the fastest growing platform in terms of numbers and importance (Tidénberg and Gómez Cruz 2015). For our analysis, we investigated the official brand account of Hollister (@hollisterco) and 12 accounts of its employees. In total, we collected 1480 brand images and 616 Hollister employee posts, covering a time frame from May 2015–May 2016. Because of the first author's professional background, we were able to identify employees' Instagram accounts. After randomly sampling the visuals, the final sample comprised 100 Instagram posts of the brand Hollister and 200 Instagram posts of employees of the brand, which were further analyzed in detail. Using critical visual content analysis techniques (Humphreys and Thompson 2014; Rose 2012), the Instagram posts were analyzed and coded for their material and expressive components as well as patterns of similarities and differences (Canniford and Bajde 2016; Rokka and Canniford 2016).

Our context is the international retailing brand Hollister, which is a subsidiary of Abercrombie & Fitch. In order to be able to juxtapose the constituents of the brand with the material and expressive visual elements of employee's posts, we draw on the published com-



pany vision. In line with the vision of the company, employees at Abercrombie & Fitch must have “the ability to be extroverted, fun, friendly, active and social. This includes projecting an energetic, vigorous and lively personality, and actively seeking out interaction with others, liveliness and enthusiasm, having a positive demeanor, and displaying a passion and enjoyment for life”. The following section illustrates how the brand’s Instagram account as well as its employees’ accounts draw on these components that constitute the brand.

**FINDINGS**




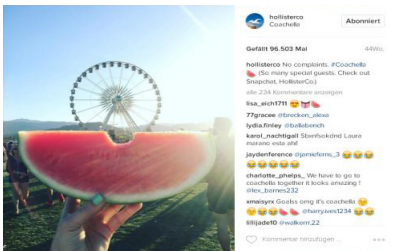

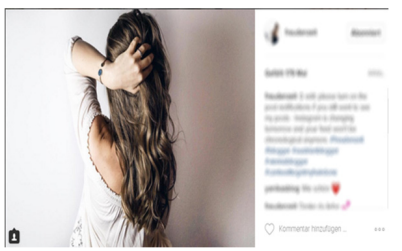

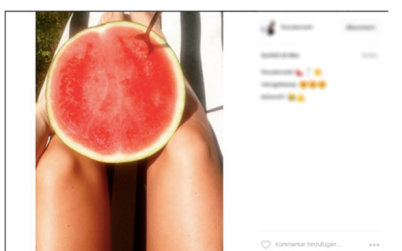
The findings of the study reveal how employees relate to their brand in online environments through practices of *mimicking*, *focusing* and *neglecting* elements of their brand. In the discussion, we further outline how these assemblages affect the brand as a whole. In the following we provide a detailed description of these practices.

**Mimicking the brand**

The analysis reveals that the images of employees share important characteristics with the images of the brand account. Employees strongly express the brand image, mimic and imitate the brand’s visual rhetoric in relevance of material elements as well as expressive elements as described in the following.

Common material elements in the brand account and the employee accounts are beaches, the sea, rocks or surf boards. Clothes are an important material element in both accounts. “*Hollister is the fantasy of southern California. Inspired by beautiful beaches, open blue skies, and sunshine, Hollister lives the dream of an endless summer*” (Hollisterco.com). While, as one might anticipate, all humans in the brand posts, wear Hollister clothes, employees are wearing a similar style of clothes, but without visible reference to the brand Hollister. It is a striking finding that the brand’s fashion and life-

**Table 1: Summary of the Findings**

	<p align="center"><b>Official Brand Account Hollister</b></p>	<p align="center"><b>Employee Account Hollister</b></p>
<p><b>Mimicking the brand</b>                      Employees embed their brand into their personal lives and normalize brand meaning                      -mimic clothing style                      -snapshot-like imaginary                      -same gestures and postures                      -live the California lifestyle</p>	   	   

style is clearly visible in the employees' posts. Employees remarkably reproduce the style of the brand, depicting the same clothes and combine them in the same way, yet they do so in an inconspicuous manner and never use the Hollister brand logo.

The brand and the employee's posts use snapshot-like imaginary. Humans on the images are active, full of energy and having fun; products are shown in motion. While brand images are mostly placed in a natural environment, showing beaches, the sea, gardens, streets or landscapes, the location of employee's visuals is mostly inside, taking the brand into their everyday context, like for example at the gym, in the bedroom, living room or kitchen. Snapshots are a powerful tool to create authenticity and demonstrate how the brand might fit into the consumer's or employee's lifestyle (Schröder 2013). Employees posts reveal the tendency to mimic the brand not

only in terms of material elements, postures and gestures but even in terms of authenticity in that they choose their own authentic places.

Turning towards the expressive components within the visuals, the Californian lifestyle the brand stands for, is strongly expressed within the brand account as well as the employees' accounts through living the good life, having fun with friends, enjoying time together, spending time at the beach. Employee visuals also mimic expressive brand elements. The most frequent expressive categories such as happiness, inspiring others, positivity and coolness are not only aligned with the brand image but also found to a great extent within the employee's visuals. Interestingly, employees do not only mimic the lifestyle, but even reinforce it.

The findings illustrate how employees emplace the brand into their personal lives. Life world emplacement is an important technique to make brands culturally relevant (Holt 2002). In times of

Table 1: Summary of the Findings (continued)

	Official Brand Account Hollister	Employee Account Hollister
<p><b>Picking central brand elements</b> Employees strongly focus on the brand promise and legitimize and demonstrate that they suit the brand by presenting their "perfect" bodies -microcelebrity -selfies</p>		

social media, employees take over emplacement work by translating brands into their everyday life context. By doing that, employees provide valuable proof for consumers that the brand reflects a valuable cultural meaning. Employees do not only help authenticate the brand by integrating it into their lives, but also visually normalize its cultural message. The inconspicuous emplacement of the brand in the real-life context of employees, and the snapshot composition of the picture itself, legitimates and authenticates the brand, which potentially stabilizes the brand assemblage as a whole.




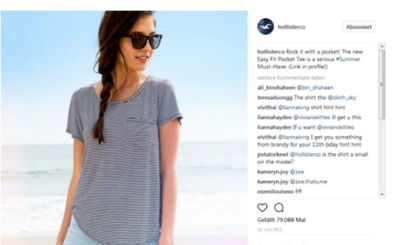




**Picking central brand elements**

Employees pick or take out a central element of the brand assemblage and give priority to this component by focusing on it and amplifying it. The brand Hollister is known for putting high body-related aesthetic standards on employees willing to work in their

stores. The aesthetic standards emphasized by the brand resembles the current preoccupation with fitness in contemporary society (Bauman 2005). Unsurprisingly, the body becomes a central visual element of Hollister, which is eagerly reproduced by its employees. We identify identical body types in brand and employees' visuals: skinny females and muscular and well-trained males. Material elements play a crucial role. Employees like to present their body and put it in the center of attention, posting selfies how they work out in the gym. Shirtless torsos and other body parts are exhibited, expressing strong motivation and dedication for aestheticizing their own body.

Interestingly, pictures focusing on the employees' bodies are often taken as selfies. Selfies are a popular mode of visual self-presentation acting as a nodal point where official brand assemblages and microcelebrity assemblages intersect (Rokka and Canniford 2016). Employees posts liken consumers attention seeking posts. The selfies

Table 1: Summary of the Findings (continued)

	Official Brand Account Hollister	Employee Account Hollister
<p><b>Neglecting commercial elements</b> Employees represent the brand and use the brand's visual rhetoric, but they do not actively promote the brand and do not participate in the marketplace Instagram -other brands visible -employees are assemblages</p>	   	   



shared by employees show a visual rhetoric that is different from the brand, shifting attention towards their bodies rather than towards the brand. Two mechanisms might be at play here. Employees strongly focus on the brand promise and legitimize and demonstrate that they suit the brand by presenting their “perfect” bodies. At the same time, having a perfect body might also serve as an ego enhancement for employees and cultural capital in liquid modernity where being fit is a “certificate of ‘being in’, of belonging, of inclusion, of the right of residence” (Bauman 2005). We argue that employees use and amplify the visual rhetoric of the brand in an attempt to legitimize their role of being an employee of the brand and at the same time make it self-relevant.

### Neglecting commercial elements

Employees’ visuals also reveal brand elements to which employees do not refer to at all. Employees strictly avoid any sales attitude. In the brand account, Hollister products appear frequently, trying to evoke the desire to go shopping. Brand visuals share product information about Hollister fashion with the intention to give outfit inspirations, mainly through the presence of Hollister clothes on the visuals or expressed through the caption.

Contrary to the brand, employees neither show the brand logo of Hollister in the visuals nor do they share product information about Hollister. Interestingly, employees even post a few other brands, most commonly Apple, Nike and Starbucks, but also other fashion brands such as Zara, H&M, and luxury brands such as Louis Vuitton or Michael Kors. This illustrates how employees actually create assemblages of various brands. These trendy brands reoccur in all employee accounts strengthening employees’ aspiration to be “in” and to belong to the “cool” crowd.

Employees do not express their love towards the brand. Contrary to other actors such as bloggers or influencer who get paid for promoting the brand, employees neither cite, nor promote or sell the brand and do not become part of the Instagram marketplace. They represent the brand and use the brand’s visual rhetoric, but they do not actively promote the brand by referring to the products or tagging the brand. As employees represent but do not sell the brand, the brand appears more integrated in their lives, making it even more authentic and credible.

### DISCUSSION

This paper contributes to our knowledge how employees relate to their brand in online environments and emphasizes the significant role of employees’ visual communications in the construction of brand assemblages. Our findings reveal three important practices how employees add to visual brand rhetoric and stabilize visual brand assemblage—mimicking brand elements and style, picking central brand elements, and neglecting commercial content. In our study, we find that employees confirm and reinforce brand meaning through mimicking and providing coherent visual interpretations of the brand, through extracting and amplifying central brand elements, and through authenticating acts of neglecting commercial content. We find that employees visual brand expressions and authentic self-presentations fulfill an important bridging function between the brand and its consumers. On the one hand, employees serve as representatives and brand ambassadors, who credibly convey brand meaning and visually communicate these to consumers. On the other hand, similar to consumers in online environments, they perform micro-celebrity and attention-seeking practices (Rokka and Canniford 2016) and refuse any commercial logic in their visual brand rhetoric, which renders the brand more authentic among consumers. Stabilization of brand assemblages is not only a matter of the degree

to which the elements of an assemblage draw on a homogeneous repertoire, which we massively find in mimicked material and expressive visual elements, but also through authentic, self-relevant articulations that become nodes in a network (DeLanda 2016)—or relations to consumers.

The study has two main limitations. First, our study focuses on one brand and one digital platform. Second, findings should be contrasted with other important stakeholders of a brand. Further research should therefore investigate the visual online behavior of consumers in contrast to employee’s visual rhetoric, but also include other brands outside the fashion industry.

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## APPENDIX A

## Material Components of the Brand Hollister

Material components	Hollister
Beach (%)	43
Accessories (%)	40
Shirt (%)	34
Jeans (%)	28
Sunglasses (%)	19
Hollister Store (%)	11
Hoodie (%)	10
Bikini (%)	7
Surfboard (%)	5
Skateboard (%)	4
Street (%)	3
Clothes on picture (vs. no clothes) (%)	88
Natural (vs.other) background (%)	77
Humans (%)	68
Female (vs. male) (%)	60
Faces visible (%)	67
Body in the center (%)	3
Humans in the center (%)	48
Hollister product in the center (%)	15
Selfies (%)	2
Number of humans (average)	1.7
Brand logo visible (%)	10
Other brand visible (%)	2

## APPENDIX B

## Material Components of Hollister Employees

Material components	Hollister
Shirt (%)	50
Accessories	30
Jeans (%)	16
Shorts (%)	14
Gym (%)	11
Jacket (%)	8
Streets (%)	7
Sunglasses (%)	6
Beach (%)	6
Sea (%)	4
Bikini (%)	3
Hoodie (%)	2
Dress	6
Beach (%)	6
Clothes on picture (vs. no clothes) (%)	63
Natural (vs.other) background (%)	40

Humans (%)	68
Female (vs. male) (%)	62
Faces visible (%)	69
Body in the center (%)	22
Humans in the center (%)	32
Hollister product in the center (%)	0
Selfies (%)	32
Number of humans (average)	0.9
Brand logo visible (%)	5
Other brand visible (%)	28

## APPENDIX C

## Expressive Components of the Brand Hollister and its Employees

Expressive components	Hollister	Employees
Happiness (%)	41	76
Inspire others (%)	33	71
Satisfaction (%)	17	66
Positivity (%)	30	55
Have fun (%)	38	48
Being active (%)	15	48
Coolness (%)	19	43
Excitement (%)	5	42
Energetic (%)	8	38
Love towards people (%)	16	33
Travel (%)	5	27
Presenting the body (%)	4	25
Enjoy Summer (%)	11	24
Sporty (%)	6	23
Love towards Hollister (%)	30	1
Love towards other brand (%)	0	2
Love towards nature/city (%)	12	17
Love towards food (%)	0	13
Love towards own body (%)	0	13
Follow the latest trends (%)	41	2
Desire to go shopping (%)	29	2
Share knowledge about Hollister product (%)	21	0
Necessity of Hollister product	15	2
Motivation (%)	0	34
Power/ Strength (%)	0	29
Throwback/ Memories (%)	0	11
Sarcasm (%)	0	13
Dedication for own body (%)	0	16
Escape (%)	3	11

# Faster Than Fact: Consuming in Post-Truth Society

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## ABSTRACT

Technocapitalism a potent combination of information technology and capitalism is the fundamental industrial force of our time. Technocapitalism affects consumers' communication power consumer culture's acceleration speed de-temporalization and counter-narratives. This paper uses social assemblage dynamics to explain how technocapitalism produces some of the most vivid digital manifestations of post-truth society.

## INTRODUCTION

The time people spend online browsing, creating, sharing, and commenting contents is increasing. According to the American Press Institute the 88% of young people use Facebook as their main source for information (<https://www.americanpressinstitute.org/publications/reports/survey-research/millennials-social-media/>). In general, online users decide if news is truth or fiction based on who shared it (<https://www.americanpressinstitute.org/publications/reports/survey-research/trust-social-media/>). Is truth getting lost in the algorithms of social media? In this paper we address this research question and investigate how people build narratives and counter-narratives that are perceived as truthful in social media conversations. In addition, we investigate how speed may shape people's formation of truth.

To address these questions, we ground our study in the frame of assemblage theory (i.e. the intersectional nature of social assemblages), social media literature on counter-narratives, and technocapitalism-related theories of speed, acceleration and de-temporalization. These are the conceptual underpinnings of what nowadays has been called post-fact society. Our study is set in the dog breeding context, an online field site where multiple beliefs and truths are constantly generated and disputed in controversial narratives and counter-narratives.

## THE DYNAMICS OF INTERSECTING SOCIAL ASSEMBLAGES

Consumers are commonly enrolled in intersecting social assemblages (i.e. a fan of a specific TV show who is enrolled also in discussion boards about TV shows in general or more broadly fan communities which intersect with media companies). These assemblages may be complementary but also problematic in their intersections, like in the case of counter-assemblages (see Canniford and Shankar 2013; Giesler 2012; Parmentier and Fisher 2015; Scaraboto and Fisher, 2016; Thompson and Coskuner-Balli 2007). According to Deleuze and Guattari (1987) assemblages are made of discontinuous and different components: some of them are rigid with high territorialization degree, while others are supple with low territorialization degree, and some of these components can mark the directions along which an assemblage gets deterritorialized (DeLanda 2016). Deterritorialization in the assemblage can occur at different rates of flow in terms of slowness and viscosity or acceleration and rupture. In fact, social assemblages may operate at different temporal scales that are relative to the duration and stability (or instability) of the events and interactions capable of building and changing them (DeLanda 2006).

Extant marketing and consumption literature has recognized the communal and commercial tensions that may arise from these intersections (McQuarries et al. 2013; Kozinets et al. 2010) and analyzed how consumers try to navigate and resolve these tensions (Par-

mentier and Fisher 2015), as in the case of consumers who work to stabilize fields, networks, communities, markets and industries (Scaraboto and Fisher 2016: 172) when tensions occur in social assemblages. However, we currently know very little about how the speed of territorialization and deterritorialization of social assemblages shape consumers' formation of truth.

Dynamism characterizes the discontinuous changes of contemporary consumer culture (McCracken, 2006: 3-4) and dromology, or the logic of speed, emerges as the foundation of contemporary technocapitalist society and the ultimate agent of progress (Virilio, 1977 [2006]: 69). Technology speeds social change and makes it largely computational (Bratton, 2006: 13). Yet, the impact of the current speed of the discursive and expressive practices through which assemblages are produced, contested, and re-stabilized in the social construction of truth in social media has largely remained unexplored. Because speed characterizes social change in contemporary consumer culture, a deeper understanding of this gap may advance consumer culture knowledge.

## THE SPEED OF COUNTER-NARRATIVES IN POST-FACT SOCIETY

Social media are connective platforms where the democratized communication power of consumers and their networked activism (Helman and Wagnsson 2015; Ray et al. 2017; Williams 2017) facilitate the outbreak and the circulation of counter-narratives (Cheong and Lundry 2012: 489). These alternative narratives compete with those of official sources of information as well between each other. Beyond the use of words, the visual rhetoric characterizing social media discourse forms a dynamic visual lexicon that articulates a multilayered counter-narrative that openly contrasts with mainstream discourses (Clancy and Clancy 2016: 282).

The multiplicity of competing narratives that characterizes social media discourse (Page, 2014) finds a fertile territory of expression in the current *post-fact society* (Manjoo 2008; Mihailidis and Viotty 2017). Post-fact society is the result of the fracturing of common institutional sources of information, the lack of common trust in avenues for information, and the massive spread of content creation and dissemination practices that have collectively led to a society in which citizens are less frequently exposed to similar sets of facts (Mihailidis and Viotty 2017: 447) that may allow for a shared perception of objective truth.

Additionally, crystallizing shared truths requires a time frame that is no longer compatible with the pace of contemporary economy. In this new economic reality, speed and its concentration have actualized the centralization and the acceleration of the technocapitalist powers of media, industry, and war-making (Virilio, 2006: 11). Rosa, Dörre and Lessenich (2017: 58) contend that modern societies are characterized by three processes of acceleration that mutually reinforce each other: 1) the technical acceleration of transport, communication and production; 2) the acceleration of socio-cultural change; and 3) the acceleration of the speed of life, social interaction, and consumption. Moreover, social media communications have made it possible to "detemporalize" consumers' connections and reactivate them at will at points in time and in sequences of consumers' own choosing (Rosa, 2013: 103). As Castells (2013: 34) argues with the concept of "timeless time" and Bauman (2000: 117-118) postulates

in his notion of “no time”, the relentless effort to annihilate time by negating formal sequencing has ended up compressing and hyper-accelerating time (Tomlinson, 2007: 10). Social media is marked by the rapid-fire development of content and its spread. This speeding of textual and imagistic content and its destructured sequentialization nurture narratives and competing counter-narratives in amplified profusion. As we have learned with the intrigue of recent events occurring across social media, this multitudinous profusion of narrative magnifies the formation of post-truths.

### THE POWER OF NEGATIVE DISCOURSE IN SHAPING POST-TRUTHS

Social media have created liquid spaces of interaction where post-fact truths are boosted by misinformation and populist discourses that are easy to distribute but difficult to refute (Bode and Vraga 2015; Dalrymple, Young and Tully 2016; Lewansowski et al. 2012; Speed and Mannion 2017; Vraga and Bode 2017). As well, harsh disputes, incivility and sarcasm arouse and polarize opinions and beliefs (Anderson and Huntington 2017), continuously destabilizing and reconfiguring existing social assemblages.

In fact, despite the recent trend that depicts individuals turning to online sources to seek out, understand, and discuss scientific issues more broadly (Su et al. 2015; Uldam and Askanius 2013), contemporary portrayals of online discussions often see them as harbors of conflict, uncertainty, and personal attack (Anderson and Huntington 2017: 599; Dalrymple et al. 2016). The negative discourse of social media shapes public perceptions of and engagement with science (Hwang, Kim and Huh 2014), while triggering contrasting debates that variously empower and disempower competing statements. With so many competing sources of truth, trust and reliability in the veracity of statements depends increasingly on the persuasive rhetoric ability of people to assemble, affiliate, territorialize and deterritorialize social consensus (Zappavigna 2012).

In this investigation, we aim to unpack how post-truths are built in the context of connective social media platforms and also map how the speed of territorialization and deterritorialization of assemblages and counter-assemblages shapes the social construction of those truths in the social media era.

### METHOD

We sought a methodological lens that could help us focus on the narratives and counter-narratives present in social media. We opted for a netnographic research approach, focusing on the plethora of discursive and expressive practices and interactions flowing through a Facebook’s social networking site. Netnography opens a window on the rich cultural and symbolic world of people and groups as they use social media (Kozinets, 2015: 80). The netnographic field site we chose was a pet-related site devoted to topics relevant to purebred dog breeds.

Pets have been treated both as consumption objects, ornaments, things that we own (Hirschman 1994), aspects of our self-concept (Belk 1988), and members of our families (Downey and Ellis 2008; Greenebaum 2004; Hirschman 1994; Hollbrook and Woodside 2008; Sanders 1990). They are fellow beings with whom we establish an intersubjective connection and share our lives (Sanders 2003). In social media, the relationship between pets and their human partners represents a prolific arena for the formation of narratives and counter-narratives. These narratives are particularly powerful when it comes to discussing about scientific issues related to dogs’ accurate selection, care, and health. In this case, dog breeders, owners and lovers form social assemblages to disseminate their post-truths.

In this paper we specifically focus on the context of purebred dog breeding and care and their public construction and representation in social media discourses. Pet breeding entails the controlled propagation of domestic animals to improve desirable qualities (Freeman 1998). The links between pet ownership and modern science run deep. No less than Charles Darwin described the connection between domestication, selection and evolution, demonstrating how domestication and selective breeding are a science that had produced significant changes over time in a range of animals, including dogs (Darwin 1868). Deliberate selective dog breeding has been used to create desired changes in dogs to adapt them to perform tasks necessary for human survival. Today some of these tasks are performed in other ways, yet dogs still have fundamental specialized uses for search and rescue, narcotics and other kinds of detection, along with other skills such as therapy (Cooper 2016). Additionally, today dog breeding follows scientific principles to refine dogs’ appearance, boost their athletic ability or improve their temperament both for personal pleasure and for increased market opportunities.

The modern-day science of dog breeding offers a fertile territory for generating strong common links between people. But it also generates equally harsh debates, disagreements and conflicts. The aim of our study is to contribute to a general understanding of the assemblage dynamics through which post-truths are socially constructed by studying how they operate and are configured in social media discourses related to dog breeding and care.

As initial sites for data collection, we followed netnographic procedures and selected three public Facebook pages. These pages were dedicated to breeders, owners and lovers of three dog breeds that are particularly sought-after in the market for the established purebred qualities and, as a result of this purity, members of these breeds are subject to specific health problems. The dog breeds are Black Pugs, Welsh Pembroke Corgi and Boxers. These Facebook spaces, named “*Welsh Pembroke Corgi*” (2013, 11,037 members), “*Black Pugs*” (2007, 11,587 members), and “*Everyday Boxer*” (2016, 35,140 members) deal with controversial and largely disputed topics of dog breeding. We collected in total 163 posts including 7,660 comments (49 posts and 2849 comments for “*Everyday Boxer*”, 48 posts and 2095 comments for “*Black Pugs*”, 66 posts and 2716 comments for “*Welsh Pembroke Corgi*”). Data collection was conducted between June and October 2017.

We conducted a hermeneutic interpretation of this qualitative dataset to identify the discursive and visual rhetoric patterns that consumers build when producing and sharing their narratives and counter-narratives on selected purebred dog care issues. We observed a variety of patterns among which we selected the most substantial (dense in meanings and actions) and the most dynamic (frequently updated). Each pattern was subsequently analyzed in-depth following Kozinets’s (2015) netnographic guidelines, generating a corpus of field notes, transcriptions, archived texts, and images constituting the entire dataset. The overall corpus of fieldnotes and transcriptions included more than 745 pages of visual and textual narratives that provided the basis for our hermeneutic interpretive work.

### PRELIMINARY FINDINGS

In table 1 we briefly show some of the key discursive dynamics that consumers use to build counter-assemblages that lead to post-truths related to vaccines, pet food, and purebred selection. Figure 1 specifically focuses on two topics, vaccines and pet food, to illustrate the different temporal scales through which post-truths are assembled.

These two topics act as *catalytic triggers* of social assemblages and counter-assemblages that get territorialized and deterritorial-



ized in post-fact truths. In the three Facebook pages analyzed, users tend to share a strong anti-vaccination ethos that builds a solid *echo chamber* (Gilbert, Bergstrom and Karahalios 2009; Pariser 2011), where common negative beliefs about vaccines are shared—in both the social media, as well as the cultural sense of that word. These shared beliefs establish a social assemblage which is reinforced by similar expressions. These expressions become enduring post-truths in which extreme, and also populist positions are held by users (see table 1: 1) anti #overvaccination). Research shows that the Internet plays a large role in disseminating and sensationalizing vaccine objections. Such objections are part of the “anti-vaccination movement” (Poland and Jacobson 2001), which involves counter-debate about potential vaccination risks that social media amplify via a rhetoric of doubt (Kata 2010: 1709). This rhetoric increases vaccination decisions based on misleading information and post-truth claims that are propagated in social media around cogent socio-cultural issues (e.g. safety, civil liberties, natural well-being, morality, ideology, conspiracy and emotional appeals) (Kata 2012; Nicholson and Leask 2012).

In the case of #diet, users tend to be united in opposing the dominant narrative spread by the pet food industry about their product quality with counter-narratives. However, while being anti-vaccine necessarily means avoiding vaccination, being anti-pet food industry does not leave pet owners with a lack of alternative options. In fact, multiple intersecting and competing counter-assemblages are territorialized and deterritorialized to support the validity of different dieting choices (see *Everyday Boxer*) where no dieting narrative emerges as dominant (see table 1: 2) multiple dieting options).

Stable echo-chambers are actualized by strong catalytic triggers, (i.e. #anti-vaccination) that territorialize widely shared ideological movements of protest which oppose institutional forces (i.e. veterinary science). These eco-chambers generate forms of speed resistance to post-truth because the crystallized beliefs constituting the eco-chamber are so strongly defended that they end up annihilating divergent opinions, while neutralizing the speed of counter-narrative generation (see table 1: 2) anti #vaccination).

In contrast, unstable territorialization and deterritorialization generated by weak catalytic triggers (e.g. multiple dieting options) are governed by high speed of post-truth. In this case different claims are confronted in a rapid flow of intersecting narratives and counter-narratives that confer dynamism and speed to the discourse (see table 1: 2) multiple dieting options). That rapid flow shapes and reconfigures the liquid boundaries of social assemblages.

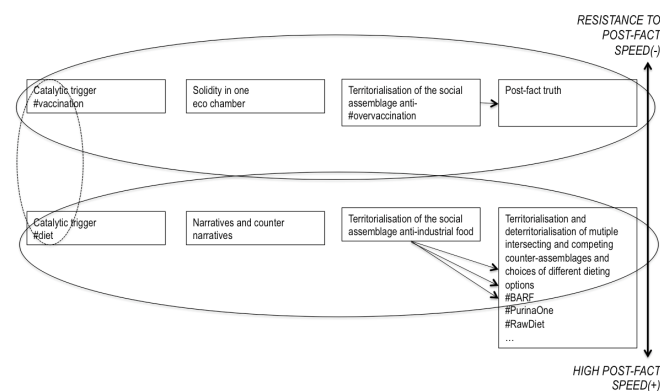


Figure 1: Speed of Social Assemblages and Counter-Assemblages in Building Post-Truths

## DISCUSSION AND CONTRIBUTION

The intensifying connectivity between networked humans and technological agents drives new influence mechanisms. These interconnected actors activate triggers that catalyze temporary investments in configurations which gather multiple truths in numerous social assemblages. Consequently, consumers make decisions based upon what they believe momentarily to be the most credible social assemblage, rather than what they might feel, in that moment, or universally, to be true.

These insights, although preliminary, offer novel insight towards understanding the complex social dynamics of contemporary consumer behavior in the social media age. As consumers such as dog breed enthusiasts encounter one another on Facebook, they also encounter contemporary technocapitalist forces related to their communicative empowerment and disempowerment, consumer culture’s acceleration, speed and detemporalization, and polarizing and reactivity-inducing counter-narratives.

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**Table 1: Catalytic triggers generating tensions in social assemblages leading to post-truths**



Catalytic triggers	Example of evidence that generates tensions in a social assemblage	Eco-chamber and Counter-assemblage	Example of evidence through which post-facts are built as truth
<p>#vaccination and sub-related topics such as pharmaceutical industry and products (i.e. #benadryl; #apoquel) and vet allopathic standards</p>	<p><i>Sandra Brush to Everyday Boxer: to counteract a corrupt Veterinarian practice of over-vaccinating - I stopped going to VCA (Mars Candy Bar company) clinics who are pushing me to repeatedly vaccinate my dogs on a 3 year rotation and not offering me titer testing... When I asked what they charge for a rabies titer (a blood test that checks for antibodies and proves immunity) they gave me "deer in the headlights" reaction and then quoted me \$449 for one titer! I took my boys to a different independent vet yesterday who agreed to draw blood samples and provide to me... I contacted Dr. John Robb in CT and he gave me instructions on how to ship -- I drove across the border to avoid having them held up in customs and shipped to Kansas State University Rabies Laboratory and paid \$54 US for Rabies / Parvo / Distemper titer testing... if the tests prove immunity for the next 8 yrs I am done and no more vaccines ever for my dogs. I have joined the movement to have the current antiquated rabies law amended. #ProtectThePets</i></p> <p><i>Tiffnie Greer Don't listen to your vet. Sounds so much like over vaccinating for cash. In 3 years, my Boxer has been vaccinated, once. He's beautiful and healthy.</i></p>	<p><b>1) anti-#overvaccination:</b> consumers' posts and related comments get crystallized in an eco-chamber that opposes the scientific standards of pharmaceutical industry and vets. Posts - like the one shown in the next column - consistently build post-facts, which assemble support from consumers.</p> <p><b>2) anti-#vaccination and resistance to speed:</b> The powerful populist claims of the anti-vaccination eco-chamber generate post-truths that are discursively built and perpetuated to isolate the divergent opinions and exclude the persons who expressed them from the social assemblage. The eco-chamber is so strongly asserted that the people whose beliefs do not conform to the dominant positions perceive themselves as victims of bullying inside the social assemblage and may consequently abandon it. Additionally, the strength of this crystallized anti-vaccine eco-chamber slows down the conversation and brings it to stop, making any opposing or competing truth surrender. That neutralizes the speed of generation and propagation of counter-narrative discourse.</p>	<p><i>Syni Brent: Jill Jenkins, look up titer testing and you will understand that what I am suggesting is not NOT VACCINATING, it's NOT OVER VACCINATING. And vaccinating on a schedule where their nervous systems are developed enough to withstand it. There's a huge difference. And I'm not just some backyard breeder who doesn't want to do right by the puppies in order to save a buck. I work closely with holistic vets, chiropractors, acupuncturists and even animal communicators regarding all my animals. They are the top priority and I look out for their best interest &amp; optimal health. Do some research and you will see that over vaccinating is a top trigger for DM&amp; kidney issues in dogs. Both issues are prevalent in the corgi breed already. It breaks down their nervous system by over-vaccinating, or giving too many at once or too early or too closely together. Taking the easy route by just letting some pharmaceutically backed vet give them an entire series of vaccinations when they don't need it can shorten their lifespan tremendously. So I refuse to follow blindly any lazy veterinarian that won't collaborate. I know my stuff. It's my job to advocate for my animals and my kids and my loved ones. That's what we do for those who can't speak for themselves.</i></p> <p><i>Candace Muenzner: I agree with the census. I hate to over vaccinate however vets just don't trust people to do their own. Good or bad you must really trust the person regarding vaccine dates or proper shipping care etc.</i></p> <p><i>Sandra Brush: the laws are wrong and not based on science at all Catarina Schwahn: Honestly, Tina Crabtree, is there any way this could be taken down? This is illegal and dangerous information she is putting out. I am a Veterinary technician and we are not even allowed to touch an animal without it's vaccination UTD in my clinic until the doctor comes in. Especially since the patient I had last year was positive for rabies at 6 months of age. This, to me, is reckless. I'm sorry</i></p> <p><i>Tina Crabtree: I understand your position Catarina, truly I do. In truth, I'm a believer in vaccines. With that being said, Sandra has the right to her belief.</i></p> <p><i>Catarina Schwahn: That, I understand, and am all for. The major issue is that what she is pushing here is illegal and people that are reading this and do as she says because she seems so full of knowledge, will end up in legal trouble and possibly having their dog's head cut off because they are not UTD. Plus, the bullying of people that don't agree with her is down right rude.</i></p> <p><i>Sandra Brush: ummm ok and your point ? my post is simply about SCIENCE and sharing information from a board certified VETERINARIAN on correct dosing of vaccines by body weight and to titer test to avoid killing your dog with over-vaccination if he already has immunity (circulating antibodies).</i></p> <p><i>Sandra Brush: I will not allow any vet to inject a vaccine into a living being (my dogs) that already has proven immunity -- it's criminal.</i></p> <p><i>Catarina Schwahn: Sandra Brush, I have noticed over the weeks that I have been on this page that you are a serious bully and anyone that doesn't agree with you, you bash and make them out as animal abusers for simple things such as vaccinations. You are basically telling us to break the law because of YOUR beliefs, which is reckless. Not only for us, but our dogs. Where did YOU get your veterinary experience from? Did YOU go to veterinary school? Have your veterinary science degree or Veterinary Technician degree? Have you seen, like I have, a six month old puppy that has rabies? That was twisting his body? It nipped me while I was triaging it last year, luckily, I am vaccinated so I was safe. But that six month old puppy was not vaccinated at all. I assisted in euthanizing and severing it's head and putting it into a cooler for Animal Control to take to state just for a confirmation of rabies. You need to stop bullying people in this group for not sharing your views. Please! You make everyone seem so hostile just because not in line with YOUR views. I had enough, I quit!</i></p>
<p>#diet and sub-related topics such as ingredients (i.e. #grainfree; #coconutoil; #feed); allergies to food; industrialization of pet-food; different dieting choices (i.e. BARF, vegan food, raw diets, natural home-made diet)</p>	<p>I don't mean to start a war or controversy, but so saddened to see all the onset of diseases in our precious companions. I was doing some research on GMO's (Genetically Modified Organisms) that plague our food supply as well as pets and wondered if this plays a part (as well as some vaccines) that are hurting our pets (allergies, kidney disease, tumors, other organ diseases, etc). This is just for information. I know its expensive to feed higher end food and organic raw and vaccines are always going to stir up fighting sides. I don't do raw, but here is a link I read about GMO's and dog foods. Wishing well to everyone of you out there because I know how much you love your fuzzy butts out there! I just wanted to share information. Please don't fight over this or add comments that are condescending to others, but just read for your own information. I think this can effect some dogs but not others just like vaccines.</p> <div>  <p><b>The Dangers of Genetically Modified Ingredients in Pet Food</b> Recent research shows that genetically modified (GM) corn causes kidney and liver disease in rats. HEALTHYPETS.MERCOOLA.COM</p> </div>	<p><b>1) Natural, anti-industrial pet food:</b> To contrast food allergies, consumers publicly craft their scientific expertise by showcasing a plethora of dieting options that build a chain of alternative post-fact truths which territorialize social consensus on natural diets over industrial food and remedies (i.e. #grain free food, # coconut oil, #home-made salmon and sweet potatoes)</p>	<p><i>Tori Ann: Ok. Anyone have a pug with allergies? She takes a cocktail of Benedryl and Clairitan regularly. Seems like Lulu has chronic earaches. I think I clean her ears ok...</i></p> <p><i>Julie Dominick: Try adding organic unrefined coconut oil</i></p> <p><i>Tori Ann: She eats a salmon and sweet potato diet. It's a limited ingredient diet. I went thru many different diets. I believe it's an environmental issue. The vet couldn't find anything that caused the scratching and earaches...</i></p> <p><i>Tori Ann: What would you recommend for her to eat? I like the ear cleaning idea... oh my Baby. I just love the daylight out of her. It pains me to watch her scratch herself and to see her ears all pink... sigh.</i></p> <p><i>Sheryl Zaiko: I feed my girls grain free...allergies have definitely improved, plus Benadryl and Hydroxyzine (from vet), expensive, but definitely helps).</i></p> <p><i>Susan Mckinnon: grain free dog food helps</i></p> <p><i>Jill Sterling Pratt: Elroy my pug/chin mix is allergic to corn and chicken he eats a limited fish diet and salmon treats his ears and butt get itchy from snacks with corn and throws up chicken</i></p> <p><i>Ashen Louise Frana: My pug is allergic to most grain products. So she eats Taste of the Wild food and that seems to have cleared up most of the problems. I also got some young living oils from a friend that i use.</i></p> <p><i>Jeanne Hemer Johnson: My kids eat Orijen Six Fish, have a teaspoon of unrefined coconut oil and a teaspoon of nonfat plain yogurt. Lily still complains of allergies once in a while. We live in the woods in an old house. So who knows.</i></p> <p><i>Colleen Wincentsen: Grain free Tori. Heart healthy oil supplements, and sweet oil or olive oil in the ears would be good.</i></p>

Table 1: Catalytic triggers generating tensions in social assemblages leading to post-truths (continued)

Catalytic triggers	Example of evidence that generates tensions in a social assemblage	Eco-chamber and Counter-assemblage	Example of evidence through which post-facts are built as truth
	<p><i>Earl Schiller to Everyday Boxer: So as many of you know Ocean had puppies, today marking 10 weeks, and one of the new owner of a pups that they bought from us, would like to start the puppy direct on a vegan diet kibble...I would like to add that we as humans can change our diet and make our own decisions and that's fine, But animals CAN NOT change their diets by themselves, it is built into their brain what they eat and dogs canines wolfs diet is MEAT. I think this is a bit selfish of her to wanting to do that because as I said animals cannot change their diet, if the owner wants a vegan animal she should buy a rabbit or something, I also feel that if she does this she is not respecting nature... anyway, just my thoughts, I would like your guys opinions about this please and thanks. Has anyone else come across this kind of thing before???? — feeling confused.</i></p>	<p><b>2) Multiple dieting options:</b> Catalytic triggers that do not create solid eco-chambers generate a confrontation of multiple options where no narrative emerges as really dominant (e.g. vegan, protein-based diet; BARF, raw diet, natural home-made diet). Confrontation then gets actualized in a rapid flow of intersecting narratives and counter-narratives that confer dynamism to the conversation, materializing acceleration and speed in the formation of different post-truth claims</p>	<p><i>Just don't overdo it because it can trap bacteria as well. And I agree with your friend who said is there a pug without allergies? Mr. Clyde has them as well. He's not related to Lulu he's one of my new ones. Absolutely no porn in their food if they smell like Fritos it's a yeast thing on the skin and you have to control the yeast in their bodies and their diet. The coconut oil works great for all of them except Clyde. He is allergic to it and gets bumps on his belly from it. Wrong I have to give him Benadryl pills and Benadryl cream to get rid of it. So I cut the coconut oil out of his diet. The bumps have cleared up.</i> <i>Colleen Wincentsen: Porn lol??? That might be tough in Vegas lol! I meant corn!!</i> <i>Dusty Herbert Tori: my pug Moe had the same issue. He is now on salmon and sweet potato as well, natural balance I think the brand is? We switched his diet because he was biting his inner thighs and they were badly irritated. He is okay now, after food change and daily prednisone and Benadryl. However, the vet also said he could have a pollen allergy. Maybe yours does too?</i></p> <p><i>Angel Warren I know many raw feeders, lots are breeders. 50% believe in whole prey raw diets (meats and proteins only) Others believe in omnivore diets or BARF which incorporates veggies, meats, grains and fruits. The argument between them (those who believe all dogs are carnivores, and the rest being those who believe all dogs are omnivores) rages on daily. BUT, never in ALL of my years and years of raw feeding, and being a raw feeding advocate have I heard of anyone making a dog a vegan fed animal. I personally believe dogs NEED protein for proper muscle/bone growth and development. My personal opinion is, that I wouldn't sell a puppy to anyone that believes that's ok. As you said, maybe a gerbil, or a bunny would be a better suited pet.</i> <i>Earl Schiller I totally agree, I thank you very much for your opinion.</i> <i>Ginger Hays Ray I have actually seen a dog the owners put on vegan diet and it looked horrible and was not healthy at all. If they truly want the puppy then they need to research the needs of a canine. We use a sweet potato and green bean diet very short term to pull weight off dogs but never long.</i> <i>Ashley Russell Kegley Amen Angel!!</i> <i>Melissa McGuire Dogs and cats should NEVER be on a vegan diet!</i> <i>Stephen McClure I thought you were joking, I'm sorry it appears your not</i> <i>Earl Schiller ya sadly I'm not.... but our decision is a no anyway.</i> <i>Stephen McClure At the very least you have been fair</i> <i>Earl Schiller So far our decision is a no to this person, that she can't have the pup, I mean yes every dog is different and what works for some dogs don't work for others, BUT iam NOT willing to take that chance that one of our pups will have health problems because a Vegan lady is forcing a helpless puppy to eat vegan kibble, I almost find that as animal cruelty to an extent even though she might have good intentions ? I think she is just a little out of touch with reality because of her veganism.....</i> <i>Hugh Oneill The Owners can choose what they want to eat but to enforce this on a Dog is WRONG WRONG WRONG. Dogs are Carnivores and thus derives its energy and nutrient requirements from a diet consisting mainly or exclusively of animal tissue. Dogs are not humans and cannot change their diet on a whim like us!!!! The puppy could grow up malnourished.</i> <i>Misty Strauser My puppies eat home-made vegan and they have never had any problem...I'm a caring mum and I give them only what is best for them to grow healthy.</i> <i>Earl Schiller exactly my thoughts also !!, thanks for the comment !!</i> <i>Angel Warren Yes, I forgot that in my list, malnourished, very much so! Which would lead to weakness, unhealthy bones, the list is crazy long of "what could be"</i> <i>Earl Schiller ya and I am definitely not will to take that chance.</i> <i>Hugh Oneill Good to hear Earl, puppy's especially need the best food content to grow strong and healthy. If i was a Vegan or Vegetarian i wouldn't impose my eating on my dog or my friends and family. the Dog doesn't have a choice! Some people just beggar belief!!!!</i> <i>....</i> <i>Brandi Rogers Can they have sardines in sunflower oil???</i> <i>Jill Vargas No, water</i> <i>Melinda Kreissler Boeh Once a month I throw whatever meat is on sale in a crockpot with brown rice, lentils, sweet potatoes, and lots of veggies and cook it until mushy. Then I freeze in small containers and add some to his kibble. He loves it. Warning: it's stinky while cooking, but he knows it's for him. Chicken livers are a special treat.</i> <i>JJ Page Kefir, raw eggs, sardines</i> <i>Chris Stypinski Couple teaspoons of coconut oil.</i> <i>Alex Kuretech Freeze dried raw food! It's incredibly healthy, and completely balanced so you won't have to feed as much kibble! Never met a dog who turned it down!</i> <i>Christina Dodge I used to do sweet potatoes green beans hamburger and chicken I would sometimes add raw egg or would even cook her scrambled eggs lol sometimes id even do plain oatmeal with a little chicken broth my pup was so underweight i did that for the first year and it helped a lot now she's 3 and will not eat without all that.</i> <i>Rafael Perez Salmon an egg left over rice chicken skin. Liver, leftover vegetables (no onion)</i></p>

Table 1: Catalytic triggers generating tensions in social assemblages leading to post-truths (continued)

Catalytic triggers	Example of evidence that generates tensions in a social assemblage	Eco-chamber and Counter-assemblage	Example of evidence through which post-facts are built as truth
			<p><i>Sherri Wickersham Tucker Ground flax seed, coconut oil, baked sweet potato, avocado, carrots, plain yogurt scrambled eggs or hard boiled, rice, cottage cheese, peanut butter...</i></p> <p><i>Chere Tait We add a little coconut oil.</i></p> <p><i>Louise Fienemann I started adding a "meat" day in once a week. Wednesdays were meat days. I gave my two a portion of raw green tripe in the morning and raw meat (lamb, beef or chicken) in the evening. They loved it! Then I did this on Saturdays too.... Now they are completely raw fed (BARF)</i></p> <p><i>Linda LaFluer Kaczor Plain can pumpkin. I add a heaping tablespoon to their dry food. Great source of fiber and they love it.</i></p> <p><i>Jill Vargas Meat, fish or eggs.....I wouldn't add more carbs on top of what the dogfood already has</i></p> <p><i>Misty Strauser Pumpkin or green beans</i></p> <p><i>Lis Hennesay 100 % pumpkin</i></p>
<p>#purebred (i.e. #genetic; #gene)</p>		<p><b>Anti-gene alterations:</b> in these threads of posts, consumers negotiate post-fact truths through which the concept of purebred selection liquefies in multiple narratives supporting different "acceptable" (or "non-acceptable") practices</p>	<p><i>[...] Melanie Allen: The dogs fur is not super "bad genes" unless it was for show. I see nothing wrong with that beautiful coat. To each their own &amp; someone will love the fact that this one came out different</i></p> <p><i>Jon Shelley: Pugs Come in fawn and black. Genetically a fawn is always fawn/fawn. Blacks can be black/ black or black/ fawn. I don't know what other mix gives you the white but probably fawn/x. So, black/ fawn x fawn/fawn could produce fawn/fawn or black/fawn. Likewise, a fawn/x with black/fawn could produce x/fawn or x/black or fawn/fawn. These pups look fawn/fawn, fawn/fawn and either fawn/x or black/x.</i></p> <p><i>[...] Denise Caceres: Wow, I didn't know that could happen. Sure she didn't cheat on him? Jk. I think you should keep him/her so we can see how they turn out</i></p> <p><i>Bev Bev Moore: and no she didn't cheat thanks I dont interbreed and only have pugs in my home</i></p> <p><i>[...] Bev Bev Moore: rose u mean someone was naughty i only have pugs in my home and don't inter bred thanks</i></p> <p><i>[...] Paula Edwards: I would dna test all the pups, but especially the black and white one as its just not in the genes to get pied markings. Maybe a cheeky suitor managed to get to your girl without noticing? :)</i></p> <p><i>Bev Bev Moore: paul your comment is very rude as i watch my girl at all times thank u so much</i></p> <p><i>Paula Edwards: If there wasn't a possible 'extra baby daddy' then I would look at the parents pedigrees, one or both sides must have Frenchie or some other breed in the mix. Lots of false papers around these days and unscrupulous breeders turning out 'pugs' with papers but non standard colors. Possible that yours have non standard colors in the past and this has caused this pup to be produced. Same with the other lady on her with her fawn pied pug.</i></p> <p><i>Tammy Gabb: It could have been generations ago that a pug got together with another breed and t not show up in pup's till many years later</i></p> <p><i>Tammy Gabb: Happens in humans all the time</i></p> <p><i>Paula Edwards: Not being offensive, but as a pug breeder of many years and knowing many more breeders who have been in it for decades more than I have, no other color that black or fawn have ever been produced. Just saying it might be worth dna testing to check for what in the bloodlines.</i></p> <p><i>Bev Bev Moore: WELL I KNOW FOR A FACT THAT MY MALE WAS THE ONLY ONE NEAR HER AND HE IS A PURE Pug AS BOTH PARENTS ARE FROM BREEDERS ALSO SHE IS NOT OUT OF MY SITE SO YOUR COMMENTS ARE RUDE AND I DO NOT BELIEVE IN ANY WAY WAT SO EVER OF INTER Breeding</i></p>

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# Consumers' Response to Branded Longevity

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## ABSTRACT

This research draws on fluency theory to uncover consumers' response to branded longevity. It employs experimental methodology. Results demonstrate that branded longevity positively impacts processing fluency as well as brand familiarity under low involvement conditions. Contribution and future results are also discussed.

## INTRODUCTION

We've all been previously exposed to the words "Since" or "established in" followed by a date while shopping for everyday items in large-scale retail outlets. The practice of communicating founding dates is trending nowadays with brands such as Lacoste (2017) and Heineken (2017) are emphasizing founding dates in their recent ad campaigns. Founding dates can be communicated on different communication mediums (food trucks, packages, ads, price tags...) thus can become very costly to companies.

The explicit communication of founding dates results in what we label as: branded longevity. The studies that investigated consumers' response to branded longevity mostly focused on its effect on other marketing variables such as brand trust and perceived risk (Rose et al., 2016; Desai et al., 2008). Surprisingly, literature did not examine the psychological mechanism that can explain its effect. This research draws on processing fluency (Lee & Labroo, 2004) to explain this effect and determine under which condition branded longevity has an effect on consumers' evaluation of the brand (Beck et al., 2016; Desai et al., 2008).

## BRANDED LONGEVITY - PROCESSING FLUENCY - BRAND FAMILIARITY

We assume that consumers are exposed to multiple accounts of branded longevity in everyday environments (e.g. product packages & ads). Berger and Fitzsimons (2008) found that frequent incidental exposure to stimuli in everyday life can influence product evaluation and choice. This is because some stimuli, such as branded longevity, has meaning for the consumer and can trigger automatically representations in memory, rendering them more accessible (Higgins, Rholes and Jones, 1977). Meaning that memory associations can be activated automatically by corresponding stimuli. Moreover, other associations that are part of the associative network of the consumers' memory can be activated automatically (Anderson, 1983; Collins & Loftus, 1975). This activation leads to an increase in processing fluency, as in render the processing of information easier, upon subsequent exposure as long as the consumer is not able to attribute the source of fluency (Berger & Fitzsimons, 2008). Indeed, features that facilitate processing fluency may also enhance consumers' evaluation of the brand (Chang, 2014) such as its familiarity. This is because an unfamiliar brand with previously encountered similarities to another brand can create an illusion of brand familiarity (Brown & Marsh, 2009). Product involvement is considered as moderator because it can moderate how labels can influence consumers' evaluation for low involvement products because it can be viewed as a peripheral cue, while for high involvement products it can also influence consumers' evaluation of the product because the label can act as a central cue (Atkinson & Rosenthal, 2014; Beltramini & Stafford, 1993; Liu & Shrum, 2009).

*Hypothesis 1* Branded longevity influences processing fluency only when consumers are not able to attribute the source of their fluency experience.

*Hypothesis 2* Processing fluency mediates Branded longevity's effect on brand familiarity.

*Hypothesis 3* Product involvement negatively moderates the influence of branded longevity on processing fluency, the higher (lower) consumers' involvement with the product the less (more) that branded longevity has an influence on processing fluency.

## STUDY 1

262 participants were randomly assigned to one of four groups following a 2 (branded longevity vs no-branded longevity) \* 2 (product involvement: high product involvement vs low product involvement) between subject design. Branded longevity was manipulated by altering the brand's founding date (e.g., Since 1952) near the logo similar to previous studies (Zhang et al., 2017; Beck et al., 2016). We measured consumers' initial evaluations of the brand, including brand familiarity (1 item from Simonin & Ruth, 1998) and processing fluency (6 items from Kidwell et al., 2013). Second the involvement of the consumers with the brand was measured using a 2 item 7-point Likert scale adopted from Berens et al. (2013). All scales were back translated following Douglas and Craig (2007).

## RESULTS

Manipulation checks proved that participants did perceive the brand's founding date and that there is a significant difference between product category involvement (see Table 1). Regarding hypothesis 1, results of a two-way ANOVA demonstrate that in both high and low product involvement conditions, a statistically significant difference is found between means of processing fluency in branded longevity and non-branded longevity conditions ( $M_{\text{branded\_longevity}} = 5.04$  vs.  $M_{\text{non\_branded\_longevity}} = 4.47$ ;  $F(2,260) = 20.69$ ;  $P = .00$ ). This means that branded longevity leads to greater processing fluency and thus H1 is corroborated. We perform a bootstrap analysis to further test significance of our results following Hayes (2014). The bootstrap was set to generate 5000 samples. Regarding the effect of branded longevity on brand familiarity, results demonstrate a partially significant effect:  $F(1,260) = 2.78$ ;  $P = .09 < .1$ . Regarding the effect of branded longevity on processing fluency, results demonstrate a significant effect with  $F(2,260) = 17.17$ ;  $P = .00$ . Regarding the effect of branded longevity and processing fluency on brand familiarity, results are significant  $F(2,260) = 9.15$ ;  $P = .00$  for processing fluency. While branded longevity is no longer partially significant  $\beta = 0.42$   $P = .49$ , processing fluency has a significant effect on brand familiarity  $\beta = .244$   $P = .00$ . This leads us to conclude that processing fluency totally mediates the effect of branded longevity on brand familiarity. Hence hypothesis 2 is corroborated. Regarding hypothesis 3, results demonstrate that there is a statistically significant effect of product involvement on processing fluency ( $M_{\text{high\_product\_involvement}} = 4.88$  vs.  $M_{\text{low\_product\_involvement}} = 4.62$ ;  $F(2,260) = 4.33$ ;  $P = .038$ ). Moreover, results indi-

cate a significant interaction effect between branded longevity and product involvement on processing fluency,  $F(2;260) = 9.22$ ,  $P = .003$ . In low-product involvement conditions, processing fluency is higher in the branded longevity groups ( $M_{Processing\_fluency}=5.09$ ,  $SD=0.72$ ) than in the non-branded longevity groups ( $M_{Processing\_fluency}=4.15$ ,  $SD=1.12$ ). This allows us to corroborate hypothesis 3.

This research provides insights regarding consumers' response to branded longevity. In particular, it identifies processing fluency as the psychological mechanisms that can explain consumers' response to branded longevity. It demonstrates a counter-intuitive conclusion demonstrating that more information (e.g. branded longevity) can lead to less neural effort (Reber et al., 2004). Finally, it proposes that the communication of the chronological age of the brand on products in low involvement categories can provide them with false familiarity (Holden & Vanhuele, 1999).

**Table 1: Significant difference between the product involvement of the two groups**

Product involvement	
Beer Steigal	Shoes Kurton
N=122	N=140
M=3.36 (SD= 2.77)	M=3.90 (SD=2.94)
F (2,260)=6.51 P=0.011	

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# How Discourse Theory Exposed Fraud in a Digital Hypertext Campaign and Proved Trademark Infringement on the Playboy Brand Name

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## ABSTRACT

The paper develops a theory of meaning production in digital marketing based in discourse theory. Focusing on the interface between digital roadmaps and user agency, a discourse analysis of meaning and inter-subjectivity in a digital hypertext proved trademark infringement in the keying process linking the Playboy trademark to unsponsored content.

## INTRODUCTION

Considering the arbitrary association of signs and meanings in language, Umberto Eco (1978) claimed that, "semiotics is in principle the study of everything that can be used in order to lie." Questions of trust and distrust are thus inscribed in meaning production and the conventions binding speakers in community. They take on even greater importance on the Internet, because the digital hypertext frees discourse from its anchor in the context and the inter-subjective contract joining I/you in the space-time of ordinary discourse, increasing the vulnerability of digital marketing to ambiguity, confusion, and fraud.

The paper develops a theory of meaning production on the Internet based in discourse theory, a development in post-structural semiotics that moves the focus of analysis from signs and meanings to the implication of meaning and reference in semiotic performance (for example Benveniste 1967, 1971; Austin 1962; and Eco 1976). Theory is supported by a case analysis that demonstrates how the author applied discourse theory to a trademark infringement case and uncovered evidence of fraud that led to a successful outcome for the Plaintiff.

## DISCOURSE THEORY

The notion of semiotic performance not only places meaning in context but also accounts for the inter-subjective contract joining speakers and interlocutors in the communication event (see Oswald 1989). Indexical markers such as personal pronouns (I/you), demonstrative pronouns (this/that), and adverbs (here/there, now/then) trace subjectivity in discourse and orient semiotic performance to the space-time of the speaking event (Benveniste 1971).

Writing from the perspective of speech act theory, Austin (1962) reflects on the implicit difficulty of assessing the veracity of performative statements because the burden of authenticity rests not with the statement itself but with the referential context. He uses the example a vow to wed spoken by actors in the course of a theatrical performance. The actor is not held to the vow because theatrical convention suspends audience disbelief and reframes the actors' statements in a fictional context. Likewise, ironic statements can be confused with lies because they are built upon a contradiction between a statement and its referent. Thus the statement, "Great weather we're having!" spoken in the midst of a blizzard is not a lie, but an indirect way of stating the speaker's displeasure with the weather.

In summary, the paper applies four semiotic principles to the case analysis.

1. Taken out of context, the arbitrariness of the signifier/signified relationship exposes signs and meaning to confusion, ambiguity, and distrust.
2. The precise meaning of words depends upon the relationship between statements and reference to a context.

3. The authenticity of the message and the intentions of the messenger build upon the inter-subjective relationship between speaker and interlocutor in the communication event.
4. Digital media increase the vulnerability of discourse to ambiguity, confusion, and fraud.

## DISCOURSE THEORY AND THE DIGITAL HYPERTEXT

The digitalization of mass marketing exposes brand communication to the potential for fraud and copyright infringement because the marketing hypertext draws from multiple Internet platforms discourses, and contexts (Neumüller 2000) in a single space-time. Thus the digital hypertext breaks down the traditionally stable play between meaning and reference to the context and disrupts the inter-subjective contract binding speakers and users in the brand discourse.

Hypertext marketing has important implications for consumer trust by exposing brands on the Internet to the effects of ambiguity, copyright infringement, and even fraud. In the following case analysis, I show how discourse theory can introduce trust to a culture of distrust by clarifying the context and subject address of a marketing campaign designed to mislead consumers, steal a brand name, and tarnish the reputation of an iconic brand.

The case study below is drawn from the author's report as an expert witness in copyright infringement litigation before the Appellate Court of the Ninth Circuit in California for the plaintiff, Playboy Enterprises International a/k/a PEI.<sup>1</sup> The case demonstrates how semiotics, and discourse theory in particular, provided insights that supported the plaintiff's claims regarding fair use of the Playboy brand name. The research proved that the search engines, Excite and Netscape, committed trademark infringement when they keyed the search terms "playboy" and "playmate" to unsponsored adult entertainment sites.

## CASE STUDY: TRADEMARK INFRINGEMENT: WHO OWNS THE TERM "PLAYBOY" ON THE INTERNET?

Trademark ownership contributes to brand equity because it protects companies' most valuable assets - the meanings and reputation consumers associate with the logo and brand name. On the Internet, competitors may violate trademark regulations by linking brand names to content and contexts unintended by the owner of the trademark. The issue of infringement is particularly tricky in cases, such as Playboy, where the brand name is the same as a common noun.

Principle: Taken out of context, the search term "playboy" became vulnerable to ambiguity and confusion, allowing defendants to key the term to unsponsored content.

The Playboy (PEI) litigation focused on the practice of "keying" or linking the search terms consumers type into the search box to advertising on a webpage. Defendants claimed that the word "playboy" and "playmate" were common words that can be found in the dictionary. Playboy claimed that the terms acquired their specific trademark meanings in the course of branding activities by PEI.

<sup>1</sup> U.S. District Court Case No. CV 90-320 AHS EE. Related case: Sa CV99-321 ahs (eex)



**Fair Use**

The International Trademark Association (1999) defines the scope of fair use on the Internet.

“The proper trademark analysis in a ‘keyword’ case, just as in any infringement case, should begin with an examination of whether the defendant’s use is a use of the plaintiff’s mark in its secondary or trademark sense. If not, then the word is being used in its dictionary sense and is a descriptive fair use. ... If, however, the word is used in its secondary, trademark sense, then the inquiry turns to: (1) whether the direct or indirect use is likely to cause confusion, and (2) where appropriate, defenses such as nominative fair use or non-confusing comparative advertising.”

Advertisers can purchase the right to appear on the results page above or below the search term. There is trademark infringement if search engines deliberately key (“link”) search terms for brand names to competing web sites. For example, if consumer types the word, “Harvard MBA” in the search box, a competing university may legitimately purchase advertising space on the results page to attract users to their sites. However, if advertisers deliberately confuse consumers by keying branded search terms, such as “Harvard,” to a less renowned brand, such as a school in Harvard, Texas, they could be accused of pilfering Harvard University’s brand equity and even diluting the Harvard brand by association with a less prestigious school.

The next section summarizes how Excite and Netscape misled consumers by linking the term playboy to unsponsored adult entertainment sites by blurring historical differences between the trademark and common uses of term “playboy.”

The judge summarized PEI’s complaint as follows.

“Plaintiff has a trademark on “Playboy®” and “Playmate®.” Plaintiff contends that defendants are infringing and diluting its trademarks (1) by marketing and selling the group of over 450 words, including “playboy” and “playmate,” to advertisers, (2) by programming the banner ads to run in response to the search terms “playboy” and “playmate” (i.e., “keying”), and (3) by actually displaying the banner ad on the search results page. As a result, plaintiff contends, Internet users are diverted from plaintiff’s official web site and web sites sponsored or approved by plaintiff, which generally will be listed as search results, to other adult entertainment web sites. Plaintiff further argues that defendants intend to divert the users to the non-PEI sites.”<sup>2</sup>

**Implications for the Playboy Brand**

Plaintiffs argued that Excite and Netscape’s infringements caused harm to the Playboy brand by fostering confusion, blurring, brand dilution, and tarnishment.

*Confusion*

Excite and Netscape confused consumers by blurring distinctions between the common and trademarked meaning of the term “playboy.” Lawyers for the defense claimed that Playboy Enterprises did not own the terms “playboy” and “playmate” on the Internet because they could be found in the dictionary. They claimed that these terms have always been associated with erotic meanings.

Principle: By anchoring the term “playboy” in historical context, semiotic research identified clear differences in the meaning and reference of the term “playboy” before and after the creation of Playboy Enterprises in 1954.

Semiotic research restored the semantic context of “playboy” and “Playboy” by tracking the use of the common noun “playboy” in dictionaries, songs, literature, and popular culture going back to the 17th century.

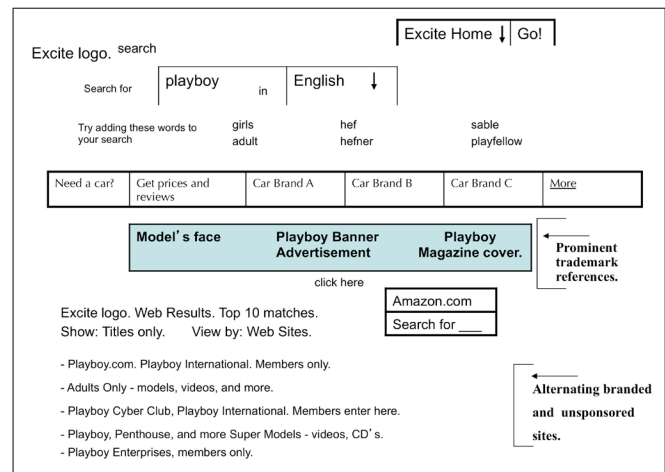
- A companion in play; a good time girl, a funny gentleman; blatantly silly
- Playboys are impractical; couldn’t do a man’s job. A player, reveler.
- Hilarious, gay, rowdy, outspoken.
- Lives a life devoted chiefly to the pursuit of pleasure.

Research revealed that the term “playboy,” along with “playmate,” had indeed acquired its specific, trademark meanings beginning in 1954 and the creation of Playboy Enterprises. They include:

- Erotic, voyeuristic, recreational sex, pleasure doll, sex kitten,
- Concubine, playmate, free, openness, Casanova, nudity
- Pin-up, centerfold girl, bunny.
- Upscale, glamorous, sophisticated, featured in mainstream press

**Implications for the Playboy Brand**

Analysis of one of the search pages used as evidence in the case reveals how Excite and Netscape confused consumers, blurred and depleted the Playboy trademark, and tarnished the brand in consumers’ minds. Excite and Netscape keyed links between the “playboy” search term and unsponsored content to confuse users and blur distinctions between the Playboy trademark and unsponsored content.



**Figure 1: Excite Web Page Analysis**

Defendants also exploited spatial connections between competitors’ content and the Playboy trademark on the search page to implicate Playboy in unsponsored content. They juxtapose the PLAYBOY key word with a menu of Playboy Related Searches, such as Hefner and *Playboy Magazine*. On some of the search pages the Playboy Related Search menu is juxtaposed with a banner ad for unsponsored adult entertainment. By inferring a connection to Playboy, these kinds of associations prompt users to click on the banner ad and visit the site. This inference is reinforced when the banner ad is juxtaposed with a “Top 10” list on which Playboy Enterprises is prominently featured. These kinds of associations tarnished Playboy’s commitment to high quality, “soft” adult entertainment.

Principle: Netscape and Excite created consumer distrust by violating the inter-subjective contract between users and the site.

<sup>2</sup> U.S. District Court Case No. CV 90-320 AHS EE. Related case: Sa CV99-321 ahs (eex)

### Blurring

A semiotic analysis of the Excite webpage shows that Excite and Netscape reinforced the branded meaning of “playboy” and “playmate” by associating these key words with the Playboy trademark through juxtapositions and analogies. In this way, defendants blurred Playboy’s hard-fought distinctiveness in the competitive environment and sent consumers to sites that had not developed a brand identity.

### Dilution

Brands rely on a coherent message. When Netscape and Excite rerouted the links between the Playboy trademark and unsponsored adult sites they diluted the brand’s strength and integrity.

On the original site, the organization of the various elements of the page takes on a rhetorical dimension that suggests associations between Playboy and unsponsored adult sites. Throughout the original web page, the juxtaposition of the keywords ‘playboy,’ or ‘playmate’ in the “Try These First” lists, site directories and search results reference Playboy International and draw from Playboy’s secondary, trademarked use of the words PLAYBOY and PLAYMATE.

Looking once more at the Search Results page [Figure 1], the alternating juxtaposition [A/B/A/B] of the sites for PEI [A] with the unsponsored adult sites [B], implicates Playboy Enterprises in an undifferentiated list of sites for unsponsored adult entertainment. This rhetorical device effectively blurs distinctions in consumers’ minds between the Playboy trademark and the unsponsored sites.

### Tarnishment

Lawyers for PEI claimed that Excite and Netscape degraded its equity by linking the keyword “playboy” to an array of hard core web sites other than Playboy Enterprises. That is, when a user typed the word “playboy” into the search box, the Excite search engine produced a list of links to unsponsored pornographic sites.

Looking again at the Search Results Page [Figure 1], Playboy Enterprises positioned the brand as “soft” adult entertainment, having avoided association with “hard core” adult entertainment such as *Hustler* and *Penthouse*. In their corporate report, management claims that the Playboy trademark references a world of ideas, culture and politics, not only the magazine centerfold. On page 4 of the 10-K form is a list of American Presidents, prominent writers, artists and celebrities interviewed in the magazine, as well as special features on cultural trends, politics and art. Moreover, Playboy Enterprises is associated with a mainstream, upscale market, as proven by the choice of advertisers in *Playboy Magazine*. Netscape also tarnished the Playboy brand by positioning Playboy banner ads next to links keyed to unsponsored pornographic sites.

## CONCLUSIONS

The Circuit Court of Southern California ruled against Playboy, but the decision was overturned on appeal. The judgment from the 9th Circuit Court of Appeals in California agreed with our argument that Playboy Enterprises (PEI) had created a new, proprietary meaning for the nouns “playboy” and “playmate” by means of advertising and marketing activities over a long period of time. The Court agreed that by creating Internet links and rhetorical associations between Playboy trademarks for “playboy” and “playmate” and X-Rated sites, Excite and Netscape confused consumers, blurred hard-fought distinctions between Playboy trademarks and unsponsored adult entertainment, diluted the Playboy brand equity, and tarnished the Playboy brand name.<sup>3</sup>

The case study illustrates the role semiotics can play in teasing out truth from fiction, restoring consumer trust, and protecting brand equities on the Internet. Future research would draw from semiotics’ untapped potential to understand dynamic and performative aspects of digital media that pose urgent questions about the nature of meaning and subjectivity in the digitalized world.

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3 United States Court of Appeals for the Ninth Circuit; No.9-56239 and No.99 – 56231; DC# CV99 – 321.

# Enhancing the Effectiveness of Narratives Among Vaccine-Skeptical Parents

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## ABSTRACT

Vaccine skeptics do not trust immunization recommendations and cause problems for public health. Using negatively framed anecdotal messages, we test how adding information about the protagonists' vaccine skepticism affects message effectiveness. Among skeptics, a narrative that portrayed vaccine-skeptical protagonists in a positive way proved most effective. Our findings are easy to implement.

## INTRODUCTION

In many countries, vaccine-preventable diseases, for example, measles, cause a significant number of unnecessary deaths because immunization levels in the population remain lower than required (Kabra and Lodhra 2013). While immunization programs successfully reach the majority of the population, some parents are concerned about potential adverse effects of vaccines for children and decide against immunization (Nyhan et al. 2014). Such parents do not trust the immunization recommendations provided by public authorities (Gershoff and Koehler 2011; Healy 2009).

Because immunization levels are lower than required, measles outbreaks have recurred in many western countries, for instance, the US, Great Britain, and Germany (e.g., Centers for Disease Control and Prevention, 2018). Outbreaks of the disease inevitably place others (who are innocent because they did not decide against the vaccine) at risk because infants younger than 12 months cannot be vaccinated and are most likely to experience severe complications when infected. Thus, vaccine-skeptical parents may cause a problem for public health, and persuading them to have their children vaccinated is a relevant public health issue (Nyhan et al. 2014; Horne et al. 2015).

Research suggests that providing vaccine-skeptical parents with information that directly addresses their concerns about the potential adverse effects of the vaccine by explaining the lack of evidence for such effects is less effective than drawing parents' attention to the negative consequences of not vaccinating their child (Horne et al. 2015). One problem with directly addressing the existing concerns is that the message repeats them, thereby potentially strengthening recipients' associations between the concern and the vaccine (Lewandowsky et al. 2012; see also the study on rumors by Tybout et al. 1981). Another problem is that it seems impossible to provide evidence for a complete absence of risk (Gershoff and Koehler 2011; Popper 2014). In regard to the question of how to draw parents' attention to the negative consequences of not vaccinating their child, previous research demonstrates that statistical evidence, for example, information about how many deaths a disease causes (ideally graphically displayed; Gershoff and Koehler 2011), works for the general public (Slater and Rouner 1996). However, skeptical recipients tend to counterargue when provided with such facts (Slater and Rouner 1996; Nyhan and Reifler 2015). Thus, when targeting skeptical recipients, Slater and Rouner (1996, 229) recommend the use of anecdotal evidence because "the processing of narrative does circumvent the tendency to counterargue." Among alternative medical students who tend to have skeptical views of vaccinations, Wilson et al. (2004, 3012) report a small (insignificant) advantage of an anecdotal intervention compared to a presentation of facts with regard to message recipients' intention to vaccinate their own child. However, Nyhan et al. (2014) report that their anecdotal message

(providing evidence of the negative consequences of not vaccinating a child against measles) did not increase skeptical parents' intent to vaccinate future children (neither did any of the other messages that the authors tested).

Because vaccine skeptics are a highly relevant target group for public health, and the literature suggests that anecdotal evidence is the most effective tool when targeting such audiences, we use the narrative by Nyhan et al. (2014) and test how information provided about the protagonists may increase its effectiveness. Previous research suggests that increasing the similarity between the recipient and the protagonist may be a way to improve message effectiveness (De Graaf 2014). This research focuses on similarity with regard to the recipient's skeptical mind-set and adds information about the protagonists' vaccine skepticism to the narrative. We are not aware of other studies that address recipients' skeptical mind-set by portraying a skeptical protagonist in a narrative.

## THEORY

In the narrative by Nyhan et al. (2014), a mother tells about her and her partner's dramatic experience when their infant almost died of measles and how they suffered at the bedside of their child with fear of losing him. Furthermore, the narrative asks the target audience to have their children vaccinated. The narrative does not provide information about the parents' attitude towards the vaccine, nor does the target audience learn whether the parents decided for or against the vaccination.

For message recipients, the parents described in the narrative (protagonists) may represent potential identification figures, and the extent of identification with a protagonist affects message effectiveness (Slater and Rouner 2002; Igartua 2010). Thus, we attempt to increase message effectiveness among vaccine skeptics by stimulating their identification with the protagonists portrayed in the narrative. Identification is related to perceived similarity (Cohen 2001, De Graaf 2014) as well as to aspirational similarity, that is, the perceived valence of the information provided about the protagonist (Tal-Or and Cohen 2010).

*Perceived similarity.* Studies demonstrate that similarity between the recipient and the protagonist with regard to relevant characteristics increases the self-relevance of the message (McKeever 2015; Raghubir and Menon 1998) and message effectiveness (De Graf et al. 2012; Hoeken and Fikkers 2014). Construal level theory provides an explanation for the effects: Liviatan and Liberman (2008) demonstrate that interpersonal similarity reduces the social distance between individuals, and less social distance leads to more concrete thinking about the other person's experiences (Trope and Liberman 2010). Concrete thinking about potential negative life events leads to higher perceived risk (Wakslak and Trope 2009). Thus, if the protagonist is similar to the message recipients, the message recipients should perceive the negative event described in the narrative as more likely to happen and as more severe, thereby increasing message effectiveness (Murdock and Rajagopal 2017). Parents who are vaccine skeptics should perceive a protagonist who mentions that he/she had the same skeptical attitude and decided against the vaccine to be similar to themselves. Vaccine skeptics may recognize their own decision in the narrative, and the negative consequences described in the narrative may become more self-relevant to them thereby increasing message effectiveness.

*Aspirational similarity.* However, the target audience is more likely to identify with protagonists whom they see in a positive light (Tal-Or and Cohen 2010). Because this research uses negatively framed narratives (as recommended by Cox and Cox 2001), the narrative highlights the negative consequences of not getting the vaccine. Thus, message recipients may assign responsibility for the dramatic situation to the protagonists, and protagonists whom the message plainly describes as vaccine opponents may appear irresponsible or stubborn. Thus, even though a skeptical protagonist may be similar to the skeptical message recipient, aspirational similarity may be low.

Taken together, we argue that to increase message effectiveness among skeptics, the narrative should provide information about the protagonists' skepticism and, at the same time, should portray the skeptical protagonists in a positive way, for instance, by mentioning how hard they thought about their decision to not have their child vaccinated. In other words, vaccine-skeptical message recipients should be more likely to identify with a thoughtful, responsible vaccine skeptic than with a seemingly stubborn vaccine opponent. Thus, the former message should be more effective than the latter; that is, it should lead to higher perceived severity of the disease, more positive attitudes towards having children vaccinated, and a higher level of intention to have a future child vaccinated. We propose the following hypotheses:

*Hypothesis 1a* Among skeptical recipients: compared to the narrative by Nyhan et al. (2014), which does not provide information about the protagonists, the same narrative is more effective when it portrays the protagonists as thoughtful vaccine skeptics.

*Hypothesis 1b* Among skeptical recipients: Compared to the narrative that portrays the protagonists as thoughtful vaccine skeptics (see hypothesis 1a), a narrative that portrays the protagonists as vaccine opponents is less effective.

## STUDY

### Participants

We conducted the study in Germany and translated all items to German. Because our aim was to reach vaccine-skeptical parents, we collected our data on internet platforms on which parents discuss relevant health issues of their children, such as immunizations. We posted the invitation to participate in our study and the link to our online survey on the internet platform "Eltern.de" (a platform for parents) and on Facebook pages linked to alternative medicine. The sample consists of 370 respondents (who responded to all relevant questions); 95% were female, the mean age was 39 and 95% had children (respondents who neither had children nor planned to have children in the future were excluded). The very high proportion of females did not cause a problem for our sample because mothers usually make health care decisions for their children (Matoff-Stepp et al. 2014).

### Measures and Procedure

We measured skepticism levels before the respondents observed the message. We used one item on immunizations in general and one addressing the specific vaccine ("I am concerned about serious adverse effects of vaccines" and "The risk for adverse effects from this vaccine is too great" 1 = fully disagree; 7 = fully agree, Freed et al.

2009). After the respondents had seen one of the messages (to which they were randomly assigned), we measured future intentions with the item (Nyhan et al. 2014) "If you had another child, how likely is it that you would give the child the MMR vaccine?" (1 = very unlikely, 7 = very likely). We measured respondents' attitude towards having children vaccinated against MMR with the item "Please indicate how reasonable you think it is to have children vaccinated against measles, mumps, and rubella" (1 = not reasonable, 7 = very reasonable). We measured the perceived severity of the disease with the item "How severe do you perceive an infection with the MMR diseases to be if a child did not get the vaccine?" (1 = very low severity, 7 = very high severity). Furthermore, we measured perceived similarity to and identification with the protagonists ("I think the parents in the narrative are similar to me" and "I could identify with the parents in the narrative", 1 = fully disagree, 7 = fully agree).

### Stimuli

Participants observed one of the following messages:

- Ad 1: the narrative by Nyhan et al. (2014) was presented with two minor adaptations. First, the narrator in the original narrative was a mother (Megan Campbell) telling about her and her partner's dramatic experience when their infant almost died of measles. We used a couple (parents) as narrators because we wanted to provide an identification figure for both female and male respondents. Second, instead of "Megan," we used names that are common in Germany (Anja and Christian).
- Ad 2: the same narrative was presented but with the additional information that before the dramatic event, the parents were vaccine opponents and had deliberately decided against the immunization ("Protagonists: vaccine opponents"),
- Ad 3: the narrative of group 1 was presented but with the additional information that before the dramatic event, the parents were vaccine skeptics who had thought very hard about their decision and had then decided against the immunization ("Protagonists: thoughtful vaccine skeptics").

All three narratives included the same appeal that parents should have their children vaccinated to avoid the severe disease.

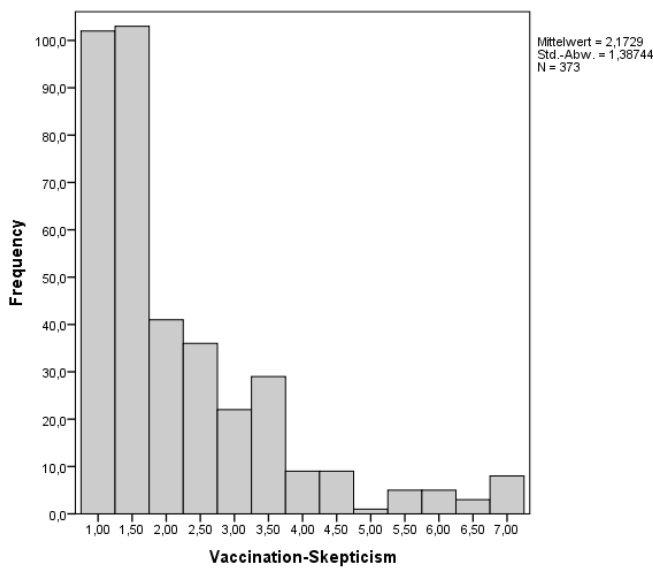
### Data Analyses and Findings

*Vaccine skepticism in the sample.* The immunization levels of approximately 80%-90% in most western countries demonstrate that the vast majority of the population holds positive attitudes toward vaccinations, and vaccine skeptics represent a minority. Thus, in our sample, only relatively few respondents were skeptical. We aggregated the two skepticism variables ( $r = .59$ ), and the mean values represent respondents' vaccine skepticism in this study. Figure 1 shows the frequency distribution of the aggregated variable.

We split the sample into three skepticism-groups: "no skepticism" (variable vaccination skepticism = 1,  $N = 102$ ); "slight skepticism" ( $1 < \text{vaccination skepticism} \leq 2.5$ ,  $N = 178$ ); "skepticism" (vaccination skepticism  $\geq 3$ ,  $N = 90$ ). Nyhan et al. (2014) split their groups by tercile. We did the same for "no skepticism" and "slight skepticism." However, we assigned respondents with vaccination skepticism  $\geq 3$  to the skeptical group (the tercile was 2.5) because on the 7-point scale, 2.5 is still very low.

*Test of the hypotheses.* Table 1 shows the mean values of the three dependent variables across the different messages and across the three skepticism groups. We tested hypotheses 1a and 1b with pairwise t-tests among the skeptical respondents. Table 1 also reports





**Figure 1: Frequency distribution of the aggregated variable “vaccination skepticism” in the sample**

the t-test results. The findings support hypothesis 1a for each of the dependent variables (attitude  $t = -3.07, p < .01$ ; severity  $t = -1.71, p < .05$ ; intention  $t = -1.61, p < .10$ ). Among vaccine skeptics, the narrative portraying skeptical but thoughtful protagonists (Ad 3) proved to be more effective than the narrative by Nyhan et al. (Ad 1).

The findings also support hypothesis 1b for the dependent variables attitude ( $t = -2.64, p < .01$ ) and the intention to have a future child vaccinated ( $t = -1.41, p < .10$ ). Among vaccine skeptics, Ad 3 proved to be more effective than the narrative that merely described the protagonists as vaccine-opponents (Ad 2). With regard to the perceived severity of the disease, Ad 2 and Ad 3 did not differ significantly ( $p > .10$ ).

Among nonskeptical respondents, the effectiveness of the three messages did not differ. This finding makes sense because Slater and Rouner (1996) argue that value-affirmative recipients employ a central-processing strategy. Thus, the additional information about the protagonists should not affect their attitudes and intentions. Among respondents who were slightly skeptical, only two pairs of mean values differed significantly. Perceived severity was higher when slightly skeptical respondents had seen Ad 3 compared to Ad 1 ( $t = -1.51, p < .10$ ) and when they had seen Ad 3 compared to Ad 2 ( $t = -1.46, p < .10$ ).

**Additional Analyses.** To test the robustness of our findings, we estimated PROCESS model 1 (Hayes 2018), including recipient skepticism as a metric moderator variable. Ads (Ad 1, Ad 2, and Ad 3) was the multicategorical independent variable of the model (with indicator coding), and message effectiveness was the dependent variable (Hayes and Montoya 2017). Because Cronbach Alpha of the three effectiveness measures (intention, attitude, and perceived severity) was .70, we used an aggregated message effectiveness index for this analysis.

While recipient skepticism has a negative main effect on the dependent variable, ad type has no main effect. Thus, overall, the effects of the three ads do not differ. However, as expected, with increasing recipient skepticism, Ad 3 is more effective than Ad 1 (coefficient of Ad 3 x skepticism interaction: .28,  $t = 2.52, p < .05$ ). In line with the mean values of Table 1, the conditional effects of Ad 3 at increasing values of the moderator that PROCESS estimates demonstrate that among nonskeptical and slightly skeptical respondents, ad

type does not affect message effectiveness. However, among skeptical respondents (the moderator value that PROCESS uses is the 84th percentile: 3.5), Ad 3 is significantly more effective than Ad 1 (coefficient: .63,  $t = 3.04, p < .01$ ). This finding is in line with the above t-test findings among skeptical respondents and again provides support for H 1a. Among skeptical respondents, Ad 2 also proves more effective than Ad 1 (coefficient: .27,  $t = 1.85, p < .10$ ), but we did not propose a hypothesis for this comparison.

When we conduct the same analysis separately for the three dependent variables, the effect of the skepticism x Ad 3 interaction is significant at 1% on attitude and at 10% on perceived severity but insignificant ( $p > 10\%$ ) on intention. However, the t-test findings (Table 1) support hypothesis 1a across the three dependent variables.

**Perceived similarity and identification.** Interestingly, the vaccine-skeptical respondents also perceived the protagonists of Ad 1 to be more similar to themselves than the protagonists described as vaccine opponents (Ad 2) and the protagonists described as thoughtful vaccine skeptics (Ad 3). Among skeptics, the mean values of perceived similarity with the protagonists were  $M_{Ad1} = 3.8$ ,  $M_{Ad2} = 2.8$ , and  $M_{Ad3} = 2.5$  (the difference between  $M_{Ad1}$  and  $M_{Ad2}$  is significant at  $p < .10$ ; the difference between  $M_{Ad1}$  and  $M_{Ad3}$  is significant at  $p < .05$ ). With regard to identification, no significant differences showed, but again, skeptics tended to identify less with the skeptical protagonists (the mean values among skeptics were  $M_{Ad1} = 3.4$ ,  $M_{Ad2} = 2.7$ , and  $M_{Ad3} = 2.6$ ). Thus, our data cannot show that perceived similarity or identification mediate the effect of the information provided about the protagonists' vaccine skepticism on message effectiveness among skeptical message recipients.

This finding poses the interesting question of why among vaccine skeptics, the message effectiveness of Ad 3 was higher than that of Ad 1 and Ad 2, but perceived similarity and identification were not. In contrast, the weakest message with regard to message effectiveness among skeptical respondents (Ad 1) was the strongest with regard to (reported) similarity and identification. The most likely explanation for this finding is our explicit measurement of similarity and identification. Research suggests that evaluations of risks rely on an automatic and quick process (Gershoff and Koehler 2011; Slovic and Peters 2006). We assume that the messages that mentioned the protagonists' skeptical mind-sets increased self-relevance and perceived risk among skeptical recipients (subconsciously), thereby increasing message effectiveness. However, when the questionnaire later asked respondents to express how similar they were to the protagonists and how strongly they identified with the protagonists, respondents might have wanted to differentiate themselves from the dramatic event and from protagonists whose decision almost caused their child to die. In line with this assumption, the mean values (see above) demonstrate relatively low levels of perceived similarity and identification (measured on 7-point scales). Implicit similarity and identification measures (instead of the explicit measures that we used) might be able to demonstrate the expected mediating effect.

## DISCUSSION

### Implications

In line with previous research, our study demonstrates that the effectiveness of narratives may depend on the information that the message provides about the protagonists (De Graaf 2014; Dillard and Maine 2012; Mc Keever 2015). We recommend that narratives addressing vaccine skeptics should present a protagonist who held similar skeptical views (before he/she experienced the negative consequences). In addition, the message should present the protagonist in a positive way, for example, as a thoughtful individual with

**Table 1: Mean values of attitude toward the vaccination, severity of the disease, and intentions dependent on: Ad type (Ad 1, Ad 2, Ad 3) and recipients' vaccine skepticisms (no skepticism, slight skepticism, skepticism)**

**Legend:**

- Ad 1: like Nyhan et al.
- Ad 2: Protagonists are vaccine opponents
- Ad 3: Protagonists are thoughtful vacc. skeptics

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<div style="border: 1px solid black; padding: 10px;"> <p style="text-align: center;"><b>Attitude toward the vaccination</b></p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Skepticism</th> <th>Ad 1</th> <th>Ad 2</th> <th>Ad 3</th> </tr> </thead> <tbody> <tr> <td>No Skepticism</td> <td>7,0</td> <td>7,0</td> <td>7,0</td> </tr> <tr> <td>Slight Skepticism</td> <td>6,8</td> <td>6,9</td> <td>6,8</td> </tr> <tr> <td>Skepticism</td> <td>4,5</td> <td>5,2</td> <td>6,4</td> </tr> </tbody> </table> </div>	Skepticism	Ad 1	Ad 2	Ad 3	No Skepticism	7,0	7,0	7,0	Slight Skepticism	6,8	6,9	6,8	Skepticism	4,5	5,2	6,4	<p><b>Attitude toward the vaccination</b> Pairwise comparison of mean values among skeptics (t-tests)</p> <hr/> <p>H 1a: 4.5 &lt; 6.4 <math>t = -3.07</math> <math>p &lt; .01</math>              H 1b: 5.2 &lt; 6.4 <math>t = -2.64</math> <math>p &lt; .01</math></p> <hr/> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>Skeptics</th> <th>N = 90</th> </tr> </thead> <tbody> <tr> <td>Ad 1</td> <td>N = 29</td> </tr> <tr> <td>Ad 2</td> <td>N = 40</td> </tr> <tr> <td>Ad 3</td> <td>N = 21</td> </tr> </tbody> </table>	Skeptics	N = 90	Ad 1	N = 29	Ad 2	N = 40	Ad 3	N = 21
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Note: all reported *p*-values in Table 1 are one-tailed

a strong sense of responsibility. Our findings are useful for practice because providing information about the protagonists is easy to implement.

**Limitations and Future Research**

Based on the limitations of our study and on our findings, we make the following suggestions for future research. First, because vaccine skeptics are a minority, our skeptical message recipient group was relatively small. Future studies may test the effects with a larger sample. Second, because we aimed to compare different nar-

ratives, we did not include a control group in our study. This absence is a limitation because we are unable to demonstrate whether the narrative that we identified as superior (Ad 3) also worked in absolute terms. Future studies should test this issue. Third, our explicit similarity/identification measure was unable to demonstrate the expected mediating effect. Future studies may use implicit identification measures, particularly when the message framing is negative and the message recipients may wish to differentiate themselves from the protagonist. Fourth, we did not repeat the measurement of the dependent variables at a later point in time. Therefore, we do not

know how robust the advantage of Ad 3 over the two other messages is over time. Future studies may repeat the measurement of the dependent variables at a later point in time, as, for instance, did Frank et al. (2015).

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# Effects of Brand Knowledge, Motivations, and Trust on Consumption Experience among Millennial Consumers

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## ABSTRACT

This is an empirical study conducted in Mexico City among millennial consumers who use vogue brands. The study addresses the effect of knowledge motivations and trust dimensions on consumption experiences analyzing the self-congruity theory. The study reveals that brand knowledge self-congruence peer motivations and brand experience influence consumption behavior.

## INTRODUCTION

Most consumers exhibit satisfaction as a materialistic output based on self-congruity, motivation, and consumption experience, instead of the perceptual value gained. (Schmitt et al., 2015). The experimentation attitude towards vogue brands is a cognitive phase, which is overridden by many consumers possessing utilitarian attitude. Millennial consumers exhibit consumption behavior within the domains of materialism (Rindfleisch et al., 1997) and experientialism (Rahinel and Redden, 2013; Giesler and Veresiu, 2014), which distinguish them as pro-vogue verses utilitarian consumers. Conventionally, consumers tend to be more responsible towards acquiring comprehensive information about brands to update their existing knowledge. Consumers evaluate extrinsic motivations for developing trust prior to making consumption decisions in reference to perceived satisfaction and societal values in general. Brand trust influences purchase intentions, consumption experience, and positive referrals (Becerra and Badrinarayanan, 2013). However, millennial consumers exhibit subjectivity in adapting to vogue brands and transformative consumption experience (Giesler and Veresiu, 2014).

Most millennials seek to establish their identities in convergence with social self-concept and the social trends. Such self-concepts develop self-image congruence through using and exhibiting the vogue brands (Chaplin and John, 2005). The vogue brands create high consumer involvement, and develop emotional attachments when consumers find the brand attributes matching with self-image congruence (Malar et al., 2011; Rhee and Johnson, 2012). Consumers express their self-image through the brand personality, which attributes to emotions and perceived satisfaction of fashion brands. Therefore, brand manifestation plays key role in driving consumer cognition towards trendy and unfamiliar brands (Su and Reynolds, 2017).

The buying behavior of millennial consumers is widely motivated by self-perceived expectations, psychodynamics, vogue, and socio-personal interactions. Vogue brands are generally positioned as high-end products, which motivate and induce young consumers for experimentation, and a social pattern-based consumption spread across spatial and temporal dimension (Gofman et al., 2010). Brand communication using rich conceptual and application driven vocabulary, which distinguishes the brand meaning and associated relationships, motivates consumers. Consumers explore brands, and analyze social relationships with brands to validate self-congruity and brand experience (Fournier, 1998). The extrinsic values motivated by peer consumption experiences build self-congruence among the potential consumers of the vogue brands in the market place. Therefore, consumers tend to explore motivations to derive new consumption experiences to support their self-congruence (Plewa and Palmer, 2014).

This study addresses the effects of knowledge, motivations, and trust (KMT) dimensions of vogue brands on consumption experiences among millennial consumers, analyzing the self-congruity theory.

It focuses on exploring the consumption behavior among millennials in reference to self-congruence, consumption motivations, and consumption experience. This study explores two fundamental research questions in reference to the hypotheses structured in this study, as given below:

- How do the interactions of millennial consumers on social media update their brand knowledge and influence their consumption experience?
- How do brand promise and brand experience develop brand trust among consumers?

The rationale of this study is built around the psychological domains of materialism and experientialism. The principal research objective embedded in this research is to explore the impact of intrinsic and extrinsic knowledge on brands, the associated motivational factors, and brand trust. These dimensions help in building consumption experience among millennials. This study contributes to the existing literature by revisiting the self-congruity theory in explaining consumer behavior among millennial consumers in reference to materialism and experientialism towards adapting vogue brands.

## LITERATURE REVIEW AND FRAMEWORK OF HYPOTHESES

Brand knowledge among millennial consumers is disseminated through the interactive platforms on the digital space. Implicit spatiality of social media has contributed in developing explicit knowledge on brands among young consumers through consumption experience sharing. The social media interactions through consumer-generated contents serve as knowledge building blocks on vogue and brand associations (Laurell, 2017). Customer engagement in brand communities on the social media causes fast updates on brand knowledge with the changes in fashion trends among the millennial consumers, which alters the consumer perceptions on brands (Gummerus et al., 2012). The millennial consumer segments exhibit differing behavioral and attitudinal brand response in reference to dynamic brand knowledge patterns. Consumers with updated knowledge and high brand response intensity elicit favorable brand associations, and show stronger affinity when stimulated with the brand name (Koll and von Wallpach, 2009). In view of the above-mentioned studies, the hypothesis has been constructed as:

*Hypothesis 1 Social media interactions help millennial consumers towards updating their brand knowledge*

Intrinsic and extrinsic motivations also affect the cognitive process of developing self-congruence and perceptions on the vogue brands and the market trends. Social media, consumer generated contents, and experience sharing on the digital media have emerged as major extrinsic motivational factors in developing self-congruence on the brands among millennials (Geri et al., 2017). Information acquired from extrinsic sources builds sustainable perceptions and strong ties with vogue brands among millennial consumers. However, image-impairment concern makes a difference with negative psychodynamics spread through the negative word-of-mouth, regardless of whether or not they are concerned about their self-image (Zhang et al., 2014).

Millennial consumers develop self-congruence on brands in view of the peer-culture and contemporary social values. The peer



motivation drives them to assimilate to their social group by conforming on identity-signaling attributes such as premium brands, uniqueness attributes such as color, and the price-affordability ratio (Chan et al., 2012). Consumption among millennials signifies symbolism, which can be explained as exhibition of personal attributes motivated by vogue. Consumers live at par with the contemporary social patterns today. Symbolic consumption reflects the personality and lifestyle of consumers, expressing social distinctions (Hosany and Martin, 2012). Consumers symbolize consumption in reference to self-congruity and brand personality. Symbolic consumption is experienced by anthropomorphizing with social endorsements and brand attributes (Fournier, 1998; Brown 1991). Upon reviewing the literature on consumer motivation as stated above, the hypothesis has been formulated as:

*Hypothesis 2 Consumers acquire motivations from social media and peer influences towards developing self-image congruity.*

Brand trust demonstrates the robustness in making purchase decision, and develops behavioral intentions towards vogue brands in a cross-cultural context. Brand trust exhibits confidence of consumer in the attributes of a brand and its social equity (Li et al., 2015). Consumers recognize strong cues from trustworthiness in advertisements, which develops self-congruence, brand image, and purchase intentions. Brand trust as consumers' confidence that the brand, product, or service firm is dependable and competent. Trust predicts perceptions of brand credibility. Brand trust builds consumers' confidence that the brand, product, or service firm is dependable and competent. Trust predicts perceptions of brand credibility and brand commitment (Herbst, et al., 2012). Consumers understand brand commitment as brand promise, which is conveyed by the companies through various advertisements and campaigns. Brand trust as consumers' confidence that the brand, product, or service firm is dependable and competent. Trust predicts perceptions of brand credibility. Brand trust as consumers' confidence that the brand, product, or service firm is dependable and competent. Trust predicts perceptions of brand credibility. Young consumers evaluate brand promise encompassing social, economic, and personal advantages as manifested in the brand communications in reference to their brand experience, and reinforce trust on the brands (Hoppe, 2017). Millennials commonly exhibit placebo effect with vogue brands in reference to their personality augmentation. Brand promise builds such placebo notion, and the consumers perceive brand benefits towards objective performance outcomes, trust, and loyalty (Garvey et al., 2016). By critically reviewing the research contributions in the context of brand trust, the following hypothesis has been developed:

*Hypothesis 3 The brand promise and brand experience contribute significantly in developing brand trust among consumers.*

Buying decisions to gain consumption experiences close to the perceived values of the consumers endure happiness, and enhance customer value. Self-congruence leads to satisfaction by developing consumer values in reference to the attributes of products and services comprising referred experience, image, and brand reputation. The value-brand congruency tends to deliver satisfaction, and inculcates a favorable attitude and buying intention (Allen et al., 2008). Millennial consumers also tend to share their consumption experience with peers to boost their self-image, and maximize satisfaction upon matching the experience with self-congruence. They desire to communicate their social identity as the lead consumers, and con-

form to choices that are strongly associated with their group and the market vogue. Identity-relevant consumer categories such as clothing and fashion accessories reinforce their social identity (Chan et al., 2012; Dalton and Huang, 2014). Self-congruity theory belongs in an outgrowth of cognitive-consistency theories (Rojas-Mendez et al., 2015), which suggest that people strive for consistency in their beliefs and behaviors to achieve satisfaction. Self-congruity theory assumes that self-concept, socio-cultural values, and market trend determine the brand choice (Allen et al., 2008).

## STUDY DESIGN

In order to measure the consumption experience of vogue brands, and the effects of brand attributes on decision making among millennial consumers, 114 respondents including both men and women between the age group of 18-30 years were selected in Mexico City. The study was conducted at the shopping malls having exclusive stores of vogue brands such as Victoria Beckham, Manolo Blahnik, H&M, Louis Vuitton, and Calvin Klein. The study was conducted during the festive shopping months of September-November, when most stores offer season's promotions in Mexico attracting large number of consumers. The data were collected on 18 variables related to the brand knowledge, motivation, brand attributes, and decision-making segments. Relevant variables within the above variable segments were chosen during the focus group session conducted prior to the development of research instrument, in which nine young consumers participated. Respondents were asked to indicate on a five-point Likert scale (1-Totally agree; 5-Totally disagree) when they make a purchase decision. In all, five vogue brand categories in the fashion apparel, fashion accessories, computer electronics, diet beverages, and mobile phones were selected for the study.

## ANALYSIS AND FINDINGS

The data was pooled variable-segment wise, and was used to analyze the 'goodness-of-fit index', which revealed that chi-square statistics (6.82), root mean square error of approximation (0.471), Tucker-Lewis fit index (0.492), comparative fit index (0.406) and incremental fit index (0.518) had an appropriate fit in the model used for analysis in the study. The results of the Table 1 have been obtained using OLS method. The following OLS equation has been used to determine the  $\beta$  values.

$$C_{exp}^{ij} = \alpha + \beta_1 B_{kno} + \beta_2 U_{gc} + \beta_3 P_{mot} + \beta_4 S_{inf} + \beta_5 B_{prom} + \beta_6 S_{cgr} + \beta_7 B_{exp} + \beta_8 B_{att} + \beta_9 P_{anth} + \epsilon$$

In the above equation, the dependent and independent variables are explained as below:

Dependent variable is Consumption experience ( $C_{exp}^{ij}$ ), whereas independent variables include brand knowledge ( $B_{kno}$ ), user generated contents ( $U_{gc}$ ), peer motivations ( $P_{mot}$ ), social influence ( $S_{inf}$ ), brand promise ( $B_{prom}$ ), self-congruence ( $S_{cgr}$ ), brand experience ( $B_{exp}$ ), brand attributes ( $B_{att}$ ), anthropomorphic perception ( $P_{anth}$ ).

Consumers update their brand knowledge ( $\beta=0.641$ ,  $p<0.01$ ) through advertising and communication, social media interactions, and peer reviews. Companies marketing vogue brands develop awareness by engaging consumers in sharing user-generated contents ( $\beta=0.527$ ,  $p<0.01$ ) on social media channels. Consumers also share brand experience among peers on the digital space. Accordingly, the results of the data analysis are consistent with hypothesis H<sub>1</sub>. Higher brand awareness, peer motivation ( $\beta=0.583$ ,  $p<0.01$ ), and wider social influence ( $\beta=0.425$ ,  $p<0.05$ ) drive positive brand perceptions and brand attachment, which prompt consumers to make purchase decision in favor of vogue brands. Millennial consumers evaluate brand promise ( $\beta=0.635$ ,  $p<0.01$ ), develop self-congruence ( $\beta=0.577$ ,  $p<0.01$ ), and tend to gain brand experience ( $\beta=0.539$ ,

$p < 0.01$ ) while motivated by the peers. Accordingly, the results validate the hypotheses  $H_2$  and  $H_3$ .

It was observed during the study that millennial consumers have pre-conceived notions on vogue brands and their effect of personality. Thus, they evaluate brands in reference to brand attributes ( $\beta = 0.471, p < 0.05$ ), anthropomorphic leverage ( $\beta = 0.541, p < 0.01$ ) and perceived social values. The study revealed that buying decisions of consumers are also motivated significantly by the brand knowledge and brand campaigns. Hence, the results of the study reveal that hypotheses  $H_1$  and  $H_2$  can be accepted. The correlations among the variables of the study have been exhibited in Table 1.

The key variables of the study were subjected to correlation matrix, which indicated that all the variables were significantly correlated with each other. Additionally, anthropomorphic perception was found to be highly correlated to social influence, self-congruence, and brand experience. Similarly, the correlation results reveal that positive brand experience reinforces self-congruence for vogue brands among millennial consumers.

**MANAGERIAL IMPLICATIONS AND CONCLUSION**

Companies engaged in promoting vogue brands can improve the brand manifestation to develop brand awareness by extensively using the consumer interactions through the social media. Vogue brands need to carry verbal and non-verbal endorsements in brand advertising to drive anthropomorphic motivations among consumers. The social media led motivations, and knowledge augmentation approaches help in disseminating a holistic view of vogue brands among consumers in the marketplace by synchronizing knowledge-motivation-trust (KMT) effects on brand experience. The KMT dimensions influence the contemporary buying decisions, and consumption experience build consumer behavior towards the vogue brands over time.

The effective verbal and nonverbal communications, brand events, and dissemination of vogue culture through digital space motivate millennial consumers. Prior awareness of fashion trends helps consumers develop appropriate self-image congruity, social self-concept, and anthropomorphic expressions on the brands.

This study reveals that millennial consumers continuously update their brand knowledge through social media interactions and brand advertisements. Consumers acquire extrinsic motivations from social media and peer influences to develop brand attachment and loyalty over time. The results of the data analysis endorsed that convergence of brand promise and brand experience develops brand trust among consumers. Millennial consumers appraise commitment of the vogue brands, and develop self-congruence accordingly to experience the brands. The peer motivation also drives consumers to anthropomorphize the effects of vogue brands on their personality. Consumers tend to explore new shopping styles. Therefore, the vogue brands should be able to provide recreational shopping infrastructure, and scope for self-revelation in the trial rooms. Such strategy would encourage consumers to anthropomorphize their personality with the vogue brands.

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**Table 1: Key Analytics and Correlations**

( $n = 114$ )

Variables		Context	$\alpha$ -Vales	-Value/ Factor Loading	SE	1	2	3	4	5	6	7	8	9
1	Brand knowledge	$H_1$	0.762	0.641* (0.78)	1.06	1.00								
2	User generated contents	$H_2$	0.814	0.527* (0.74)	0.94	0.87*	1.00							
3	Peer motivation	$H_2$	0.786	0.583* (0.83)	0.89	0.71*	0.82*	1.00						
4	Social influence	$H_2$	0.881	0.425** (0.71)	0.68	0.76*	0.88*	0.79*	1.00					
5	Brand promise	$H_3$	0.829	0.635* (0.74)	1.05	0.84*	0.81*	0.76*	0.64**	1.00				
6	Self-congruence	$H_1, H_2$	0.741	0.577* (0.81)	0.63	0.79*	0.73*	0.87*	0.83*	0.88*	1.00			
7	Brand experience	$H_3$	0.824	0.539* (0.79)	0.66	0.76*	0.83*	0.78*	0.61**	0.83*	0.94*	1.00		
8	Brand attributes	$H_1$	0.843	0.471** (0.74)	0.77	0.88*	0.78*	0.81*	0.77*	0.79*	0.84*	0.74*	1.00	
9	Anthropomorphic perception	$H_2$	0.803	0.571* (0.82)	0.72	0.66**	0.89*	0.87*	0.91*	0.84*	0.93*	0.91*	0.80*	1.00

Figures in parentheses indicate factor loading of data  
 \* $p < 0.01$ , \*\*  $p < 0.05$ , SE= Standard Error

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# Consuming Commodified Selves – Accelerated Identity Co-Construction Dynamics Through Fashion Performances on Instagram

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## ABSTRACT

This paper enhances the understanding of the bi-directional relationship between performers as commodified selves and consumers in digital environments. Drawing on performativity theory this study illuminates accelerated identity co-construction dynamics through visual fashion performances on Instagram. Analysis of interview data identifies three such dynamics: affirming emulating and immersing in dreams.

## INTRODUCTION

Contemporary consumer culture has increasingly transformed from a linguistic to an overall visual culture (Schroeder 2002). This visual turn also manifests in increasing popularity of visual photo-sharing platforms like Instagram, which is the fastest growing social media platform with currently over 800 million monthly active users (Begu 2018; Instagram 2018). The nature of the digital environment of Instagram accelerates visual consumption by “pointing, tapping, swiping, and glancing” (Carah and Shaul 2016, 83) – in other words, scrolling quickly through the flow of images, tapping to stop the flow, taking a quick glance at an image, and continue swiping. But, how does this accelerated consumption affect consumers’ daily lives? How does acceleration manifest in the construction of consumers’ selves?

Prior research on visual performances mainly focused on the site of production – the consumed, performers respectively (Kerrigan and Hart 2016). These studies investigated digital identity formation using dramaturgical approaches of impression management and self-presentation techniques (Jensen Schau and Gilly 2003; Kerrigan and Hart 2016), micro-celebrity practices (Marwick 2015), and blogging (McQuarrie, Miller, and Phillips 2013; Scaraboto and Fischer 2013). Yet, scholars increasingly argue that the most important site of an image’s meaning is the audience referring to the “death of the author” (Barthes 1977, 145; Rose 2012). However, research on identity co-construction dynamics through visual consumption with a focus on the site of the audience – the consumers – is scarce.

This study aims to investigate the bi-directional relationship between performers as commodified selves and consumers, that is, identity co-construction dynamics through fashion performances on Instagram. Analysis focuses on in-depth narrative interviews supplemented with auto-driven photo elicitation (Heisley and Levy 1991) to investigate consumers’ meanings ascribed to the visual consumption of fashion and commodified selves on Instagram. Findings reveal consumers’ desired content, requirements for consumption, and accelerated identity co-construction dynamics. Accelerated identity co-construction dynamics encompass affirming, emulating, and immersing in dreams. This study closes with discussing findings, and pointing out limitations and future research possibilities.

## THEORY

### Consumers as commodities in postmodern society

Postmodern society manifests as “a society of consumers meant for and made for their consumption” (Bauman 2005, 35). Accordingly, consumer society embodies a process of commodification, that is, consumers crafting themselves to become sellable and valuable objects within the market. Consumers increasingly consider “being a consumer commodity that makes them bona fide members of that

society” a desirable quality (Bauman 2007, 57). The rise of social media further accelerated this process of commodification (Schwarz 2010). Influencers deploy manifold marketing practices to become and remain sellable commodities – constantly trying to increase their market value by “staying ahead of the style-pack” (Abidin 2016; Bauman 2007, 99). Consequently, commodified consumers are always on the move, searching for something desirable and attention-grabbing.

Yet, postmodern consumers are governed by the constant pressure to reinvent themselves, refresh their offers, and change identities. Thus, contemporary consumerist culture prioritizes “parts” over the “whole,” “short term” over “long term” respectively (Bardhi and Eckhardt 2017; Bauman 2007, 69). Digital environments foster this urge for self-endorsement. Instagram characterizes such a visual digital environment where consumers may frame digital commodified selves for the consumption of others that do not necessarily reflect “real life” identities (Marwick 2015; McQuarrie et al. 2013; Presi et al. 2016; Rokka and Canniford 2016).

### Performing and co-constructing identities in postmodern society

Postmodern consumers experience an intertwined struggle between conformity and individualization – a so-called “hybridization” demanding conformity to individualization (Bauman 2005, 28). Thus, identity formation is an ongoing process where consumers compose, decompose and recompose their identities by means of repetitive social interactions (Howarth 2002). Social media further reinforces repetitive social interactions on a daily basis (Larsen 2007). Digital performances not only inspire, but also encourage the audience to replicate (Khamis, Ang, and Welling 2017). Accordingly, consumers not only seek constant change in material objects, but also in their identities (Bauman 2005; Shankar, Elliott, and Fitchett 2009). They quickly discard and adjust their online identities if rejected by others. Consequently, consumption-oriented performative acts on social media enable co-construction of ‘identity-in-practice’, which is of short timespans, situation dependent, and thus temporal, dynamic and fluid (Kerrigan and Hart 2016; Larsen 2007).

### Performativity theory

This study draws on performativity theory (Austin 1975; Butler 1990, 2010) in order to investigate how individuals consume visual fashion performances on Instagram, and how this consumption relates to co-construction of consumers’ identities. The central idea of performativity theory is that repetitive acts construct and form identities (Butler 1990). Accordingly, a performance comprises the relationship between performers, their actions and the audience (Butler 1990). Language, practices, and visuals frame performances of identities that, in turn, shape reality through the exertion of intentional (illocutionary) forces and related intentional or unintentional effects (perlocutionary acts) (Austin 1975; Schechner 2006). Thus, performances reinforce and communicate identities within society – both verbally and bodily (Austin 1975; Butler 1990, 2010).

In the context of this study, this implies that visual fashion performances on Instagram as intentional (illocutionary) acts have a related and potentially unintended (perlocutionary) effect on consumers’ identity formation. This study focuses on consumers’ narratives related to visual consumption of fashion performances on Instagram.



Applying this performative view onto identity co-construction dynamics provides an increased understanding of the entangled dynamic relationship between performers as commodified selves and consumers in digital environments like Instagram.

**METHODOLOGY**

This study uses in-depth narrative interviews supplemented by auto-driven photo elicitation to investigate consumers’ visual consumption of fashion performances on Instagram (Harper 2002; Heisley and Levy 1991). Criteria for the applied purposive sample implied that respondents, first, had an own Instagram account, second, actively engage with Instagram, and, third, belonged to the most prevalent user group on Instagram – Millennials. Prior to the interview, respondents were asked to select three fashion-related persona brand accounts, which they frequently consume on Instagram. This projective material was then integrated in the interviews generating in-depth insights into respondents’ meanings ascribed to visual fashion performances on Instagram, and related identity co-construction dynamics.

The sample comprised 11 German-speaking respondents (age range: 20–30; mean = 26; profession: student (6); nurse (2); manager (2); doctor (1)) – ensuring a gender distribution congruent with Instagram’s user statistics – 68% female and 32% male (Aslam 2018). Interviews lasted from 55 minutes up to 1.5 hours resulting in 161 pages verbatim transcripts. Data analysis involved an iterative process of inductive categorization (Kreiner, Hollensbe, and Sheep 2006; Spiggle 1994) and abstraction to derive major themes arising throughout respondents’ narratives.

**FINDINGS**

Narrative interviews brought forward insights into the multi-faceted visual consumption of fashion performances on Instagram. The following section entails a detailed account of desired content, requirements for consumption, and performatively accelerated identity co-construction dynamics (Figure 1).

**Desired content and requirements for consumption**

Respondents frequently stated that they seek foremost variety in content, that is, lifestyle performances related to fashion, travel, food, sports, interior design, nature, photography, and even politics / activism. Fashion is rather an integral part within these thematic categories and rarely consumed as stand-alone category. However, respondents consider fashion a tool to express these lifestyle-related themes. Compositional aesthetics and consistency of visuals have to be visually appealing – yet, regarding photography itself, not regarding display of fashion taste per se (Dolbec and Fischer 2015).

“For me it is very important with respect to Instagram accounts in general that the quality of photography is good. I don’t like accounts that are arranged unprofessionally. That is why I also don’t follow some of my friends, because I am not interested in that. I select very carefully, because it has to be visually appealing to me. That is extremely important to me. I am interested in certain things, which may be the person itself, lifestyle, interior design, fashion, or food.”(R5, female, 27)

Respondents additionally argued that representing naturalness fosters repetitive consumption (Butler 1990). Contrary, respondents do not value excessively staged unnatural performances as they consider these as ‘calls for attention.’ Consumers prefer performances they can relate to – ‘torn from real life’ and filled with emotions – as R2 refers to a plus-size model account:

“It seems very likeable to me that she shows herself as she is. That she is simply posting images of herself without using Photoshop or anything else, simply showing that every woman has problems with her body in a certain way and that you can regardless like yourself as you are and that makes her very much likeable as a person to me.” (R2, female, 26)

Moreover, respondents stated that they immediately discard persons who post too often, that is, multiple times a day, and replace them by other accounts – “I like what you are doing, but don’t impose on me” (R5, female, 27) – illustrating the accelerated consumption dynamics in postmodern consumer culture (Baumann 2007).

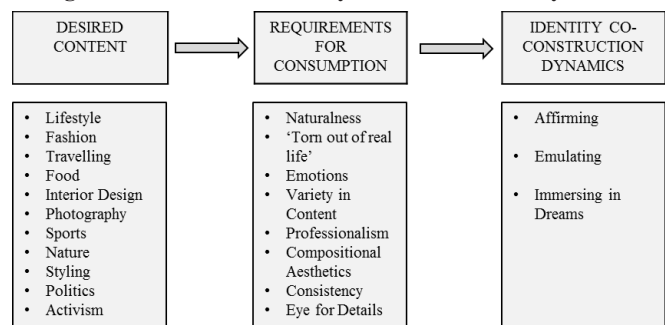
**Accelerated identity co-construction dynamics**

Consumers explained their frequent usage of Instagram by referring to the ever-changing, constantly renewing nature of home feed content. Relating to consumers’ urge for fast consumption, Instagram offers a visual environment enabling such accelerated consumption:

“[...] and when I push the ‘follow’ button, then the recommendations pop up. These are similar feeds, related types of bloggers respectively. And due to that you delve into the whole thing quite fast, because you have a multitude of such persons very fast.” (R1, female, 20)

Respondents further claimed that they prefer consuming images over text – first, due to faster consumption, and, second, due to the myriad of meanings images can convey (Schroeder 2002). However, consumers’ narratives not only addressed accelerated dynamics of the digital environment per se, but also accelerated identity co-construction dynamics (Figure 1).

**Figure 1: Accelerated Identity Co-Construction Dynamics**



First, this study finds that the consumption of commodified selves accelerates *affirmation* of purchases that cause internal struggle within consumers’ conscience, that is, respondents reported cases of uncertainty and twinges of conscience with respect to prior or upcoming purchases.

“I set myself the goal to purchase an expensive watch when I am done with my apprenticeship. I already decided for a specific Rolex, however it is a huge investment. But then I saw this photo and experienced affirmation. I thought to myself, if Roger Federer is wearing this watch it must be really beautiful.”(R6, male, 27)

This quote emphasizes that consuming Roger Federer affirmed R6’s decision already made of purchasing a Rolex – solving his internal struggle of desire vs. costs (Kozinets, Patterson, and Ashman 2017). Accordingly, consuming commodified selves accelerated

the **affirmation** to purchase this watch without having to look for alternative sources of affirmation. Similarly, this study finds that performative acts of commodified selves unintentionally affect post-purchase **affirmation** in terms of uncertainty, and even motivation for work out (Austin 1975) (Table 1).

Second, this study finds that consumers **emulate** consumed visual performances in terms of places. Respondents predominantly associate fashion with travelling. *“I really like that I can see different kinds of fashion in different countries and that is why I associate it [fashion] with travelling”* (R5, female, 27). However, fashion only plays a minor role in this case. Consumers rather engage in lifestyle-oriented place co-branding (Sevin 2014). Performative acts of commodified selves travelling the world accelerate consumers’ quests for adequate motives when visiting similar places:

*“[...] The funny thing is when I was on my way to London I quickly browsed through Instagram, and then remembered his account [iamgalla], and there is this photo of him. There I saw,*


*for instance, this place – this arc from which you can see Big Ben. And then this photo came out in the end.”* (R9, male, 25)

Accordingly, this quote illustrates the accelerated **emulation** enabled through the consumption of commodified selves on Instagram (Table 1). Thus, the performer’s intention of depicting a jet set lifestyle unintentionally results in visual networked co-branding of specific places (Austin 1975) – visual performances of places that a lot of consumers would like to have on their own accounts. Respondents frequently stated that they reminisce about their own travelling experiences when they see a similar photo.

Third, this study finds that consumers **immerse in dreams** when consuming commodified selves on Instagram. Consuming commodified selves elicits wanderlust and longing within consumers. Most respondents state that they do not have the financial means to live the lifestyle of Instagram performers – yet, Instagram offers a possibility to delve into virtual journeys:

**Table 1: Findings**

	<b>Examples of Interview Data</b>
<b>Affirming</b>	<p><i>“I set myself the goal to purchase an expensive watch when I am done with my apprenticeship. I already decided for a specific Rolex, however it is a huge investment. But then I saw this photo and experienced affirmation. I thought to myself, if Roger Federer is wearing this watch it must be really beautiful.”</i> (R6, male, 27)</p> <p><i>“I have this light pink blouse with birds on it. I always thought to myself that it looks really shitty, but then I repeatedly saw it on Instagram and it changed my perception of this blouse. So in the end I thought to myself that it cannot look that bad and now I am wearing it.”</i> (R3, female, 24)</p> <p><i>“Well, every now and then I am quite lazy when it comes to running, especially when it rains. Then I shrink away from running. But then I look on Instagram and see these people working out and think for myself, “alright, let’s go for working out.””</i> (R3, female, 24)</p>
<b>Emulating</b>	<p><i>“If I know that I am travelling somewhere soon, then I explicitly look for other people’s content of these places. I go to the browse bar, put in the place first, i.e. London, and then set the location to London, and then I immediately get the “most popular posts” of London. Similarly, I check for hotels or restaurants, i.e. London, there is this famous restaurant that I saw on Instagram. And then I check hashtags in similar vein. The funny thing is when I was on my way to London I quickly browsed through Instagram, and then remembered his account [iamgalla], and there is this photo of him. There I saw, for instance, this place – this arc from which you can see Big Ben. And then this photo came out in the end.”</i> (R9, male, 25)</p> <p><i>“For instance, I am planning to go on vacation this summer, this means that I followed a multitude of travel accounts to seek inspiration in what I like and where I think to myself, “wow, I would really love to take this photo, too” or food, if I don’t know what to I should cook, I might find something on Instagram that appeals to me, where I say to myself, “ok I’m cooking this for myself now.”</i> (R5, female, 27)</p>
<b>Immersing in Dreams</b>	<p><i>“Just as I said, Instagram is such a small separate world and I think it is a beautiful place where you can submerge and say “okay now I am not the person who has to get up early in the morning for work or such things,” but on Instagram I am a person who can also show other people due to likes, that I really appreciate what they do. It is a community and I am a part of it. I may become in some way another person on Instagram.”</i> (R5, female, 27)</p> <p><i>“What I like so much about this account is the fact that she posts a lot of pictures where I think: “Ahhh this could be me!” because you don’t see her on the pictures. [...] you don’t see her face, and when I look at these photos, I think for myself: “Ahhh I’d love to sit there right now.” Somehow this makes me identify myself stronger with these pictures.”</i> (R1, female, 20)</p> <p><i>“What animates me to consume Instagram is that it isn’t so stressful, that it is a distraction, and that you can delve into a different little world, which sets itself apart from everyday life, and which is a little bit dreamy. [...] These are feelings where I say to myself, “wow just live your life! Just do it! I really would like to do it the way these people do.”</i> (R5, female, 27)</p>

	Examples of Projective Visual Data
<p><b>Affirming</b></p>	 <div> <p><b>rogerfederer</b> • Abonniert</p> <p>rogerfederer Welcome to Instagram @Rolex #101031</p> <p>Weitere Kommentare laden</p> <p>instagmuser Obviously, lucky watch for you Sir 🤩</p> <p>pgro2345 @rogerfederer : that's a cool shot</p> <p>perrymarco @alessandra.rezzola .. Le' ura de na per me ..</p> <p>blomeuhren 🍷</p> <p>♥️ 💬 📌</p> <p>Gefällt 81.466 Mal</p> <p>28. NOVEMBER 2015</p> <p>Kommentar hinzufügen ...</p> </div>



“Well, unfortunately I don’t have the financial means for travelling. I think that you can’t have it all, but maybe it animates me to take charge of my own life and pursue my dream of travelling. This means that I travel virtually as I look at all these things. As I said, I associate fashion very much with travelling. So in a way, I definitely travel virtually.” (R4, female, 28)

Correspondingly, *immersing in dreams* also triggers a ‘just do it – live your life!’ mentality within consumers. Even though momentarily not within reach, visual performances exhibiting close external focalization, that is, the audience can see the same things in the same way as the performer (Rose 2012), align the consumer with the consumed – identities the consumer might never be able to achieve (Table 1). Thus, performers’ intentional depiction of travel lifestyle unintentionally leads to consumers’ *immersion in dreams* about possible future selves (Austin 1975).

## DISCUSSION

The empirical investigation illustrates how the digital environment of Instagram enables accelerated identity co-construction dynamics between performers as commodified selves and consumers. Interestingly, this study finds a discrepancy between the intended commercial force of visual Influencer-driven advertorials, namely promoting products, and unintended related effects in consumers’ identity formation (Abidin 2016; Austin 1975). Thus, this study sheds light on the complexity of meanings consumers ascribe to digital consumption of fashion – protruding far over the classical realm of fashion.

Consumers in this study predominantly do not buy the advertised products, but rather take ‘bits and pieces’ out of the sandbox of consumed commodified selves and performatively fashion their selves through repetitive visual consumption on Instagram (Butler 1990). Consumers seek affirmation of decisions already made that yet cause internal struggle. Furthermore, under the arising duality between consumers and commodities, individuals become both object and subject (Bauman 2007) – especially when emulating. Metaphorically speaking, consumers delve into the digital environment of Instagram immersing themselves into different possible selves and worlds. Consequently, the dynamics of Instagram allow for instant accelerated identity co-construction dynamics related to multiple temporal selves – past, present, and future (Kerrigan and Hart 2016). Past in the sense of solving a post-purchase dissonance or reminiscing about visited places. Present in terms of impromptu consultation on popular photo locations or best restaurants in town. Future in regard to taking charge of one’s own life and dream about possible future selves. Consuming commodified selves on Instagram thus potentially accelerates co-construction of consumers’ multiple, fluid and temporal identities.

This study has two main limitations. First, this study focuses on the site of the audience. Second, findings are still exploratory. Future studies could take into account both performers and their consumers, confronting both with ascribed meanings vis-à-vis, namely intention and reception of specific posts – in other words, connecting the consumed and the consumer. Visual analysis of projective material could further illuminate identity co-construction dynamics (Rokka and Canniford 2016).

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# The Effects of Breadth of Product Categories on Budgeting

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## ABSTRACT

Individuals plan for the use of their resources daily. We explore how the level of details of one's budget affects the budget's predictive power. We find evidence that more detailed budgets predict spending less accurately. This phenomenon is mediated by one's liking for the products budgeted and perceived financial constraint.

## KEYWORDS

Budgeting, Category Size, Breadth of Category, Overspending, Planning.

## INTRODUCTION

Individuals have to plan for the use of their resources (e.g., time, money, etc.) daily.<sup>1</sup> Factors that affect how individuals plan and the accuracy of their plans have attracted much interest from researchers. Recent research suggests that one such factor is how much one plans. Interestingly, some evidence suggests that the more one plans, the less accurately one predicts one's use of resources. This area of research has focused on demonstrating this tendency when one plans for and uses one's time. We explore this tendency in the financial domain by studying the relations between how detailed one's budget is, operationalized as how narrow or broad the product categories that one plans for are, and how well one's budget predicts one's spending. For example, one's total, broad budget for remodeling one's house could be broken into narrower sub-components, such as one for flooring, one for lighting, and one for landscaping. Existing literature suggests that how detailed one's budget is affects how well that budget predicts one's spending. Research on planning for time suggests that budgeting for narrower product categories could lead to less accurate predictions of one's spending.

## THEORETICAL BACKGROUND

Considerable research has shown that individuals maintain mental budgets for different categories of spending (e.g., Thaler 1999). Consumers' spending and consumption behaviors are affected by how mental accounts are formed and how expenses are assigned into them. The more spending is recorded in one account, the less likely consumers will spend from that account (Soman and Lam 2002). Consumers are also motivated to post ambiguous expenses (e.g., a dinner with friends at a concert) into the accounts perceived to have more funds available (Cheema and Soman 2006). Assigning a resource to an account associated with "specialness" makes consumers less likely to use it because they keep waiting for the perfect occasion to use it, which often comes after resources, such as wine or coupons, have expired (Shu 2011). More generally, mental budgets have been implicated in under-consumption in some categories and over-consumption in others (Heath and Soll 1996).

The breadth of product categories has been shown to affect one's willingness to spend resources. Spiller (2011) shows that individuals become less willing to spend resources when they are thinking of spending on/from narrow product categories (e.g., Starbucks gift cards) than when they are thinking of broad categories (e.g., Visa gift cards). This is because narrow categories evoke a sense of resource constraint, which makes one consider opportunity costs more.

Another line of research by Malkoc and Zauberan (2006) show that willingness to pay increases with concreteness of mental representations of outcomes. Concreteness is driven by both category size and psychological distance. Narrower categories (e.g., strawberry cheesecakes) should evoke more concrete mental representations than do broad categories (e.g., desserts) (i.e., the fan effect, Anderson and Redder 1999). Additionally, concreteness of representations may also differ between budgeting and shopping. According to construal level theory (CLT, e.g., Trope and Liberman 2010), temporal distance is one determinant of the level of concreteness of representations. Relative to shopping, budgeting or planning is more temporally distant from consuming the product, and thus, should evoke less concrete representations. We therefore expect category size to have differential effects when individuals budget than when they shop.

How much individuals like certain products is another factor underlying how individuals budget and shop. Narrow categories are more likely to recruit specific exemplars of that category to one's mind than do broad categories (Anderson and Redder 1999). And specific exemplars evoke more affectively charged responses, which are more likely to affect people's behavior, such as donating to a cause (e.g., Small, Lowenstein and Slovic, 2007). Similarly, narrow categories should make people more willing to spend on positively valued products than do broad categories because they evoke more intense affective responses. This effect should also be differential between budgeting and shopping because of differential temporal distances from consuming the products. Budgeting should evoke less affect intensity than shopping does due to greater temporal distance from consuming the products (e.g., Trope and Liberman 2010).

These factors drive one's willingness to spend in different directions. In this paper, we explore how these conflicting forces combine to affect one's budget and spending. The literature reviewed suggests that category size should differentially affect budgeting and shopping.

My research helps deepen a body of literature on the planning fallacy (Kahneman and Tversky 1979), and the "irony of planning" (Buehler and Griffin 2003; Spiller and Lynch - working paper). Considerable research has studied the "planning fallacy", which shows that people underestimate how much time they need to complete tasks. Most of this research focuses on individuals' planning for time. But a smaller set of papers studies the "budget fallacy", defined as individuals' tendency to underestimate their future spending (Peetz and Buehler 2009, Peetz and Buehler 2012).

Despite the vast amount of research on the planning fallacy for time, there is a paucity of research on the planning fallacy for money, i.e., the budget fallacy. We broaden this body of literature by focusing on the budget fallacy. Additionally, we explore the breadth of product category as a new operationalization of the extent of planning. We consider budgeting for one broad product category to be less extensive than budgeting for many narrower sub-categories of that broad category.

Some research shows an ironic effect of planning in that individuals who plan for time more exhibit the planning fallacy more (Buehler and Griffin 2003; Spiller and Lynch - working paper). Individuals commit the planning fallacy for time less if they are induced into an abstract mindset, which involves less concrete details (Peetz and Buehler 2012, Peetz, Buehler and Wilson 2010). Consistent with

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<sup>1</sup> This article was developed based on the first author's Ph.D. dissertation.

this literature, we predict that the budget fallacy is exacerbated when consumers plan for narrower product categories.

*Hypothesis 1* Individuals exhibit the budget fallacy more as they budget and shop for narrower product categories.

Based on the literature reviewed, we also expect individuals' liking for products and perceived financial constraint to mediate this exacerbated budget fallacy.

*Hypothesis 2* The phenomenon predicted in hypothesis 1 is mediated by individuals' liking for the products.

*Hypothesis 3* The phenomenon predicted in hypothesis 1 is mediated by individuals' perceived financial constraint.

The following two experiments were designed to test these hypotheses.

## METHOD

### Study 1: Budgeting and Shopping Experience to Test Hypothesis 1

#### Study Overview

350 MTurk participants participated in an online study to be paid \$1.40. Participants were randomly assigned to one of three conditions (Category Size: Broad vs. Narrow vs. Very Narrow). Participants budgeted and shopped online for a provided list of grocery products for enough consumption over one week.

#### Procedure

All participants were first given a list of 20 grocery products, including 10 food and 10 beverage products (e.g., Nestle instant coffee, Safeway instant coffee, Welch's grape juice, etc.) that they would budget and then shop for.

#### Manipulation of category size

In the Broad category condition, participants sorted this list of 20 products into 2 categories with fixed, provided labels, "Food" and "Beverages". In the Narrow category condition, participants sorted the list of 20 products into 10 narrow categories with fixed, provided labels, which are sub-categories of the broad categories "Food" and "Beverages", (e.g., instant coffee, grape juice, etc.). There were two brands in each narrow category, one more expensive and high-quality than the other (e.g., in the narrow category "instant coffee", there were two products "Nestle instant coffee" and "Safeway instant coffee"). In the Very Narrow category condition, participants were asked to take several minutes to carefully read through the list of 20 products. Each "very narrow category" was operationalized as a product with a brand (e.g., Welch's grape juice). Thus, in the Very Narrow category condition, it was not possible to ask participants to sort the 20 branded products into any categories other than the branded products themselves, a task that would likely not induce any additional effects.

The 20 very narrow categories were sub-categories of the 10 narrow categories, which in turns were sub-categories of the 2 broad categories.

Participants were told that their grocery consumption totaled typically about \$50 per week; but they could budget and spend as much as they wanted.

Besides the sorting task, a second part of the category size manipulation was presented in the budgeting task. In all conditions, participants were shown the same list of all 10 grocery products that they would shop for (e.g., tomatoes, orange juice). But below this list, participants were presented with either the 2 broad categories, 10 narrow categories, or 20 very narrow categories, depending on their condition, and then asked to budget for their consumption over one week by typing in a budget amount, in dollars, for each of the [2/10/20] categories presented to them. A field that automatically calculated the total budget was presented below the categories.

After budgeting, participants shopped for the groceries they budgeted for. All participants were presented with the same list of 10 products that they saw when budgeting and were asked to shop for these 10 products for enough consumption over one week using the budget they just created. When shopping for each product, participants saw two brands with their prices, one more expensive and high quality than the other. Participants typed into two text boxes how much of each option they would buy, in pounds for foods and ounces for beverages. The shopping list of 10 unbranded products was always presented to participants throughout the shopping task.

A third part of the category size manipulation was presented in the shopping task. While shopping, participants saw feedback of how much they had spent in each of either 2 broad categories, 10 narrow categories, or 20 very narrow categories, depending on their condition. All participants also saw how much they had spent in total.

After shopping, participants filled out the covariates, including the Tightwad-Spendthrift scale (Rick, Cryder, Loewenstein, 2008), adapted scales measuring Propensity to Plan for Money in the next 1-2 weeks (Lynch, Netemeyer, Spiller and Zammit, 2010), and demographic variables.

The dependent variable was the total amount of money that participants budgeted and spent.

#### Results

We first calculated how much money participants overspent relative to their budget:

$$\text{Over-Spending} = \text{Total Dollar Spent} - \text{Total Dollar Budgeted}$$

An ANCOVA testing for the main effect of Category Size on Over-Spending showed a significant main effect of category size ( $F(2, 329) = 11.56, p < .001$ ). Participants over-spent less in the Broad condition ( $M_{\text{Broad}} = -7.28$ ) than in the Narrow ( $M_{\text{Narrow}} = 6.00$ ;  $F(1, 329) = 8.99, p = .003$ ) and Very Narrow ( $M_{\text{Very Narrow}} = 13.16$ ;  $F(1, 329) = 22.39, p < .001$ ) conditions. Narrow and Very Narrow conditions differed marginally ( $p = .099$ ). The covariates did not have any significant effects (all  $p > .191$ ).

Participants spent significantly less than they budgeted in the Broad condition ( $t = -4.58, p < .001$ ). The mean Over-spending was marginally larger than 0 in the Narrow condition ( $t = 1.51, p = .133$ ), and significantly larger than 0 in the Very Narrow condition ( $t = 3.83, p < .001$ ). That is, participants increasingly spent significantly more than they had budgeted as the category size gets narrower.

In summary, the results of this experiment support hypothesis 1. In the next experiment, we aim to uncover the mediators underlying this phenomenon by exploring the mediators Liking for products and Perceived Financial Constraint. Additionally, in study 2, we informed participants of relevant prices of all products before beginning the budgeting task.

**Study 2: Budgeting and Shopping Experience to Test Hypotheses 2 and 3**

*Method*

300 participants from mTurk were recruited for this study. Study 2 had similar paradigm, procedure and manipulation with study 1. The only changes from study 1 were:

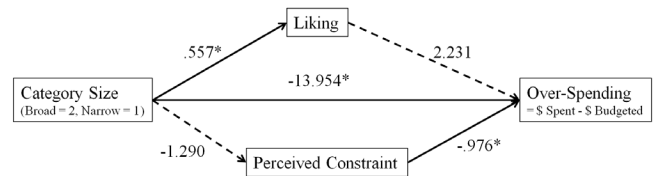
1. When products were presented to participants in the sorting and budgeting tasks, the product prices were also presented.
2. Study 2 has two conditions instead of three. These two conditions were similar to the “Broad” and “Narrow” conditions in study 1.
3. Two mediators were measured after the sorting task, but before the budgeting and shopping tasks:
  - Perceived Financial Constraint: On the same page, participants were presented with the list of products, with their prices, that they would budget and shop for, for enough consumption over one week; they were told that their grocery consumption over one week was typically about \$50 dollars; participants then rated how constrained they felt their financial situation would be for those budgeting and shopping tasks on three 11-point scales adapted from Spiller (2011).
  - Liking: Participants in both conditions were presented with the same list of all the products they would budget and shop for. But below this list, participants in the “Broad” condition were presented with two scales, for “Food” and “Beverages”, and rated their liking for the products they were presented with on these two scales. Participants in the “Narrow” condition were presented with ten scales, each for a narrow product category that

they would encounter in this experiment, and rated their liking for the products on these ten scales. The liking score was the average of these either two or ten scales.

*Results*

The findings in study 1 were replicated. Participants over-spent more when category size was narrow ( $M_{\text{Narrow}} = 10.95$ ) than when it was broad ( $M_{\text{Broad}} = -2.48$ ;  $F(1, 293) = 7.03, p = .008$ ). The mean over-spending was significantly greater than 0 in the Narrow condition ( $t = 2.61, p = .010$ ), but not in the Broad condition ( $t = -.86, p = .392$ ).

We then conducted mediation tests with the two mediators Liking for products and Perceived Financial Constraint, with the bootstrapping technique discussed by Zhao, Lynch and Chen (2010), using Preacher and Hayes’ (2008) SPSS script. The independent variable is Category Size. The dependent variable is Over-Spending. The effect of Category Size on Overspending through both mediators are significant (CI Constraint = .025: 4.064; CI Liking = .095: 4.452). These results support hypotheses 2 and 3.



\* Significant at p=.05  
Dotted lines denote marginal significance

**Figure 1: Conceptual Model from Results of Study 2**

**Table 1: Results of Studies**

		Category Size							
		Broad	Narrow	Very Narrow					
Study 1	Mean Over-Spending in dollars	-7.28	6.00	13.16					
	Simple effect of Category Size $F(1, 329)$	-	8.99*	22.39*					
	t value when comparing Mean Over-Spending to 0	-4.58*	1.51	3.83*					
	Mean Over-Spending in dollars	-2.48	10.95						
	Main effect of Category Size $F(1, 293)$	-	7.03*						
	t value when comparing Mean Over-Spending to 0	-0.86	2.61*						
<b>Results of Mediation Analyses with Overspending as DV**</b>									
Study 2	Mediator	IV to Mediators (a paths)			Direct Effects of Mediators on DV (b paths)			Mediation 95% Confidence Interval	
		$\beta$	t	p	$\beta$	t	p	Lower	Upper
	Constraint	-1.29	-1.65	0.100	-0.98	-2.67	0.008	0.03	4.06
	Liking	0.56	2.67	0.008	2.23	1.63	0.105	0.10	4.45
		Total Effect of IV on DV			Direct Effect of IV on DV (c' path)				
		$\beta$	t	p	$\beta$	t	p		
		-11.45	-2.36	0.019	-13.95	-2.86	0.005		

\* Significant at p=.05

\*\* IV Category Size: Narrow coded as 1 and Broad coded as 2  
Constraint: Higher score means higher constraint  
Liking: Higher score means higher liking



## DISCUSSION

These two experiments are among the few examining a budget fallacy. As a new operationalization of the extent of planning for money, product category size has high ecological relevance to the domain of budgeting. We found that individuals' over-spending increases as they budgeted and shopped for narrower categories, which was mediated by how much individuals liked the products, and how financially constrained individuals felt.

This research does not suggest that no planning is better than planning. Rather, it points to an avenue to further explore how consumers can plan to maximize their well-being.

## CONCLUSIONS

In this research, we explored a consequence of category size on budgeting by manipulating category size. However, we expect that there are endogenous factors that determine which level of categorization individuals assign products or activities into. An avenue for future research is to explore determinants of category size. What long-lasting individual tendencies affect one's level of categorization? Cheema and Soman's work (2006) suggests that situational factors affect categorization. But do situational factors affect certain individuals more than others? It would also be interesting to explore how these questions generalize to the domain of planning for time.

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# It's About Trust: The Diffusion of Deviant Consumer Behavior

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## ABSTRACT

When does deviant consumer behavior become accepted as non-deviant? Addressing this, a social diffusion process is modeled, which starts with individual adoptions, builds critical mass to where the behavior once labelled as deviant, becomes mainstream, resulting in a new emergent norm. Propositions are developed, supported by a comprehensive conceptual framework.

## INTRODUCTION

Deviant consumer behavior (DCB) is ubiquitous; some legal, some illegal. Pornography is edging its way into the mainstream: it is a \$97 billion global industry (CNBC 2014) with 40 million Americans regularly visiting porn sites (Webroot 2014); and in 2017 (alone) a major porn site, Pornhub, got 28.5 billion visits (Silver 2018). Once flaunted by the “deviant” minority, seemingly most people now have tattoos – 40% of US adults aged 26-40 (Pew Research 2013). Illegal software downloading is pervasive – 57% of computer users, worldwide, admit they pirate software (BSA 2012). In 2001, two years after Napster’s creator gave the first version of the music sharing software to 15 friends, it had been downloaded 57 million times, equipping 200 million PCs worldwide, and established the basis for illegal music downloading (Fattah 2002) – this rapid diffusion through society revolutionized the music recording industry.

As some DCB spreads through society, when does it stop being deviant and become non-deviant or “normal?” The extant CB literature does not address this research question, nor does it give sufficient attention to the pervasive subject of deviance (Dootson et al. 2016). This is not surprising given the inherent challenges in studying this diverse topic. Conceptual boundaries vary, as does the nature of deviance itself; what is deviant to one person might not be to another, and what was deviant many years ago might not be today (Voyer 2014). The dark side of CB, deviance was recognized as being difficult and troubling (Hirschman 1991), while also being one of the most important new areas of CB research (Mick 1996). Notwithstanding, since Wells’ (1993) call for greater research into the dark side of CB, substantial advancement remains to be made.

This conceptual research is positioned within the limited CB literature on deviant consumption and adheres to Debbie MacInnis’ perspective on conceptual research (MacInnis 2017). Several key contributions are made: our understanding of DCB is enhanced, and the CB literature is enriched as theory from other disciplines (marketing, sociology, and criminology) informs this work. Although some individual factors are considered (initially), I focus on society as the level of analysis.

## DEFINING DEVIANT CONSUMER BEHAVIOR

In this research, I am not concerned with the origins of *why* consumers pursue deviant behavior. Instead, using society as the level of analysis, I focus on *how* DCB spreads through society, and its resultant social normative effects resulting in “acceptance.” Integrating social learning theory with marketing diffusion theory, I explore the dissemination of DCB to when it ceases being considered as deviant and becomes commonly accepted as non-deviant.

Deviance is embedded in a social environment, and a particular behavior can be deemed deviant upon evaluation against the norms of a reference group (i.e., society). Norms are rules in the minds of group members that stipulate expected behavior. Here, the usual pejorative sense of deviance is not assumed. Instead, I emphasize the

notion of “departure.” Merton (1961, 723) emphasized that, “deviant behavior cannot be described in the abstract but must be related to the norms that are socially defined as appropriate and morally binding.” Adopting this argument, I define deviance as: a socially-based notion, which reflects willful normative violation as defined by the members of a reference group. DCB is formally defined as, a consumption experience that is related to an idea, practice or object of consumption, which is in contravention of normative standards as defined by the members of a reference group (society).

## THE CONCEPTUAL FRAMEWORK OF DCB DIFFUSION

The process-oriented framework at figure 1 conceptually traces the diffusion of DCB starting with individual adoption, and spreads to the collective level at which point, the formerly DCB, having attained mass adoptions, has entered mainstream society and has become non-deviant. The process is described under three major rubrics: (1) adoption – how individual consumers adopt the DCB; (2) diffusion – how a critical mass of adopters occurs; and (3) attainment of non-deviant status – as it is accepted by society. An emergent norm in support of the behavior ultimately results.

### Adoption Process

Social cognitive theory distinguishes between two separable processes in the social diffusion of innovations: the acquisition of knowledge via social learning (regarding the innovation), and the adoption of it (Bandura 1986). Social learning is assumed to be the main process that links social structure to individual behavior – DCB (Akers 1998). Adoptive behavior is best analyzed in terms of psycho-social determinants rather than types of people (Bandura 1986). Moreover, social contextual factors can serve to greatly influence individual adoption decisions (Fisher and Price 1992). I propose:

**PI:** in table 1

*Social Structure.* Prominent sociologists (e.g., Durkheim, Merton, Blau) contend that society cannot be adequately understood by solely observing individual behavior; people are enmeshed in relationships that are hinged on communications networks (Bandura 1986). These networks are, “the regular patterns of person-to-person contacts that can be identified as people exchange information in a human social system” (Monge 1987, 243). Social structures are comprised of these networks, which are based on ties. Granovetter’s (1983) analysis of ties suggested that weak ties, which serve a bridging role between network clusters, are the primary types of relationships that facilitate entry of new information into the cluster; strong ties hold the clusters together but allow limited transmission of new information – members hold similar views. Consumers with weak ties are likely to travel in diverse social circles where they learn new behavior like DCB.

In uncertain situations, people turn to those who they believe are knowledgeable for guidance (Bandura 1986). I surmise that to mitigate uncertainty, DCB occurs in the presence of those with whom trust has been secured. Trust would likely be facilitated in a strong-tie situation. Also, consumers’ adoption of DCB would act to reduce uncertainty by activating a strong tie relation by turning to those who they know and perceive to be knowledgeable and trustworthy.

Acquaintances who interact with members of other groups act to broaden diffusion paths. Weak ties could enhance access to diversity; however, it is the strong-tie network that greatly influences

INDIVIDUAL

COLLECTIVE

“DEVILANT”

“NON-DEVILANT”

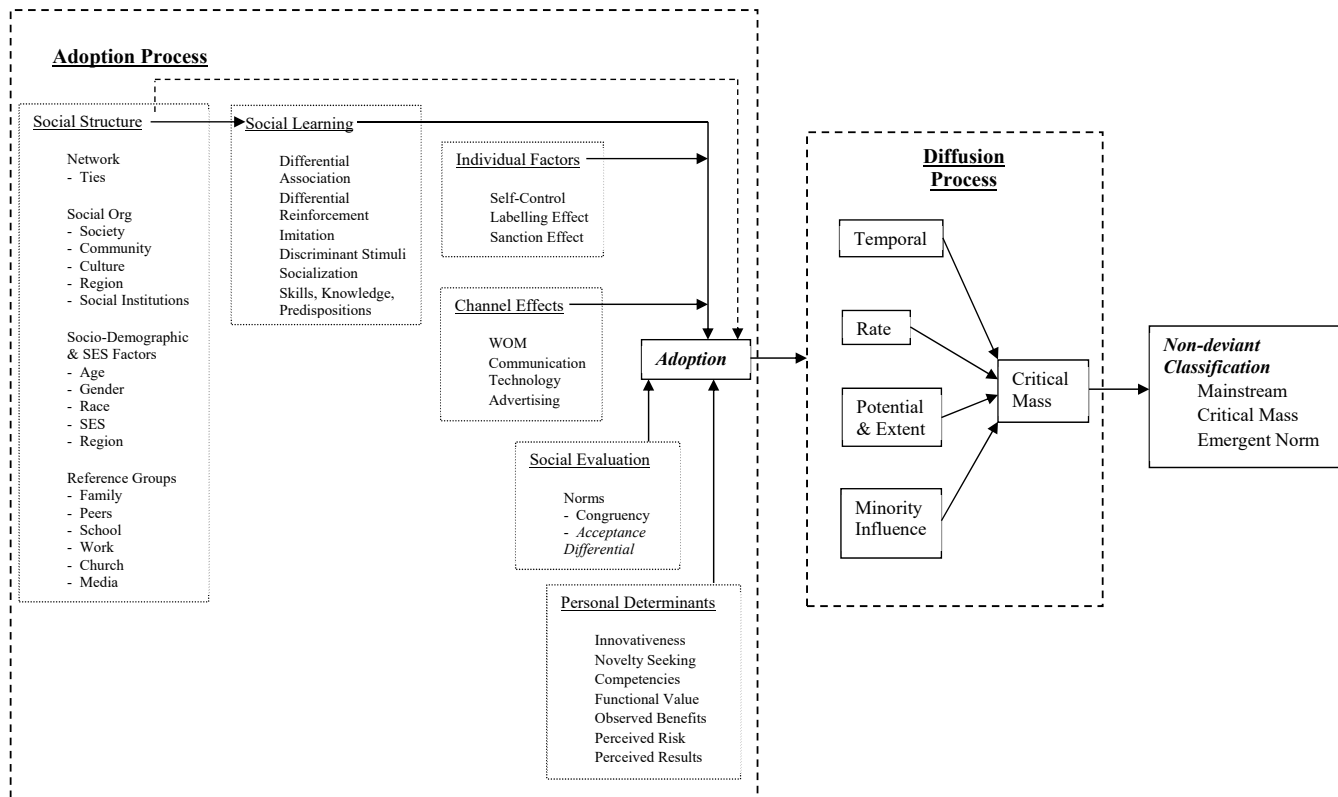


Figure 1: A Conceptual Framework: The Process of Deviance to Non-Deviance

what actually gets adopted from the diversity (Bandura 1986). New information from weak ties would serve to expose new clusters to DCB. I propose:

**P2, P3, P4:** in table 1

Social structure variables contained in a deviance-facilitating environment can impact adoptive behavior, via learning mechanisms (Akers 1998). Social structure facilitates social learning. I propose:

**P5:** in table 1

*Social Learning.* Social learning theory (Bandura 1986) holds that a learner can acquire new responses by solely observing the behavior of a model, which explains learning of many social responses (DeLamater and Myers 2011). Whether the learner will perform the behavior is influenced by its consequences. People can differentially associate with those who model particular behaviors, and through successive exposures to stimuli (DCB), differential reinforcement of the behavior occurs (Birenbaum and Sagarin 1976). These behaviors can be imitated, facilitating social learning, and supporting socialization (DeLamater and Myers 2011). I propose:

**P6, P7, P8:** in table 1

Socialization refers to: instrumental learning (rewards and punishments); observational learning (modeled behaviors); and internalization (making behavioral standards part of the self) (DeLamater and Myers 2011). Via socialization, social norms are learned from others – socializing agents. Learned early in life, conformity to norms facilitates social interaction. Learning plays a key role in acquiring some DCB but not others e.g., skills needed to pirate software, but not compulsive shopping. I propose:

**P9:** in table 1

*Individual Factors.* Theoretically grounded in internalization (described above), self-control is the struggle between the two psychological states: desire and willpower (Hoch and Loewenstein 1991; Baumeister 2002). Internalized standards guide behavior when a consumer behaves without considering possible rewards or punishments, even without surveillance by others. She might feel morally obliged to perform a behavior, or she might experience a strong internal feeling that a behavior is wrong (experiencing guilt if these moral prohibitions are violated). The pejorative label, “deviant” serves to stigmatize the holder, making her less worthy than others (Becker 1963; Birenbaum and Sagarin, 1976). Most consumers wish to avoid this – its threat would reduce the likelihood of DCB adoption, but once bestowed, secondary deviance may serve to enhance potential adoption (Becker 1963). Sanction is a negative occurrence (legal implications, ostracizing, ridicule from others, etc.) that consumers try to avoid. Potentially powerful, consumers will likely consider its consequential effects when processing learned information. The effect of learning on DCB adoption is expected to be moderated by the aforementioned individual factors. I propose:

**P10, P10a, P10b, P10c:** in table 1

*Channel Effects.* WOM is one of the most influential forces in the marketplace (Kozinets et al., 2010). Arndt (1967, 1) stated that WOM is, “informal conversation [that] is probably the oldest mechanism by which opinions on products and brands are developed, expressed, and spread.” It is likely one of the most prevalent means of DCB-information transmission. Social information transmission is enhanced by communications technologies (Bandura 1986); video games and TV can portray norm-violating behavior as interesting,

fun, and exciting. Due to advertising's pervasiveness, repetitiveness, sophistication, and effective delivery (Pollay 1986), its role is highly salient and could lead to DCB. I propose:

**P11, P11a, P11b, P11c:** in table 1

*Social Evaluations.* Norms serve to: (1) foster coordination among members in pursuit of social goals by providing a cognitive frame of reference through which group members interpret and judge their environment, and thus, provide a basis for distinguishing good from bad, and important from unimportant; (2) act as pointers on how to behave in novel/ambiguous situations; and (3) define common identity (DeLamater and Myers 2011). Norms evolve over the "diffusion time horizon" (Gatignon and Robertson 1985) and can aid or hinder DCB diffusion. The interplay between the individual and existing social norms is important; self-evaluative reactions to one's own behavior governs DCB adoption (Bandura 1986). The social normative context in which behavior occurs is instrumental in DCB adoption (Gatignon and Robertson 1985). Adoptability of DCB (taken as an innovation) can be enhanced when it is compatible with prevailing social norms and value systems (Rogers and Shoemaker 1971). An evaluative comparison between norms and DCB (congruency) will affect adoption. I propose:

**P12, P13:** in table 1

*Personal Determinants.* Highly impactful in CB, innovativeness is "the degree to which an individual is receptive to new ideas and makes innovation decisions independently of the communicated experience of others" (Midgley and Dowling 1978, 236). A consumer who possesses a high level of innovativeness is more likely to adopt a DCB. Novelty-seeking is a motivating force that drives a consumer to seek out new and potentially discrepant information (Hirschman 1980). Some consumers will seek novel stimulation by adopting DCB (Hirschman 1984). Personal adopter competencies affect the adoption of DCB; requisite knowledge and skills could be required, e.g., software piracy requires computer skills. The rate at which innovations are adopted in society varies, because they differ in the skills and resources required for successful adoption (Bandura 1986). Experienced functional value, i.e. desired goals can be determinants of adoption (Betman, Luce and Payne 1998). DCB's functional value addresses the purpose of adoption by classifying it as either intrinsic, instrumental. Intrinsic purpose implies adoption that is inwardly focused, whereas, instrumental implies external outcomes. Conspicuous consumption (e.g., fashion, body modification, etc.) can be expected to be subject to greater social influence versus those consumed privately (Bandura 1986). Adopters of DCB who view observed benefits of adoption from others would be expected to be positively influenced by observation. Perceived risk is a formidable force (Murray and Schlacter 1990). Consumers who perceive an innovation (DCB) as risky are more likely to seek the advice of opinion leaders (Arndt 1967). I propose:

**P14:** in table 1

### Diffusion Process

Diffusion is the spread of DCB through society. When a critical number of adopters is attained, the label of "deviant" ceases to be applied, and the behavior has "entered mainstream." I apply diffusion theory to understand the spread of DCB: "the process by which alteration occurs in the structure and function of a social system. When new ideas are invented, diffused, and adopted ... social change occurs" (Rogers 1995, 6). Temporal considerations involve: the process by which an individual transitions from first knowledge to adoption; the earliness/lateness of adoption in relation to other members of the system; and the rate of adoption (adoptions per time period). Rate is linked to critical mass – the number of adoptions (a threshold level) – required for social normative change by stimulat-

ing the emergence of a new social norm supportive of the behavior. Norms and values are determinants of the rate of diffusion (Gatignon and Robertson 1985). Since DCB initially contravenes norms, temporal effects become important since time lags would slow the adoption process (Rogers 1995). Dissocial behaviors (vs. prosocial) are slower in stimulating widespread diffusion (Bandura 1986). Differential consequences and social inducements associated with the DCB likely account for the variation in time between initial awareness and subsequent adoptions. Early adoptions that are socially valued can gain benefits for the user; however, some DCB carries the risk of punishment and requires the impact of "striking examples to reduce restraints sufficiently to initiate a substantial rise in the modeled behavior" (Bandura 1986, 174). Strong inducements are likely needed for adoption of DCB. I propose:

**P15, P16, P17, P18, P19,** in table 1

The potential and extent to which DCB is diffused depends on numerous factors: interpersonal communication, and the nature and utility of the DCB itself. If something is intriguing or useful, it would spread quickly (e.g., Napster). Interpersonal communication is impactful as opinion leaders (innovators) transmit DCB (Stuterville and Roberts 1975). Highly innovative, opinion leaders are often seen as deviant and are therefore, accorded questionable credibility by average members; their role in diffusion is likely to be limited since all members can serve as opinion leaders by spreading information about DCB (Rogers 1995). Hence, diffusion of DCB relies on adopters more so than opinion leaders. I propose:

**P20, P21, P22:** in table 1

Interpersonal influence has many forms: normative (members conforms to others' expectations); majority (pressure from a group's majority over individuals); and minority (a few members can exert pressure on the majority). Often a dissenting minority, holding different viewpoints from the majority, can be impactful. A minority coalition may attempt influence if it wants to change a judgment by the majority, and/or norms or procedures (DeLamater and Myers 2011). Several conditions could serve to enhance attempts by a minority coalition. Moscovici (1980) advanced the conversion theory of minority influence, which suggests that to attain compliance, the minority coalition will usually seek to use persuasive means to affect change by taking a distinctive position (may be deviant) and holding it consistently in the face of pressure to demonstrate commitment. The size of the minority affects the coalition's capacity to influence others; many members can exert more influence than just a few (DeLamater and Myers 2011). I propose:

**P23, P24, P25:** in table 1

### The Tipping Point

Originating in scholarly research, in the area of social movements, the notion of critical mass has gained prominence, as well as popular notoriety in Malcom Gladwell's, "The Tipping Point." Rogers (1995, 313) describes critical mass as, "the point at which enough individuals have adopted an innovation so that the innovation's further rate of adoption becomes self-sustaining." It is the cumulative result of progressively attaining subsequent individual thresholds that ultimately leads to the point of critical mass (Granovetter 1978). I consider it to be a "tipping point" – the point at which the DCB ceases to be "deviant" and has been effectively diffused through society. Associated with this adoption by the majority of society's individuals, is the normative change that takes place; from being largely negative (rejecting the DCB) to acceptance. I propose:

**P26, P27:** in table 1

*Emergence of New Social Norms* as described by Coleman (1990) is the prototypical micro-to-macro transition that arises from



individual actions leading to the formation of a norm. In turn, the process ends at the micro level again with individual conformity to the norm. Over time there is a tendency for conceptions of rights (underlying norms) to converge and ultimately attain an agreement among members (Wallace and Wolf 1999). Supporting this, Blau (1964) proposed an “emergent process” whereby shared experiences can serve to produce norms and values. The mechanism is not direct

exchange, but rather people’s dislike for the psychological state of cognitive dissonance, as they seek to avoid it; individual rationalizations can be strengthened and transformed into norms. Normative change is the ultimate outcome of DCB’s diffusion through society. Members receive social approval in exchange for conformity (Blau 1964). I propose:

**P28, P29, P30, P31:** in Table 1

**Table 1: Propositions and Related Descriptions**

Proposition	Description
<b>P1</b>	The adoption process of DCB (and in turn the resultant diffusion process) will be expected to be facilitated and enhanced under positive conditions of: <ul style="list-style-type: none"> <li>• A supportive social structure to support learning to sustain the adoptive behavior;</li> <li>• Optimal conditions for social learning;</li> <li>• Positive social evaluations with respect to normative standards; and</li> <li>• Personal determinants related to perceived factors associated with adoption.</li> </ul>
<b>P2</b>	Network structures will affect individual adoption, leading to the diffusion of DCB where: <ul style="list-style-type: none"> <li>• Weak ties will be expected to enhance diffusion of DCB;</li> <li>• Strong ties will be expected to have a limited effect on the diffusion of DCB but will influence adoption of the DCB; and</li> <li>• The greater the tie strength, the greater the likelihood of adoption of DCB.</li> </ul>
<b>P3</b>	Initial knowledge acquisition regarding the DCB will be affected by tie strength where weak ties will be more likely to convey “new” information. The source of the DCB will likely originate from a weak tie relationship.
<b>P4</b>	DCB is diffused to a larger number of individuals and traverses a greater social distance when passed through weak ties rather than strong ties.
<b>P5</b>	The effects of social structure on DCB adoption are expected to be mediated by the social learning process.
<b>P6</b>	Differential association – by associating with those persons partaking in the DCB, those not engaged in the DCB are likely to adopt it via this contact.
<b>P7</b>	Observational learning (imitation) is a key mechanism by which many DCB are acquired.
<b>P8</b>	Differential reinforcement – the greater the number of exposures (stimuli) to DCB, the higher the likelihood of adoption.
<b>P9</b>	Some forms of DCB require skills, knowledge, and predisposition in order for adoption to occur.
<b>P10</b>	The adoption of DCB can be expected to be influenced by the level of social learning. However, the effect can be expected to be moderated by some individual factors: <ul style="list-style-type: none"> <li><b>P10a</b> At higher levels of self-control, the influence of social learning on adoption will be expected to be negligibly related to adoption. Conversely, at lower levels of self-control, the influence of social learning on adoption can be expected to be positively related to adoption.</li> <li><b>P10b</b> At higher levels of the labelling effect, the influence of social learning on adoption will be expected to be negligibly related to adoption. Conversely, at lower levels of the labelling effect, the influence of social learning on adoption can be expected to be positively related to adoption.</li> <li><b>P10c</b> At higher levels of the sanction effect, the influence of social learning on adoption will be expected to be negligibly related to adoption. Conversely, at lower levels of the sanction effect, the influence of social learning on adoption can be expected to be positively related to adoption.</li> </ul>
<b>P11</b>	The adoption of DCB can be expected to be influenced by the level of social learning. However, the effect can be expected to be moderated by the channel effects: <ul style="list-style-type: none"> <li><b>P11a</b> At lower levels of transmission of DCB via <i>WOM</i>, the influence of social learning on adoption will be expected to be negligibly related to adoption. Conversely, at higher levels of <i>WOM</i>, the influence of social learning on adoption can be expected to be positively related to adoption.</li> <li><b>P11b</b> At lower levels of <i>communication technology</i>, the influence of social learning on adoption will be expected to be negligibly related to adoption. Conversely, at higher levels of communication technology, the influence of social learning on adoption can be expected to be positively related to adoption.</li> <li><b>P11c</b> At lower levels of the <i>advertising</i>, the influence of social learning on adoption will be expected to be negligibly related to adoption. Conversely, at higher levels of the advertising, the influence of social learning on adoption can be expected to be positively related to adoption.</li> </ul>
<b>P12</b>	The greater the congruency between existing social norms and the DCB, the higher the likelihood of adoption.

Proposition	Description
P13	The greater the congruency between existing social norms and the DCB, the higher the rate of adoption.
P14	The primary personal determinants of adoptive behavior will be expected to be influenced by the following adopter-oriented factors: <ul style="list-style-type: none"> <li>• Innovativeness (+);</li> <li>• Novelty seeking (+);</li> <li>• Adopter competencies (required skills and knowledge) (+);</li> <li>• Experienced functional value (intrinsic or instrumental) (+);</li> <li>• Observed benefits (from others) (+);</li> <li>• Perceived risk (-); and</li> <li>• Perceived results (outcomes) (+).</li> </ul>
P15	Temporal lags in diffusion of DCB will be expected due primarily to: <ul style="list-style-type: none"> <li>• Reluctance to undertake an activity or behavior that might result in sanction (be punished) from society; and</li> <li>• Discrepancy between anticipated and actual experience.</li> </ul>
P16	DCB will spread at different rates and patterns because they differ in the skill and resources they require for successful adoption.
P17	The more compatible the DCB is with existing social norms and values, the greater the rate of diffusion.
P18	The more homogeneous the social system, the faster the diffusion rate.
P19	A time delay between DCB practise and its benefits will be expected to reduce willingness to try new DCB practices.
P20	The greater the influence of interpersonal communications in society, the greater the likelihood of diffusion. Specifically, the following factors will be expected to have a positive relationship with the likelihood of diffusion: <ul style="list-style-type: none"> <li>• Information sharing;</li> <li>• Give meaning by mutual feedback to the information they exchange;</li> <li>• Gain understanding of each other's views and influence each other's views; and</li> <li>• Mutual influence.</li> </ul>
P21	If a DCB is highly functional, has high utility value, and does not require unavailable resources, it will be expected to be widely diffused through a large number of networks.
P22	DCB diffusion through a social system will be expected to be reduced, the greater the discordance with prevailing values and practices.
P23	The greater the extent to which the DCB is idiosyncratic, the lesser the extent to which it will be diffused through society due to the reduced likelihood of sequential adoption.
P24	If the DCB is presented/displayed in a non-conciliatory fashion (unwilling to make concessions) it is likely to cause others to perceive it as being dogmatic and therefore idiosyncratic and therefore, reduce its likelihood of adoption.
P25	The greater the number of persons forming the initial coalition, the greater the likelihood of the DCB being adopted by the majority.
P26	Once a critical mass is attained, the formerly DCB, loses its deviant status resulting in the emergence of a supportive social norm.
P27	Once a new supportive emergent social norm arises, the behavior can be considered to have entered mainstream.
P28	As progressively greater numbers of individuals adopt the DCB, the higher the likelihood that social attitudes will be accepting (or positive) of the DCB.
P29	As progressively greater numbers of individuals adopt the DCB, the higher the likelihood that an emergent social norm will develop that is accepting of the DCB.
P30	The (original) DCB will be considered to be "mainstream" (i.e., having diffused through society) when it is supported by an emergent and underlying social norm.
P31	Sustainability of the DCB will be expected to be enhanced as: <ul style="list-style-type: none"> <li>• Personal and collective attitudes and behavior must be changed for sustainability; and</li> <li>• Benefits must be produced and perceived to gain wide acceptance.</li> </ul>

## CONCLUSIONS AND IMPLICATIONS

In this conceptual research, I have sought to understand how DCB becomes mainstream by presenting a comprehensive process-oriented model. In so doing, I have adhered to Debbie MacInnis' perspective on conceptual research (MacInnis 2017). Notably, I have answered calls from Mick and Hirschman for research into the area of deviance, and I have heeded Rogers' (1976, 1995) suggestions for

integrating social structure into diffusion theory. This has served to address a void in the CB literature on consumption. I have enriched the CB literature by importing theory from other disciplines. Importantly, theoretical contributions have been made: this research represents an initial attempt to understand DCB diffusion; and a platform for subsequent empirical research into DCB has been established.

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# Competitive Papers—Extended Abstracts

## On Politics, Morality, and Consumer Response to Negative Publicity

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### EXTENDED ABSTRACT

Events of negative publicity around brands often invoke widespread responses from consumers who observe the event. Interestingly, these observing consumers diverge quite drastically in their responses to the brand. Consider a widely publicized event about the US-based airline carrier United Airlines. In early April 2017, the airline's employees forcibly removed a boarded passenger after he refused to give up his seat. In response to this event, one Twitter user said, "*Video of man being violently dragged off a plane is disgusting @united should be boycotted. You treat people with respect not like animals.*". However, opinions were not entirely one-sided; many people felt the outrage was not justified and defended United Airlines, arguing that airlines were within legal bounds to overbook and re-accommodate passengers, and that the customer was disruptive to the entire flight. One such Twitter user said, "*Let's not all blame @united—you're legally required to follow crew instructions when you're on a plane, even when they tell you to get off.*"

For the same negative publicity event, what leads some consumers to be outraged at the brand while others defend it? What are the determinants of such divergent consumer responses? Past research suggests that brand and relationship-related variables (e.g., brand commitment; Ahluwalia, Burnkrant, and Unnava 2000, and loyalty status; Steinhoff and Palmatier 2016) moderate consumer responses to negative publicity. Current research shows that political ideology could be one predictor of consumer responses to negative publicity event – even if the event is non-political in nature.

We posit that political ideology plays a significant role in influencing consumers' diverging responses (condemnation vs. defense) of brands in such scenarios. Research in consumer behavior has examined how individuals' political ideologies drive complaining behavior (Jung et al. 2017) and responses to various persuasive appeals aimed at them (e.g., Winterich, Zhang, and Mittal 2012; Kidwell, Farmer, and Hardesty 2013; Kaikati et al. 2017). We theorize that consumers' political ideology shapes their responses to events involving *others* via broad beliefs about what is right vs. wrong.

Specifically, we suggest that opposing political ideologies give rise to moral pluralism among consumers, which leads to varying concepts of acceptable behaviors by brands in the marketplace. Moral pluralism is the idea that several conflicting conceptions of morality may all be equally correct and fundamental. Morality is the set of principles concerning the distinction between right and wrong or good and bad behavior. However, what individuals consider to be "moral" varies widely both in nature and strength. In the current literature, we draw from Dworkin (1978) and Chiu, Hong and Dweck (1997), who theorize that individuals tend to hold one of two main classes of moral beliefs in which either upholding *duties* within a given system is fundamental (duty-based belief) or upholding human *rights* is fundamental (rights-based belief). Following norms, laws, and role expectations are at the core of a duty-based conceptualization of morality. In contrast, protecting individuals' rights, providing equal opportunity, and upholding fairness are fundamental to rights-based morality.

During negative-publicity events those involving service failure, consumers' moral beliefs are pitted against each other in their responses to the event. We demonstrate that liberal (vs. conservative) consumers are more likely to condemn a brand and defend the customer in such a scenario, and that this response is mediated by rights (vs. duty)-based moral beliefs. A liberal consumer, due to his or her rights-based moral beliefs, will likely view the denial of a customer's rights as a fundamental moral violation. Conversely, a conservative consumer who holds duty-based moral beliefs is likely to view the customer's refusal to comply with norms and authority as a fundamental moral violation. Thus, political ideology indirectly influences consumer responses to publicized brand events, even when there is no explicit political partisanship associated with the event.

We use a multi-method approach to test our theory. For study 1, we gathered a large dataset of tweets ( $n = 219,070$ ) from Twitter in a quasi-experimental field study using consumers' actual social media activity surrounding the United Airlines incident mentioned above as a behavioral outcome variable. We estimated users' political orientation using a ranking algorithm and conducted sentiment analysis of tweets utilizing two approaches (a machine learning-based Naïve Bayes classifier and a dictionary-based text analyzer). Analyses show that immediately after the negative-publicity incident, liberal (vs. conservative) Twitter users were more likely to express negative sentiments, especially anger and anxiety, against United Airlines. A control sample of tweets from immediately before the event showed a null effect of political ideology on negative sentiment.

In study 2, we surveyed a national panel of U.S. adults following the United Airlines incident. Participants' self-identified political ideology (liberal vs. conservative) predicted higher rights- vs. duty-based moral beliefs, respectively, which jointly mediated their attitudes toward both United and the affected customer. Using binary party identification as IV, analysis show that participants identifying as Democrats expressed more negative attitudes toward the airline brand ( $M_{\text{dem}} = 1.61$ ,  $SD_{\text{dem}} = .99$ ) than did Republicans ( $M_{\text{rep}} = 2.06$ ,  $SD_{\text{rep}} = 1.49$ ;  $t = 2.27$ ,  $p = .009$ ). Additionally, Democrats expressed more positive attitudes toward the affected customer ( $M_{\text{dem}} = 4.95$ ,  $SD_{\text{dem}} = 1.57$ ) than did Republicans ( $M_{\text{rep}} = 4.27$ ,  $SD_{\text{rep}} = 1.76$ ;  $t = -2.87$ ,  $p = .004$ ).

Finally, in study 3 we manipulated moral pluralism among participants in order to test our theory in an experimental setting. Manipulated Rights vs. Duty mindsets significantly predicted the variance in brand attitudes ( $F(2, 403) = 5.02$ ,  $p = .007$ ), with a significant main effect of priming condition ( $F(1, 403) = 4.31$ ,  $p = .038$ ) and a significant main effect of political ideology ( $F(1, 403) = 6.124$ ,  $p = .014$ ). As predicted, participants primed with a rights-based moral view of self expressed more negative attitudes toward the fictitious brand ( $M_{\text{rights-based}} = 3.50$ ,  $SD_{\text{rights-based}} = 2.23$ ) than did those primed with a duty-based moral view of self ( $M_{\text{duty-based}} = 3.97$ ,  $SD_{\text{duty-based}} = 2.54$ ). These findings demonstrate the causal relationship between rights (vs. duty)-based moral beliefs and consumer attitude toward brands in a negative publicity scenarios.

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# The Influence of Conflicting and Complementary Benefit Goals on the Execution of Accuracy and Effort Process Goals

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## EXTENDED ABSTRACT

Goals influence consumer choices not only by setting outcome priorities, but also by managing the approach to goal pursuit. We will refer to the first class of goals as benefit goals and to the second class of goals as decision process goals. There are two perspectives on the relationship between benefit goals and decision process goals.

The first perspective assumes that benefit goals determine the nature of the decision process goals. When benefit goals represent important outcomes, conflicting objectives, or high-effort pursuits, people are more likely to invoke a *maximize accuracy* process goal (Beach and Mitchell 1978; Johnson 1984; Luce 1998). When benefit goals represent trivial outcomes, oft-pursued objectives, or low-effort pursuits, people are more likely to invoke a *minimize effort* process goal (Harris and Blair 2006; Hoyer 1984; Hoyer and Brown 1990; Moore and Lehmann 1980). The second perspective assumes that characteristics of the decision context itself can activate decision process goals, independent of the nature of the benefit goals. Decision contexts that have an extensive information load, high level of complexity, or significant degree of accountability are more likely to invoke a maximize accuracy goal (Bettman, Luce, and Payne 1998; Griffin and Broniarczyk 2010; Lee et al. 1999; Payne, Bettman, and Johnson 1993; Tetlock 1992; Wright 1975). Decision contexts that create time constraints, ease information assimilation, or create “lock-in” (e.g., stickiness) are more likely to invoke a minimize effort goal (Bettman and Kakkar 1977; Dhar and Nowlis 1999; Häubl and Trifts 2000; Lurie and Mason 2007; Moore and Lehmann 1980; Zauberger 2003).

This research proposes a third perspective on the relationship between benefit goals and decision process goals. We explore the possibility that the characteristics of benefit goals can moderate the execution of decision process goals. We find that conflicting benefit goals interfere with the pursuit of both a maximize decision accuracy goal and a minimize decision effort goal. This interference effect is a consequence of decision difficulty leading to ambiguity about how to execute the decision process goals. Furthermore, we show that complementary benefit goals facilitate the pursuit of both a maximize accuracy goal and a minimize effort goal. This facilitation effect is a consequence of decision ease leading to clarity about how to execute the decision process goals.

We find support for our proposed theoretical framework in six experiments using a sequential, stimulus-based choice paradigm in which people consider alternatives until they find an acceptable option (Wald 1947). In all experiments, the procedure involved choosing a vacation package (replicate 1) and a car (replicate 2). We directly manipulated the decision process goals because indirect manipulations (e.g., varying time pressure, varying involvement, varying product category) are less precise. The conflicting benefit goals (thrift and prestige) and complementary benefit goals (prestige and have fun) were chosen based on a pretest designed to find benefit goals relevant to the choice context.

Experiment 1 shows that conflicting benefit goals interfere with the decision process goal execution by activating (vs. not) conflicting goals (e.g., thrift and prestige) and assessing whether consumers consider more (or less) options before making a decision. When participants did not have active benefit goals, they were able to pursue both the maximize accuracy and minimize effort decision process

goals. When participants had two conflicting benefit goals active, there was an interference effect: participants with a maximize accuracy goal considered fewer options and participants with a minimize effort goal considered more options than their control condition counterparts.

Experiment 2 shows that complementary benefit goals facilitate the pursuit of both a maximize accuracy and a minimize effort decision process goal. When participants with a maximize accuracy goal had two complementary benefit goals, they considered significantly more options than participants who had no active benefit goals because it was easier to make additional comparisons. When participants with a minimize effort goal had two complementary benefit goals, they considered significantly less options than participants who had no active benefit goals because it was easier to be confident an adequate option had been found.

Experiments 3a and 3b provide evidence for the interference effect proposed underlying mechanisms. We found that the effect of conflicting goals on the number of options considered is serially mediated by decision difficulty → decision ambiguity both for a maximize accuracy (experiment 3a) and a minimize effort (experiment 3b) decision process goal. Further, we also investigated four alternative explanations for the effect: process accountability, outcome accountability, decision importance, and involvement with the choice task, as each of these processes have been shown to influence pursuit of a decision process goal (Bettman et al. 1998; McAllister, Mitchell, and Beach 1979; Tyszka 1998; Zhang and Mittal 2005). None of these explanations accounted for the interference effect.

Experiments 4a and 4b provide evidence for the facilitation effect proposed underlying mechanisms. We found that the effect of complementary goals on the number of options considered is serially mediated by decision ease → decision clarity both for a maximize accuracy (experiment 4a) and a minimize effort (experiment 4b) decision process goal. As in experiments 3a and 3b, none of the alternative explanations accounted for the facilitation effect.

Overall, our findings demonstrate that the relationships between benefit goals can influence a person’s ability to execute a decision process goal and extend the adaptive decision-making literature by identifying factors unrelated to choice characteristics influencing the execution of a decision process goal. The implication is that decision process goals can be conceptualized similarly to benefit goals, in that the goals get activated, goals are pursued using means, and sustained goal pursuit depends on the effectiveness of that pursuit. Consequently, the results will encourage research into how a variety of yet-to-be considered factors (e.g., commitment, progress, equifinality) encourage the pursuit of decision process goals.

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# Communicate Healthiness Through Indirect Measures: The Effect of Food in Motion Figure on the Perceived Healthiness of Food

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## INTRODUCTION

The use of health claims in food advertising over the past few decades is widespread and well documented (e.g., Chandon & Wansink, 2007). Advertisements tend to employ direct health claims or use cues that have clear associations with health (e.g., Batra & Ray, 1986; Chowdhury, Olsen, & Pracejus, 2008; Edell & Burke, 1987; Olney, Holbrook, & Batra, 1991; Reichert, LaTour, & Kim, 2007; e.g., Snyder & DeBono, 1985).

Numerous studies have examined the effectiveness of marketing communication that directly argues product healthiness (Kozup, Creyer, & Burton, 2003; Lähteenmäki, 2013; Nocella & Kennedy, 2012). The findings suggest that in general, health claims effectively increase perceived product health (e.g., Dean et al., 2007; Lyly, Roininen, Honkapää, Poutanen, & Lähteenmäki, 2007). Claims that foods can prevent illness also influence on perceived healthiness (Saba et al., 2010). In addition, mentioning healthy ingredients improves perceived healthiness (Hasler, 2008; Jesionkowska, Sijtsema, Konopacka, & Symoneaux, 2009; Aschemann-Witzel & Hamm, 2010; Lalor, Madden, McKenzie, & Wall, 2011).

In the current work we show that cues that do not directly tied to healthiness can also serve to communicate healthiness. Specifically, we show that presenting food in motion in advertisements can improve perceived healthiness. We believe that this occurs by means of *visual rhetoric*, which is defined as “an artful deviation in form that adheres to an identifiable template”. Visual rhetoric entails three key elements: an image deviating from reality, repeated encounters of consumers with the same template, and an identifiable pattern (McQuarrie & Mick, 1996). Consumers become used to the irregular presentation of the product through repeated exposure to the pattern. This normalization of an unusual pattern in turn serves to increase persuasion.

In the food domain, advertisements frequently display food in motion (Gvili et al., 2015; Gvili, Tal, Amar, & Wansink, 2017), even though when consumed in real life foods are motionless and cannot move. Individuals who are exposed to such ads perceive food in motion as deviating from reality, but do not interpret this deviation as an error due to their repeated encounters with food in motion in advertisements. Hence, food in motion advertisements entail all the key elements of *visual rhetoric*. Accordingly:

*Hypothesis 1*    *Advertisements presenting food in motion constitute a visual rhetorical device through their irregular imagery template*

As stated above, our underlying argument is that ads presenting food in motion may lead to better perceived healthiness compared to those displaying static food. But, why should a visual rhetoric presentation of food in motion signal healthiness? We argue that food motion enhances perceived healthiness because both motion and healthiness are associated with freshness. More specifically, (Gvili et al., 2015) reported an association between motion and freshness by showing that food products were rated as fresher when presented in motion. They posited that this relationship is rooted in the relationship between motion and life (see also Goldman, Krider, & Ramaswami, 1999; Péneau, Brockhoff, Escher, & Nuessli, 2007).

Increased judgments of freshness should in turn increase judgments of healthiness. Extensive research confirms that freshness significantly increases judgments of health (see also a review article by Paquette, 2005). Evidence concerning the strong positive linkage between perceived freshness and perceived healthiness also derives from governmental agencies dealing with food health related issues (e.g., U.S. Department of Agriculture, 2011). Accordingly, exposing consumers to food in motion is likely to increase its perceived freshness, which should in turn lead to enhanced perceptions of healthiness. Formally:

*Hypothesis 2*    *Food products that are presented as moving in ads will be rated as healthier than food that is presented still.*

*Hypothesis 3*    *Evaluation of food product freshness will mediate the positive effects of motion on perceived healthiness.*

## EXPERIMENT 1

Due to the essential role of freshness in our argument we decided to first replicate the findings reported by Gvili et al. (2015), who found that exposure to food in motion appears to generate a sense of freshness.

### Method

Seventy undergraduate students (44% females, mean age of 26) were presented with a printed advertisement, ostensibly from a newspaper. The brand name and other identifying cues were removed from the advertisement.

Participants were randomly divided into two experimental conditions: motion and no motion. Both conditions were identical except that the ad in the motionless condition included an image of a still fish, whereas the ad in the motion condition presented the very same image of a fish but depicted as leaping out of the water.

After viewing the advertisement, participants were asked to evaluate the freshness of the fish shown in the advertisement on a scale of 1 (not fresh at all) to 9 (very fresh).

### Results

A one-way ANOVA revealed a significant main effect of motion on freshness. Specifically, participants rated the fish as fresher when it was presented in motion ( $M = 6.23$ ,  $SD = 1.88$ ) rather than motionless ( $M = 4.86$ ,  $SD = 2.22$ ;  $F(1, 68) = 7.77$ ,  $p < .01$ .) This result suggests that visual presentation of food in motion enhances consumer judgments of freshness.

The next experiments sought to explore the connection between this effect and perceived food healthiness, demonstrating that motion leads to enhanced judgments of healthiness through its enhancement of judgments of freshness.

## EXPERIMENT 2

Experiment 2 examined whether the visual rhetoric of food in motion would enhance judgments of health, and tested whether this effect would be mediated by the consumers' sense of freshness.

### Method

Sixty undergraduate students (55% female, mean age 26) were sampled from the same population pool as in Experiment 1 for course credit. Through computerized monitoring of participants across all our experiments, we ensured that they did not participate in more than one experiment.

The same method as in Experiment 1 was applied with two main changes. First, we measured perceived health on a scale of 1 (= not healthy at all) to 9 (= very healthy). Second, to further extend the generalizability of our findings to another food product, we used a different food: yogurt.

### Results and Discussion

As predicted, a one-way ANOVA revealed that participants rated the yogurt as healthier when presented in motion ( $M = 6.03$ ,  $SD = 1.97$ ) rather than motionless ( $M = 5.00$ ,  $SD = 1.86$ ;  $F(1, 58) = 4.36$ ,  $p < .05$ ). In addition, and consistent with the previous results, the yogurt was perceived as fresher when depicted in motion ( $M = 6.20$ ,  $SD = 1.42$ ) rather than still ( $M = 5.31$ ,  $SD = 1.02$ ),  $F(1, 58) = 7.75$ ,  $p < .01$ .

A mediation analysis indicated that perceived food freshness mediated the relationship between the motion condition and judged food health. The indirect effect of motion on judged food healthiness through judged freshness was positive and significant ( $a b = 1.04$ ,  $z = 2.68$ ,  $p < .01$ ). Presenting food in motion had a significant effect on perceived freshness ( $a = .89$ ,  $t = 2.78$ ,  $p < .01$ ). This, in turn, significantly increased anticipated healthiness ( $b = 1.18$ ,  $t = 8.79$ ,  $p < .001$ ). In addition, the direct effect of food in motion on perceived food healthiness was positive and significant ( $c = 1.03$ ,  $t = 2.09$ ,  $p < .05$ ). However, when the indirect effect was accounted for, this direct effect became non-significant ( $c' = -.01$ ,  $t = -.03$ ,  $p > .05$ ). A bootstrap analysis with 5,000 resamples revealed that the 95% confidence intervals for the significant indirect effect excluded zero (from .33 to 1.85). These results provide support for the argument that perceived freshness mediates the effects of motion on healthiness, supporting  $H_2$ . That is, food motion increases participants' perceptions of freshness. This increase in perceived freshness due to motion is what in turn increased perceived health.

The final experiment was intended to rule out a halo effect as a potential alternative explanation for these findings.

## EXPERIMENT 3

Halo effects can provide an alternative explanation for the relationship between motion and health. That is, motion may create an overall positive halo, which would in turn positively influence judgment of all product attributes, rather than affecting freshness and health specifically. However, our explanation as to the link between motion and healthiness argues for a specific link between motion and healthiness, such that not all attributes should be affected.

The objective of Experiment 3 was to rule out a halo effect as an alternative explanation for the effect of the visual rhetoric of food in motion on health. An additional objective was to obtain a more ecologically valid effect. Accordingly, we used a realistic newspaper advertisement as our stimulus for this experiment. We expected that the results would hold in a real life setting, enhancing the ecological validity of the findings (Bateson & Hui, 1992; McKechnie, 1977).

### Method

Fifty undergraduate students (42% female, mean age of 26) were sampled from the same population pool as in Experiment 1, and participated in this experiment in exchange for course credit.

Participants were randomly divided into two experimental conditions: motion and motionless. They were then presented with a newspaper that included an advertisement for fish. In the motion condition the visual ad depicted the fish in motion, leaping out of the water, whereas in the motionless condition the fish was depicted still. The actual image of the fish itself was identical in both conditions.

After viewing the advertisement, participants were asked to evaluate four properties of the fish in addition to its freshness and healthiness. Two measures of food attributes aside from health and freshness were added to rule out halo effects as a potential explanation. Specifically, participants evaluated the following food attributes: appearance (the fish does not look good at all / looks very good), and heaviness (not heavy at all / very heavy), all rated on 9-point Likert scales. They then rated how interesting the ad was (not interesting at all / very interesting) and how suitable the ad was for the newspaper (not suitable at all / very suitable).

Together, these four new measures were used to rule out halo effects. If halo effects are responsible for the effect of motion on food judgment, other favorable product properties should also be enhanced by motion. However, if the effect is unique to the inferences of freshness (and consequently health), motion should be unrelated to participants' judgment of other food properties.

### Results and Discussion

The results of Experiment 3 showed a similar effect of motion in food advertisements as found in Experiment 2. A one-way ANOVA indicated that participants rated the fish as more fresh when it was presented in motion ( $M = 6.76$ ,  $SD = 1.71$ ) rather than motionless ( $M = 3.52$ ,  $SD = 1.94$ ;  $F(1, 48) = 39.17$ ,  $p < .001$ ). In line with the results of the previous experiments, this result suggests that food movement enhances the perception of freshness, providing further support for the visual rhetoric effect of food in motion ( $H_1$ ). In addition, although participants in both conditions saw the same picture with the same fish, those in the motion condition rated the fish as healthier when they saw it in motion ( $M = 5.28$ ,  $SD = 1.84$ ) rather than motionless ( $M = 3.52$ ,  $SD = 1.61$ ;  $F(1, 48) = 12.97$ ,  $p < .001$ ), supporting  $H_2$ .

Next, we tested the mediation of these effects by freshness judgments. The mediation analysis showed that perceived freshness mediated the relationship between motion and anticipated food health. The indirect effect of motion on anticipated health through perceived freshness was positive and significant ( $a b = 1.17$ ,  $z = 2.63$ ,  $p < .01$ ). Exposure to food in motion had a significant effect on perceived freshness ( $a = 3.24$ ,  $t = 6.26$ ,  $p < .01$ ). This, in turn, significantly increased expected health ( $b = .36$ ,  $t = 2.86$ ,  $p < .01$ ). Further, the direct effect of food in motion on health was positive and significant ( $c = 1.76$ ,  $t = 3.60$ ,  $p < .001$ ). However, when the indirect effect was accounted for, this direct effect became non-significant ( $c' = .59$ ,  $t = .96$ ,  $p > .05$ ). A bootstrap analysis with 5,000 resamples revealed that the 95% confidence intervals for the significant indirect effect excluded zero (from .36 to 2.27). As in Experiment 2, these results provide support for the claim that perceived freshness mediates the effects of motion on health, supporting  $H_2$ .

More importantly, the results help rule out halo effects by showing that the visual rhetoric effect of food in motion did not influence the judgment of any other favorable food attributes. Namely, the appearance of the fish was not perceived more favorably when it was presented in motion ( $M = 4.08$ ,  $SD = 2.18$ ) rather than motionless ( $M = 4.32$ ,  $SD = 2.29$ ;  $F(1, 48) = .144$ ,  $p > .05$ ). Likewise, the portion

of fish was not perceived as larger (heavier) when it was presented in motion ( $M = 510.00$ ,  $SD = 331.66$ ) rather than motionless ( $M = 544.00$ ,  $SD = 273.98$ ;  $F(1, 48) = .156$ ,  $p > .05$ ). Similarly, the ad was not perceived as more suitable for the newspaper when the fish were presented in motion ( $M = 4.00$ ,  $SD = 1.87$ ) rather than motionless ( $M = 3.72$ ,  $SD = 2.57$ ;  $F(1, 48) = .19$ ,  $p > .05$ ). Finally, the ads were not evaluated as more interesting in the motion condition ( $M = 4.80$ ,  $SD = 1.63$ ) than in the motionless condition ( $M = 4.84$ ,  $SD = 1.60$ ),  $F(1, 48) = .01$ ,  $p > .05$ ).

If a halo effect was indeed responsible for the effect of the food in motion visual rhetoric on food product evaluation, motion should also have affected the consumer judgment of other favorable attributes, which did not occur. Consequently, food motion uniquely influenced judgments of freshness, which in turn raised the ratings of perceived health.

### GENERAL DISCUSSION

The display of moving food in advertising can and is exploited by advertisers as a form of visual rhetoric to promote positive product evaluation. The widespread use of the visual rhetoric of food in motion is supported by the significant effects of this technique on consumer judgments of these foods. Motion specifically appears to increase anticipated food healthiness, which may impact overall product evaluations and, consequently, choice.

Motion influences judgments of healthiness through its association with freshness, despite its ostensible irrelevance for judgments of product health. Such implicit messages may prove effective in enhancing product evaluations. Further, implicit cues of healthiness such as motion may avoid the negative relationship between healthiness and tastiness. This would allow advertisers to communicate both enhanced healthiness and taste together, despite the persistent and well-documented negative association between healthiness and tastiness.

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# Self-Producer's Journey: Identity Construction and Transformation in Self-Production

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## EXTENDED ABSTRACT

Identity is dynamic and shaped by the experiences within the environment in a reflexive interaction (Cherrier and Murray, 2007). Production of a good or service for one's own consumption, that is self-production (Troye and Suphellen, 2012), creates a reflexive milieu. Even a seemingly mundane self-production experience, such as cooking for yourself, may have extensive consequences on self-producing consumer's sense of who s/he is.

The current research examines the act of food preparation and the journey of self that transpires through the self-production act and the social dynamics that shape individual self-producers. We expand the theorization of identity formation and transformation around self-production activities that have been studied within do-it-yourself (Wolf and McQuitty, 2011), craft consumption (Campbell, 2005), productive consumption (Press and Arnould, 2011), and prosumption (Toffler, 1980) literatures.

In order to explore the topic, we conducted a multi-sited netnography (Kozinets, 2010) on six forums consisting of 4000 consumer posts. The sites were chosen due to their high circulation rate and diversity of posts. We coded and analyzed the data set with our research goals in mind; first independently, then together by comparing and contrasting emerging themes. Data analysis followed an iterative process and was in constant dialogue with the literature.

Analyses reveal bi-directional relationships among self-production, identity, and community. Here, we discuss two main themes: the loop between identity and self-production, and the community around the self-production act.

### *Identity-Self-Production Loop*

Self-producers' motivations, emerging from their identities, define the meaning of the self-production act. Furthermore, identities shape the production process including production methods (e.g., baking, grilling) and styles (planning, execution). Production styles, for instance being a planner or an improviser, affect how people cook. A planner likes organizing and values precision. Instead, an improviser is a "free-spirit" who decides on the spot, works with whatever ingredients are available in the pantry, and favors rules of thumb over scales and measurement cups.

Identity shapes the production activity and outputs that, in turn, shape several identity layers. Engagement in the production process (experimenting, learning, using the tools) triggers a self-awareness and reflection process:

*Rita: Food is a direct channel to someone's mind and culture. and through cooking different foods, I can learn more about myself, test my limits and broaden my horizon.*

Furthermore, in time, the self-production act nourishes the self-producer's confidence and pride through a sense of mastery and control over the process and outputs:

*Erica: What I like best about cooking is the sense of getting my stuff together....Imposing order and control over life and its circumstances may be beyond my ability. But planning, preparing and executing a dish or even a meal is possible. Mind you, it is a challenge, but none the less, sometimes I pull it off. And that is very, very rewarding.*

The sense of control and confidence felt through the production process is an internal appraisal by and for the self-producing consumer. The production experience enables the journey of transformation from actual to desired (e.g., confident, highly-esteemed

cook) identity. Through repeated exposure to continuous self- or other-evaluated success (or failure) episodes during or as a result of the self-production process, individuals repeatedly access various identities (e.g., successful person). These identities may become part of the stable self, eventually independent of the context (cooking).

Outputs and community dynamics also enable the self-reflexive processes. Self is assessed, evaluated, and re-directed through social comparisons. The individual finds a place within one's own social relationships as well as the larger community by exchanging recipes and presenting outputs. On these occasions, contrasting the self with others has identity consequences since the assessments may lead to more or less favorable self-evaluations.

Furthermore, food preparation helps individuals demarcate their identities from the crowd while forming social bonds. Through experimentation, self-producers create a unique identity, and by sharing their experiences, they become part of the larger community. Via dissemination of self-producers' unique practices and acknowledgments of success, identities of self-producers are validated within the community. Once individual experimentation outputs are validated, one's personal practice becomes part of the community's journey. The individual shapes the norms and the community too.

### *Self-Production Community Defined*

Given our findings and the lack of emphasis in the literature, we propose a distinctive definition of self-production community and highlight its unique properties of practice and learning orientations. We define 'self-production community' as a social community structure that consists of members who engage in the design and/or the physical production processes of outputs for personal consumption. Unlike craft communities (Campbell, 2005), self-production communities do not require output personalization or high standards for the production process. Craftsmanship emerges as a specific subset of self-production activities (e.g., gourmet cooking).

Within brand communities, identities are formed in the image of the brand. The brand acts as an anchor that defines the meanings and the associated identities within the community. Even in the cases of anti-brand or anti-consumption groups (Thompson and Arsel, 2004), brand identity shapes the ethos of these groups. As opposed to the pre-defined meanings of a brand, self-production acts may mean different things (e.g., self-esteem, socialization) to different self-producers. Self-producers choose the meaning of their own act. Without the borders of a brand, self-production offers flexibility in defining and expressing the self-identities around it, and the self-production community assists (not regulates or structures) the creation of the self by the self. The acceptance of prescribed meaning structures versus creating your own meaning structures is in line with Cherrier and Murray's (2007) discussion of 'having' versus 'being' lifestyles.

Self-production holds the potential for symbolic representation and meaningful enactment of actual or desired identities. Hence, it is a venue of identity transformation. It provides a symbolic sphere in which self-producers can gradually rehearse and finally release themselves into new identities by using the reflections from the process, output(s), and/or community. The findings, in line with Oyserman et al. (2012)'s conceptualization of the identity and self, insinuate that the content of the self is dynamic. The reciprocal relationships that are pinpointed in our study support processual theorization of identity (Cherrier and Murray, 2007) and underscore a self-reflexive process.



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# Divorcing the Market

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## EXTENDED ABSTRACT

Missing from the recent interest in consumer research literature in consumers organizing and creating new markets (e.g. Bardhi and Eckhardt 2012; Dolbec and Fischer 2015; Firat 1991; Karababa and Ger 2011; Martin and Schouten 2014) is the phenomenon where people detach themselves from market society and the 'high life' they have achieved well before retirement age to construct alternative modes of living. The purpose of this paper is to close this gap.

We study this phenomenon in Turkey because as a relatively recent and fast growing market society Turkey presents a fresh insight into a phenomenon that occurred earlier in market societies such as the United States. The back-to-land movements of the 1950s and 1960s in the United States (Jacob 1997), for example, present similar motivations, but, as we find in this study, the resulting actions and purposes have changed significantly.

We had long interviews with ten informants who, after having successful, high income lives in large cities, chose to abandon market society and began to experiment with new modes of life. They were selected through purposeful snowball sampling. An extensive search of news items about such people and their experiences was executed and information was collected from print and video sources, as well as from the Internet blogs and other records. Moreover, we benefited from 8 short interviews conducted by a group of cinema and digital media students for a video documentary project, supervised by Özgün (2014), who investigated the dynamics behind the life change of a group of friends who decided to form a community close to nature, trying to construct a sustainable life. We followed the guidelines provided by Spiggle (1994) and Kvale (1996) for the analysis and interpretation of the qualitative data.

Our informants' discourses exhibit that they are moved by tensions between substance they seek in life and an emptiness they experience in market society as well as the tension between maintaining and sustaining this substantive life versus the destructive impulses they observe in market society, which they perceive as inviting death. This quest for substance and life leads to a recognition that sharing with and helping others, doing something genuinely good for society, and emphasizing substance in social interactions in general is required for the quest to be realized. This sentiment finds expression in moral and spiritual (albeit not religious) fulfillment rather than material gratification. Happiness is then linked to meaningful contribution to lives beyond one's own. This is significant because this concern guides much of how the people who abandon the market centered life (re-)organize their lives. For example, one of our participants moved from Turkey to Cambodia to help children and started a soup kitchen. Two of them started a little café in a small remote village also as a center for helping children with their education. Another outcome of the quest, also emphasized in extant work, is being close to nature, establishing a sustainable way of life. According to our participants, since the existing system gives way to exploitation and waste, there will soon be a lack of fresh air to breathe and fresh water to drink, not to mention proper food. Some have built small communes for sustainable lifestyles, producing their own food and energy. On the other hand, starting new lives is not without challenges. One needs to be determined to survive in nature, away from the comforts of the city. Our participants also recognize the allure of consumption that is difficult to resist once one becomes part of consumer culture. Con-

sequently, rather than completely abandon the market, they utilize it infrequently and only as a means of accessing dire necessities otherwise impossible to obtain. Other challenges relate to adapting to the new social environment.

The meaninglessness of modern life, especially when market driven, was foreseen and observed by several key scholars who have influenced contemporary thinking (e.g., Durkheim 1964/1893; Rousseau 1984/1762; Weber 1958/1905), and its effects as consumer culture also discussed by more recent others (e.g., Ewen 1988; McCracken 1988; Slater 1997). These observations indeed were realized for our informants. Thus, they chose to disassociate themselves from market society. The key difference, however, from early back-to-landers is that our informants today do not exhibit a desire to create a new mode of living to completely limit themselves to. Instead, they wish to experiment with their visions of modes of life that are not dominated by market society, yet willing to navigate among different orders, including occasional marketplace exchanges. This is what some have called a postmodern tendency (Firat and Dholakia 1998). This willingness to exist with and navigate multiple orders of life, even if preference for the one experimented with is strong, is a novel phenomenon. Earlier movements were built on intentions to replace one order with another to which people would have total loyalty. Also, our participants see resistance from within the culture largely ineffective, therefore opting to construct and create alternative modes of living. Our participants' foremost concern is to live a mode of life they envision without imposing it upon others; if others like it, they can join in.

Studying consumer culture and how consumers integrate into and even construct markets is, indeed, informative to understand the nature of the contemporary human condition and how it developed. Yet, just as ardently, we also need to study people's attempts to find alternative modes of life if we are to explore and find the potentials for change that many recognize to be imperative if humanity is to escape from the evidently critical and possibly devastating consequences of continuing on a path that an order guided solely by the market logic will produce.

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# Competition and Trust in Economic Exchange: Biology, the Environment, and Self-Consciousness Matter

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## EXTENDED ABSTRACT

Trust is a central concept undergirding economic exchanges and can impede or promote the welfare of consumers and organizations. We investigate how trust arises in decision-making by examining a genetic factor (the catechol-O-methyltransferase gene; *COMT*) and an environmental variable (touch) to reveal a process explaining how and when people trust each other in economic exchanges.

### Trust

Trust is often studied via economic games (e.g. Berg, Dickhaut, and McCabe 1995; Bohnet and Zeckhauser 2004; Camerer 2003; Camerer and Weigelt 1988). We use the multi-move centipede game to examine determinants of behavioral trust. In this game, participants are provided with a monetary allotment divided into larger and smaller piles. Participants can take the larger pile or pass control to their partner. After each pass, both piles double. Standard assumptions of self-interest suggest that rational players should take immediately to maximize winnings. However, players frequently pass control, even late in a game (e.g. Colman et al. 2017; Levitt, List, and Sadoff 2011; McKelvey and Palfrey 1992). Such behaviors imply that players who trust their opponents will pass reciprocally to increase collective winnings.

We propose that a basis for trust lies in the human wanting system (e.g. Anselme and Robinson 2016; Berridge and Robinson 2003), and that polymorphisms of the *COMT* gene drive trusting behavior. We investigate two questions: *How* and *when* (i.e., under what conditions) does *COMT* influence trusting behaviors? To answer “how,” we hypothesize that empathy and psychological trust serially mediate the effects of *COMT* on passing versus taking. To answer “when,” we hypothesize that incidental touch moderates the effects of *COMT*.

### COMT and the Genetic Basis of Trust

The wanting system underlies reward pursuit and particular genes regulate motivation therein (e.g. Berridge and Kringelbach 2015; Pool et al. 2016). In the wanting neural network, unconditioned and conditioned stimuli are paired to form learned internal expectations and unconscious motivation for rewards (e.g. Schultz 2015). Both winning and monetary outcomes in the centipede game can be considered as salient rewards in this context.

*COMT* is especially crucial in the wanting system (e.g., Camara et al. 2010; Marco-Pallarés et al. 2010). For example, people with the met/met *COMT* polymorphism show greater reward responsiveness than met/val and val/val carriers (Lancaster, Linden and Heery 2012). The former experience rewards as more pleasant (evoking a greater wanting response; Wichers et al. 2008; see also Lancaster et al. 2015).

Further, *COMT* is particularly relevant to choice contexts (Lancaster et al. 2012), executive processing and short-term memory (Goldberg et al. 2003), and positive emotionality and reward-seeking (Wacker et al. 2012). In such cases, the met/met allele increases dopaminergic activity at synapses related to information processing,

decision-making, and fear reduction (Lachman et al. 1996), all central processes in economic exchanges.

### Regulating the Effects of COMT in a Trusting Way

Extant research shows that touch leads to emotions (e.g., Hertenstein et al. 2006, 2009), and emotions in the form of feelings of security drive the effects of touch on money invested in an allocation game (Levav and Argo 2010). Further, touch as an extended massage facilitates social bonding (Morhenn, Beavin and Zak 2012) and monetary sacrifice (Morhenn et al. 2008) via oxytocin. We argue that the activation of empathy is another outcome of incidental touch occurring in everyday situations.

### Empathy, Perspective-Taking, and Trust

Empathy is often construed as an affective trait/state where a person feels empathetic concern for others (Batson 2011). Similarly, perspective-taking - one's ability to understand others' points of view and feelings - is sometimes considered a cognitive component of empathy (e.g., Davis 1996). Empathy prompts prosocial behavior to gain rational benefits (e.g., reciprocity, morality, optimizing resources, etc.; Eisenberg, Eggum and Di Giunta 2010) or for purely altruistic reasons (e.g., Batson and Shaw 1991).

In summary, we posit that incidental touch will open participants to social facilitation and interact with *COMT*. For *COMT* met/met carriers, touch should lead to greater stimulation of natural inclinations to both feel empathetic concern and engage in perspective-taking. In turn, these affective and cognitive empathy responses should guide state trust and trusting choice behavior.

### Method

Participants played ten centipede games using directions and stimuli adapted from McKelvey and Palfrey (1992) and were assigned to a touch or no-touch condition. In the touch condition, a female experimenter verbally told each participant whether they would make the first/second move in the centipede games and surreptitiously applied a 1-second open-palm touch to the back of the shoulder blade. In the no-touch condition, this instruction was delivered without a touch. Participants then played the centipede games. Subsequently, we measured affective/cognitive empathy, psychological trust, and socio-demographic variables. Finally, participants donated a saliva sample and were paid their earned game proceeds.

We coded *COMT* (rs 4680) as met/met = 1 and (met/val and val/val) = -1. For behavioral (revealed) trust, we examined the proportion of times participants passed out of their total opportunities and applied a logit transformation.

### Results

We used Hayes' (2013, 2015) PROCESS macro to test two conditional serial mediation models with *COMT* as the independent variable, empathetic concern/perspective-taking as the first mediators, state trust as the second mediator, and revealed trust (propensity of passing) as the dependent variable. Touch moderated the relationship



between *COMT* and both types of empathy. Gender, time spent in the USA, race, game format, and game order (first/second choice) were controls.

Empathetic concern and perspective-taking yielded similar results when entered as the first-stage mediator, as predicted. *COMT* and touch interacted to influence both types of empathy. For the touch condition, met/met carriers had greater empathetic concern and perspective-taking than met/val and val/val carriers. Empathy, in turn, positively influenced psychological trust. Finally, psychological trust positively influenced revealed trust. The index of moderated mediation was significant in both cases, indicating the presence of the hypothesized path.

Thus, both sources of empathy and psychological trust mediate the effects of *COMT* on passing, and incidental touch moderates the effects of *COMT*.

## Conclusion

Our findings contribute to a better understanding of the psychological and biological mechanisms underlying trust and conditions when trust is likely to arise.

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# Dancing with Commercialism: Emphasizing Dramatism to Persuade

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## EXTENDED ABSTRACT

Prior research has noted that people dislike commercial content and try to avoid online advertising (e.g., Cho 2004). Trust is difficult to establish between brands and audience on social media. Tensions arise when commercial activity is discerned in blogs (Kozinets et al. 2010; McQuarrie, Miller and Phillips 2013; Dolbec and Fisher 2015). Understanding how to create engaging commercial content online is an important issue for many global firms (Holt 2016; Kozinets et al. 2010, Kozinets, Patterson, and Ashman 2017). Through the theoretical lens of performance theory, we examine how bloggers ease the tension between commercial content and audience distrust.

Performance theory has its origins in sociology (e.g., Goffman 1959), anthropology (e.g., Turner 1986), and theater studies (e.g., Schechner 1988). It has also been utilized to study a variety of consumption phenomenon (Grove and Fisk, 1992; Grove and John, 2000). Service encounters have long been conceptualized as a performance co-produced by both consumers and providers (e.g., Sherry and McGrath, 1989; McAlexander and Schouten, 1998; Kozinets et al., 2002; Tucker, 2007; Tumbat and Belk 2013) and market evolution has long been conceptualized as a drama (Giesler 2008). This stream of research adopts the dramaturgical perspective (Goffman 1959, 1961, 1967; Turner 1986) and focuses on the role of consumers in the co-construction of performance. In these studies, performance is conceptualized as “a witnessed event, whose audience perceives it to happen in relation to an obligation and who holds it to a standard” (Deighton 1992, p.363). Social media is a space to observe consumer performances (Papacharissi 2012) and self-presentation (Arsel and Zhao 2010; Schau and Gill 2003). We examine how successful bloggers engage in dramaturgical performance to ease communal-commercial tensions and at the same time maintain their popularity.

Extant research has examined consumer responses to the commercialization of online blogs as well as the strategies used by bloggers to alleviate the tensions that have emerged as a result of such commercialization. Kozinets et al. (2010) suggested that the commercial content on blogs ought to be relevant to the blog’s subject and not violate communal norms. McQuarrie, Miller and Phillips (2013) found that consumers tend to accept the commercialization of fashion blogs, interpreting this as evidence of the bloggers’ taste leadership. Dolbec and Fisher (2015) highlighted the tension between the logic of art and the logic of commerce in fashion blogs. However, the bloggers in these studies are all focused on a particular field (e.g., fashion). In this paper, we emphasize dramatism as a key strategy in a variety of commercial blogs to reduce the communal commercial tension.

The essence of dramatism is to produce transformation (Schechner 1988). Theatrical transformation takes place at three levels: in drama, in the performers, and in the audience. Schechner (1988) differentiates two types of spectators, accidental audience and integral audience. Deighton (1992) extended these ideas and differentiated between consumers attending a performance or consumers participating in a performance. By bridging Schechner’s (1988) focus on audience and Deighton’s (1988) emphasis on performance, we seek to extend our understandings of the tensions between commercial content and communal ideals in social media and examine the transformation of the audience from accidental to integral through dramaturgical performance on blogs.

We adopted netnography (Kozinets 2002; Kozinets 2015; Kozinets 2010) and in-depth interviews (McCracken 1988) in data collection. The first author followed more than 50 most active WeChat bloggers from December 2015 to March 2018. An aggregate online news feed site (<http://www.newrank.cn/>) was used to identify blogs for this analysis. This news feed has more than 10 million WeChat blogs and publishes daily reports. We analyzed 10 popular WeChat blogs. The selection of WeChat blogs was based on the blog entry’s reading rate and ranking. We chose WeChat bloggers that represented a variety of different writing styles, but they all heavily relied on commercially oriented cooperation in blogs (e.g. with WOMM messages integrated in entries). 28 in-depth interviews were conducted with 16 popular bloggers and 12 marketers in China. Our data analysis was based on several iterative movements (Spiggle 1994; Kozinets 2015).

Based on our data analysis, we found three transformation processes in blogging performance. Similar to Schechner’s (1988) notion of theatrical transformation in drama, in the performers, and in the audience, we found that transformation occurs in relation to the blogger and the audience as a result of the blogging performance. Successful bloggers facilitate the transformation of commercial content to consumer desire through dramaturgical performance (skill, show, thrill, festival, and hybrid performance) and through these performances they are able to transform an accidental audience into an integral audience. We found that WeChat bloggers can use dramaturgical performance to produce a multitude of different engaging brand-related content for the audience. Blogging performance can produce transformation at different levels, such as transforming content into consumer desire, brand indifference into brand interest, and accidental audience into integral audience.

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# The Power of the Past: Consumer Nostalgia as a Coping Resource

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## EXTENDED ABSTRACT

A handful of recent studies show that nostalgia – a bittersweet mindset of returning to one’s earlier days, characterized by associations of warmth, familiarity, trust, safety, belonging and a sense of protection (Hepper et al. 2012; Holak and Havlena 1998; Stern 1992) – is a valuable inner resource that can be accessed in times of distress and discomfort (Sedikides et al. 2015; Sedikides and Wildschut 2017) and can provide a coping value for consumers experiencing aversive states. For example, during cold days or in cold rooms, people use nostalgia to literally feel warmer (Zhou et al. 2012) or experiencing nostalgia acts as a response to self-threat (Sedikides et al. 2015). One such aversive and discomforting state that people confront every day is experiencing disease threat.

Given the particular qualities of nostalgia as capturing safety, comfort, and self-protection, it makes sense to propose that nostalgia may be particularly suitable as a psychological resource under conditions where these specific qualities are likely to be under threat, i.e., when one is confronted with the threat of illness and disease. We suggest a novel approach that when facing a disease threat, consumers will experience higher levels of nostalgia and demonstrate increased preferences for nostalgic products. More importantly, this paper is the first to propose that not only disease threat triggers the need for nostalgia and increases consumer nostalgic preferences, but in turn nostalgia may be harnessed to buffer and mitigate the threat and itself act as a coping mechanism, successfully psychologically substituting other coping behaviors (i.e., washing one’s hands). We show that experiencing nostalgia through product choice or advertising cues may be a positive psychological coping mechanism to maintain comfort and handle the threat of disease. Hence, our research suggests that triggering nostalgia in the marketplace might have notable and unexpected downstream consequences for consumer welfare and well-being. In contrast to the previous research showing that general feelings of disease threat increase the likelihood of reactive behavior and avoidance (Schaller 2014), we suggest that this aversive state may actually trigger a proactive response, i.e., the choice of nostalgic products.

In addition, we suggest that these nostalgic preferences form while experiencing the emotion of disgust which is a typical response when facing a threat of disease and which allows us to detect and avoid the potential threat. When experiencing such an aversive and unpleasant state as disgust, people will aim for comforting and soothing cues and thus show an increased receptivity towards nostalgic stimuli. However, people respond differently towards disgust and their response depends on individual sensitivity levels. We approach this in our research by employing experienced disgust as a mediator and one’s sensitivity to disgust as a moderator of the proposed relationship.

Four experiments tested our hypotheses. First, we predicted that disease threat would trigger higher levels of experienced nostalgia (experiment 1, N=302). This study used a single factor between-subjects design and experienced nostalgia as the main dependent variable. When disease threat was made salient (vs. absent), participants engaged in a word stem completion task and we measured how many nostalgia-related words they wrote in each condition. Next, we proposed that disease threat, but not actual disease experience, would elicit consumer nostalgic preferences (experiment 2, N=296),

and this effect would be mediated by the emotion of disgust (experiment 3, N=77). The second experiment used a single factor between-subjects design and willingness to buy nostalgic products as the main dependent variable. Experiment 3 used the same manipulation procedure and additionally tested whether experienced disgust mediates the impact of disease threat on consumer nostalgic preferences. Finally, the last experiment tested our notion that experienced nostalgia would have the capacity to compensate the protective behavior and act as a psychological coping mechanism (experiment 4, N=238). This study used a 2 (disease threat vs. control) x 2 (nostalgic vs. non-nostalgic advertisement) between-subjects factorial design with individual difference in disgust sensitivity as a measured independent variable and hand cleaning as the main dependent variable.

Across four experiments, we found consistent support for our hypotheses that consumers may seek nostalgic products to buffer and mitigate the threat of disease. Experiment 1 showed the initial evidence that disease threat leads to higher levels of experienced nostalgia. The results of experiment 2 extended this finding and demonstrated that disease threat, and not actual disease experience, motivates consumers to choose nostalgic products. In experiment 3, we replicated the results of experiment 2 and provided further evidence for the underlying processes by revealing the mediating role of disgust. Finally, experiment 4 demonstrated that nostalgia functions as a psychological resource with buffering qualities and is used as a coping mechanism to maintain comfort when experiencing disease threat.

Our point of theoretical departure was that nostalgia is a valuable psychological resource that can be accessed in times of distress and discomfort (Sedikides et al. 2015; Sedikides and Wildschut 2017). The present research contributes to this literature in several ways. First, it documents a novel factor influencing nostalgic consumer choices – disease threat. Next, the present research uncovers unexpected downstream consequences of nostalgia in the consumer domain by revealing its buffering qualities when the disease threat is salient. The current findings are in line with the research by Zhou et al. (2012) which showed that nostalgia can assist in regulating not only psychological self-threats, but more physical threats as well. In addition, although much of the prior research (Argo, Dahl, and Morales 2006; Huang et al. 2017; Mortensen et al. 2010) has shown that disease threat leads to avoidant behavior and withdrawal, we demonstrate that it may not always be the case and in certain situations it might result in increased preferences for products.

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# The Anchoring Effects of Temperature Cues on Price Valuations

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## EXTENDED ABSTRACT

### Purpose of this paper

For most humans, the local environment can have a major influence on their attitudes and behaviors. Whether it is the ambient smells (Mitchell, Kahn, & Knasko, 1995), sounds (Spangenberg, Grohmann, & Sprott, 2005), color (Bellizzi & Hite, 1992) or warmth (Huang, Zhang, Hui, & Wyer, 2014), the immediate surrounds play a part in how we feel and the decisions we make.

It is no surprise, then, that weather also has the ability to shape what we think, feel and do. For example, research has shown weather can influence stock returns (Goetzmann & Zhu, 2005; Jacobsen & Marquering, 2008), retail sales (Starr-McCluer, 2000; Steele, 1951), food consumption (Bruno, Melnyk, & Völckner, 2017; Lucht & Kasper, 1999), helping behaviors (Cunningham, 1979; Rind, 1996) and willingness to pay (Murray, Di Muro, Finn, & Leszczyc, 2010). Importantly, most of the existing research has typically examined the effects of actual weather (Bruno et al., 2017; Goetzmann & Zhu, 2005) and ambient temperature (Bruno et al., 2017; Murray et al., 2010). Given that anchoring serves as a heuristic in a cognitive process (Tversky & Kahneman, 1974), it is proposed that psychological traits, such as impulsivity, can influence anchoring effects. This is because impulsivity is associated with how an individual seems to react without an objective reasoning (Dickman, 1990). That is, consumers with high levels of impulsivity are more likely to use such heuristics in making decisions (Cheung, Kroese, Fennis, & De Ridder, 2017; Salmon, Fennis, de Ridder, Adriaanse, & De Vet, 2014).

The current research aims to extend the findings in this area by testing a novel prediction that weather and temperature cues can lead to anchoring effects, thus influencing consumer behavior in a subtle and indirect manner. Specifically, it is proposed that high (vs. low) temperature cues will increase higher levels of price valuations for a given product or service. However, this anchoring effect will be moderated by impulsivity. Further, positive affect will mediate the relationship.

### Design/methodology/approach

The research consisted of two studies. Study 1 was a one-factor, six-level (temperature: 31, 32, 39, 81, 83, 89) between-subject design. Guests at a hotel in the United States participated in exchange for a chance to win an additional free night of accommodation. Study 2 was a one-factor, two-level (temperature: 35, 85) between-subject design, conducted to replicate the results of Study 1, test the condition under which the predicted effect might be attenuated (H2) and examine the underlying causal mechanism in the process (H3). That is, increasing temperature influences positive affect and leads to higher perceived valuation. However, this indirect effect should only occur among those with high levels of impulsivity.

### Findings

Findings demonstrate participants viewing high temperature cues ( $M=110.96$ ,  $SD=8.96$ ) reported higher levels of price valuations than did those viewing low temperature cues. In addition, a significant interaction between temperature and impulsivity was

observed. Specifically, there were positive effects of temperature on price valuations at moderate and high levels of impulsivity. Similarly, moderated mediation analysis examined the indirect effect of temperature (high vs. low) on choice price, via positive affect, and moderated by impulsivity. Results revealed the indirect effect was significant at moderate (3.82) and high levels of impulsivity (5.82).

### Originality and contribution of this paper

The findings of this current research provide three important implications, theoretically and practically. First, this research contributes to the literature on weather and anchoring effects by testing a novel perspective that demonstrates how simple visual (temperature) cues, rather than ambient weather and temperature, can lead to anchoring effects. Second, the findings of this research identify theoretically grounded moderator (impulsivity) and mediator (positive affect) variables within the research context. This is significant because there is little understanding on how psychological traits and individual differences can influence anchoring effects (Furnham & Boo, 2011). Moreover, most studies which examine the underlying mechanism of anchoring effects have focused on cognitive factors, including anchoring-and-adjustment (Tversky & Kahneman, 1974), selective accessibility (Chapman & Johnson, 1999), and attitude change (Blankenship, Wegener, Petty, Detweiler-Bedell, & Macy, 2008)2008. Thus, the current study contributes to the literature on anchoring effects by identifying the impact of psychological traits (impulsivity) and examining the underlying process from an affective perspective (positive affect). Third, the findings of this research are beneficial to marketers by highlighting the importance of simple, environmental cues to increase positive consumer evaluations.

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# What Converts Webpage Visits into Crowdfunding Contributions: Assessing the Role of Circumstantial Information

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## EXTENDED ABSTRACT

The information displayed on a crowdfunding project webpage can be divided into two broad categories: *core* and *circumstantial*. Whereas the former reflects relatively stable information about the project, its purpose, and its characteristics, the latter refers to the information that is continuously updated because of the circumstances.

Given the ubiquity and visual salience of circumstantial information in crowdfunding platforms, it is fair to assume that companies and consumers believe it influences funders' decision-making processes. To assess this assumption, we conducted a survey of 113 Brazilians ( $M_{\text{age}} = 23.11$ ,  $SD=6.65$ , female = 53%). They were introduced to a hypothetical project purportedly hosted on an all-or-nothing crowdfunding platform. We then told them that the project had information about (a) the number of people who had already funded the project, (b) the amount raised so far relative to the funding target, and (c) the number of days left in the campaign. Participants were asked whether they believed one or more of these three pieces of information would influence their decision. Sixty-six percent said they might be influenced by this circumstantial information and 23.9% said they were sure that they would be influenced by it. They were also asked which of the three pieces of information they would most and least like to have access to before making their funding decision: 60% responded that the most valuable piece of information was the amount raised relative to the target, and about half (48.7%) answered that the least valuable information was the time left in the campaign.

This suggests that consumers believe circumstantial information could indeed influence their funding decisions, but their perception of the relative importance of each piece of information seems to vary. However, whether their beliefs and answers reflect reality is an open question. As we shall see, a careful reading of the literature reveals that it is still unclear whether and/or how this kind of circumstantial information influences the effectiveness of projects in converting webpage visits into actual contributions. We seek to fill this gap by analyzing a unique dataset of about 3.5 million web page visits and 79,600 contributions for 934 different projects displayed on the largest Brazilian crowdfunding platform. Precisely, this paper systematically assesses the extent to which information about the number of past contributions of a given project (NPC), the relative amount raised (RAR), and time left in the campaign (TLC) influence the funding rate (FR), which we define as the ratio of the number of contributions to the number of web page visits on a given day.

Crowdfunding studies usually rely on the number of contribution pledges as the main outcome measure (Kuppaswamy and Bayus, 2017; Lu et al., 2014; Thies et al., 2016). While it is useful in many situations, this metric may capture not only the influence of core and circumstantial information about the project on subsequent contributions, but also the effort of the project owner, which is unlikely to remain constant overtime. Given that our interest is in whether circumstantial information influences the effectiveness of projects in converting webpage visits into actual contributions, a more compelling outcome measure is needed: funding rate (FR). This measure represents the ratio of the number of contributions to the number of webpage visits on a given day. This departure from the previous literature is significant as it captures the behavior of people who have

a minimum interest in the project (i.e., have decided to visit its page), but who have probably not yet made their funding decision and may therefore use the salient circumstantial information on the page to help make their decision.

We obtained data from Catarse, the largest non-investment crowdfunding platform in Brazil. During the period for which we obtained data from the company, all the projects followed the all-or-nothing rule and ran on a pre-defined time frame. Approximately 80% of the projects available were related to arts (music, film, theater, etc.), which suggests that most funders were motivated to be part of an artistic project or to help the project owners achieve a personal goal. Although the project owners could decide on the duration of their project's funding campaign, 77% of them had a funding period of two months. We obtained data on all the projects between 2011 and 2013 and adopted the following inclusion criteria: (1) having a (termination) deadline prior to October 2013; (2) not having a "second chance" (a few projects, which we removed from our dataset, were allowed to receive funds after their stated deadline); and (3) having a duration of two months (60 to 62 days). The daily number of visits to each project was collected from Google Analytics in collaboration with Catarse. Our empirical analysis employs project fixed effects to analyze our panel data set of daily observations for all projects.

There are theoretical reasons to suggest that past contributions could influence a prospective funder's funding decisions. People rely on others' behavior to infer quality as well as social norms. Hypothesis 1 claims a positive association between NPC and funding rate. Despite the theoretical possibility that NPC may increase perceived quality or trigger social norms, H1 is not supported.

Adopting the rationale of perceived usefulness (Dawes et al., 1986; Kuppaswamy and Bayus's, 2017), it is reasonable to speculate that the greater the amount of funds raised relative to the funding target, the higher the funding rate will be. Hypothesis 2 posits that RAR will positively associate with the funding rate, but the strength of the association will be significantly reduced once the target fund is reached. It is supported.

It is reasonable to suspect that procrastination may also take place among potential funders in crowdfunding settings, such as committing to support a friend's social project next week rather than now. Thus, the funding rate should increase as the perceived opportunity to put off making a contribution (i.e., the time left in the campaign) declines. However, this should only be true up to a point. If the perceived usefulness of the contribution also plays a dominant role, as argued in H2, then the impact of TLC on the funding rate should become much weaker once the target has been reached. Hypothesis 3 suggests that TLC will negatively associate with the funding rate, but the strength of the association will be significantly reduced once the target fund is reached. It is supported.

In summary, the results show that RAR and TLC are powerful pieces of circumstantial information, but only until the funding target is reached. After that, their influence declines significantly. NPC has little influence on funding decisions, possibly due to the overwhelming impact of the other two pieces of information.

Consistent with Kuppuswamy and Bayus's (2017, 2018) studies using Kickstarter data, our results suggest that funding in Catarse has an asymmetric U-shape: projects attract more funders in their first days than in the middle of the funding period, and then the number of funders increases again towards the end. Interestingly (although yet to be documented), part of the phenomenon is likely a function of visibility (e.g., promotional efforts). Once controlled for the number of visits on every given day, the U-shape gives way to an upward trending line: the funding rate increases throughout the funding period. For this reason, our first contribution is to show that variations in visits over the life of a project account for a substantial part of the variations in contributions over time, suggesting that funding decisions start before the platform is assessed. Using the funding rate (i.e., the ratio of the number of contributions to the number of web page visits on a given day) as our outcome measure allowed us to disentangle the influence of a project's visibility from the decision a funder makes after accessing the project's page on the platform.

Our second contribution is to provide evidence for the positive effect that past funding has on the funding rate. We show that the amount already raised is a much better predictor than the number of past funders, suggesting that what matters is not the size of the crowd, but how close a project is to achieving success. We also show evidence for the effect of time on funding decisions. Simply put, when there is less time left to fund a project, the funding rate increases.

More interestingly, our third contribution is to show that the perceived usefulness of a contribution plays a dominant role. We found that when a project reaches its funding target, the impact of

both the amount already raised and time becomes much weaker. Disentangling these possibilities helps give a better understanding of the motivations behind funding in all-or-nothing non-investment crowdfunding projects. Prospective funders seem concerned about the usefulness of their funds: they are willing to help project owners, but mainly when "their help really matters" (i.e., before the target is reached).

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# Product Ethicality Dilemma: Consumer Reactions to ‘Disgusting’ Recycled Products

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## EXTENDED ABSTRACT

As the increasing attention to environmental issues led companies to introduce sustainable brands and products to the market (Mazar and Zhong 2010), the gap between consumers’ explicit attitudes toward sustainable products and their consumption behavior has been a major concern (Luchs et al. 2010). Although extensive research has focused on potential reasons for the relatively low market share of sustainable products (Newman, Gorlin, and Dhar 2014), very limited research has examined the obstacles specific to recycled products (Linton and Hamzaoui 2013). As green products, recycled products are made in whole or in part from a wide range of materials recovered from the waste stream (EPA 2016). This study examines the effect of feelings of disgust associated with recycled products on product ethicality perceptions and product attitudes. Given that consumers usually buy recycled products mostly for social and ethical considerations, it is especially important to examine how factors unique to those products affect ethicality perceptions and product evaluations.

Moral judgments are founded upon approximately five moral domains, which involve discrete sets of interrelated values and rules of how people ought to behave and what warrants punishment or sanctions (Haidt and Graham 2007). The domain of purity involves principles directed at protecting the sanctity of the body and soul. These values are originally related to the evolutionary challenges of avoiding the consumption of toxins, parasites, or bacteria. From a purity standpoint, it is immoral to behave in a way that is self-polluting, filthy, or profane (Rozin et al. 1999). The morality literature has conceptualized disgust as a moral emotion defined by appraisals of purity and contamination (Haidt 2003). Research shows that physical disgust and moral disgust activate overlapping brain regions and are linked through cognitive and behavioral processes (Eskine, Kacirik and Prinz 2011). As a consequence, feelings of disgust have been shown to increase extremity in our moral judgments (Eskine et al. 2011).

According to the consumer behavior literature, many common consumer products such as cigarettes, diapers, and trash bags elicit disgust among consumers (Morales and Fitzsimons 2007). This suggests that feelings of disgust are not a rare occurrence in the marketplace, and consumers are likely to experience them on regular shopping trips. Today, many disgust-eliciting products such as cigarette butts, marine debris, and underwear are recycled to manufacture new sustainable products (Terracycle 2017). Hence, one can expect that feelings of disgust associated with some of those recycled materials cause consumers to perceive the end product as disgusting as well. Driving from the morality literature showing the effect physical disgust on negative moral judgments (Eskine et al. 2011), this study suggests that compared to ‘non-disgusting’ recycled products, ‘disgusting’ recycled products might result in lower product ethicality perceptions, which in turn might decrease product attitudes (H1).

Moral identity represents an individual’s broad associative cognitive network of related moral traits (e.g., being kind), feelings (e.g., concern for others), and behaviors (e.g., helping others) (Aquino and Reed 2002). Within this associative network, the strength of these moral associations reflects the degree to which a person’s moral identity is chronically important (e.g., whether a person cares about being a person who has these traits, feelings, and behaviors in general). Therefore, an individual who is characterized by high moral identity would likely have more thoughts, both in quantity and speed, regard-

ing moral traits such as fairness, generosity, and helping the society. For instance, moral identity was found to be a strong predictor of charitable giving, even when the donation recipient was a member of an out-group (Reed and Aquino 2003; Winterich et al. 2009).

Given that individuals with high internalized moral identity see morality at the very core of their being, one might expect them to be more concerned about ethical situations. For instance, compared to individuals with low moral identity, individuals with high moral identity are less likely act unethically (Gino et al. 2011) and more likely to engage in prosocial behaviors (Aquino and Reed 2002). However, prior research suggests that feelings of disgust and moral judgments are interrelated through cognitive processes (Eskine et al. 2011). Therefore, this study suggests that individuals high in moral identity internalization are more likely to have higher product ethicality perceptions for non-disgust eliciting products versus disgust-eliciting products. On the other hand, given individuals low in moral identity internalization are less concerned about ethical situations, they are not expected to experience significantly different levels of product ethicality perceptions between disgust-eliciting recycled products and non-disgust eliciting recycled products (H2). The interactive effect of recycled product type and individuals’ moral identity internalization on product ethicality perceptions is expected to be reflected in product attitudes (H3).

A pilot study was conducted to test whether feelings of disgust associated with end products depend on the type of recycled materials they are made from. For this study, we recruited 199 individuals from MTurk ( $M_{age} = 33.88$ ). Participants were asked to evaluate 24 hypothetical bags, each partly made from a different type of recycled product (e.g., recycled seatbelt, plastic bottle, etc.) and displayed in random order. Each participant rated all 24 bags on a scale from 1 (“not at all disgusting”) to 7 (“very disgusting”). Hierarchical cluster analysis uncovered 3 distinct clusters: (1) extremely disgusting, (2) moderately disgusting, (3) not-disgusting. Whereas mean disgust value of the bags in the extremely disgusting cluster (e.g., a bag made from recycled underwear) were significantly higher than the scale midpoint ( $M = 5.37, t(198) = 11.87, p < .001$ ), mean disgust value of the bags in the not-disgusting cluster were significantly lower than the scale midpoint ( $M = 2.16, t(198) = -24.80, p < .001$ ). Results of this study confirmed that consumers can perceive products as disgusting depending on the type of recycled product they are made from.

Study 1 had a three-factor (disgusting recycled product, non-disgusting recycled product, recycled material) between-subjects design. For this study, 233 individuals who were recruited from MTurk ( $M_{age} = 39.12$ ), were randomly distributed to one of three product-type conditions. In all conditions, participants were asked to imagine shopping on a website that sells bags. Then, participants saw a website visual describing a bag made of recycled materials. All participants saw the same bag visual and website, but the materials the bag was made from varied depending on their assigned condition. In order to avoid any prior attitudes consumers might have, we used the brand and website design of a Canadian bag brand Mariclaro which sells recycled products online.

In the disgusting recycled product condition, the bag was made from disgust-eliciting materials (e.g., recycled cigarette butts). In the non-disgusting recycled product condition, the bag was made from non-disgust eliciting materials (e.g., recycled seatbelts). Finally, in the recycled-material condition, the bag was made from particular

fibers (e.g., polyester). According to the pilot study, mean disgust rating of the recycled products in the disgust condition ( $M_{disgusting} = 4.36$ ) were significantly higher than the mean disgusting rating of the recycled products in the non-disgusting recycled product condition ( $M_{not-disgusting} = 2.32$ ,  $t(198) = 21.43$ ,  $p < .001$ ).

We measured participants' general attitude toward the bag using five seven-point scale. The items included "dislike/like", "unfavorable/favorable", "negative/positive", "undesirable/desirable", and "bad/good" ( $\alpha = .98$ ). In order to measure perceived product ethicality, participants rated their agreements with the statements "This bag is social responsible", "This bag is produced with high ethical standards", and "This bag is sustainable" on a scale ranging from 1 ("not at all") to 7 ("very much") ( $\alpha = .84$ ). As adapted from previous literature (Argo, Dahl, and Morales 2006), we asked participants to report to what extent wearing the bag would make them feel: "disgusted", "revolted", "unclean", and "gross" ( $\alpha = .97$ ). The order of the product ethicality and disgust measures was counterbalanced.

An analysis of variance (ANOVA) using product type as the independent variable and disgust index as the dependent variable produced a significant main effect ( $F(2,230) = 19.35$ ,  $p < .001$ ). Participants perceived wearing the bag more disgusting in the disgust-eliciting recycled product condition ( $M_{disgusting} = 2.60$ ) than in the non-disgust eliciting recycled product ( $M_{not-disgusting} = 1.35$ ,  $t(230) = 5.46$ ,  $p < .001$  or recycled material conditions ( $M_{material} = 1.42$ ,  $t(230) = 5.24$ ,  $p < .001$ ). A second ANOVA using attitude index as the dependent variable produced a significant main effect ( $F(2,230) = 8.39$ ,  $p < .001$ ). Participants had lower product attitudes in the disgust-eliciting recycled product condition ( $M_{disgusting} = 4.52$ ) than in the recycled product ( $M_{not-disgusting} = 5.42$ ,  $t(230) = -3.63$ ,  $p < .001$  or recycled material conditions ( $M_{material} = 5.35$ ,  $t(230) = -3.41$ ,  $p < .001$ ). Similarly, an ANOVA using product ethicality as the dependent variable produced a significant main effect ( $F(2,230) = 4.35$ ,  $p = .014$ ). Participants had lower product ethicality perceptions in the disgust-eliciting recycled product condition ( $M_{disgusting} = 5.40$ ) than in the recycled product ( $M_{not-disgusting} = 5.93$ ,  $t(230) = -2.84$ ,  $p < .01$  or recycled material conditions ( $M_{material} = 5.78$ ,  $t(230) = -1.49$ ,  $p = .04$ ).

We conducted mediation analysis (PROCESS model 4; Hayes 2017) with product type manipulation as the categorical independent variable; product ethicality perceptions as the mediator, and product attitude as the dependent variable. The bootstrap analysis confirmed an indirect effect both for disgusting recycled vs. non-disgusting recycled product comparisons ( $\beta = .33$ , 95% CI: [.11, .60]) and disgusting recycled product vs. recycled material condition comparisons ( $\beta = .23$ , 95% CI: [.01, .50]).

Study 2 was conducted to test our findings in Study 1 with undergraduate students, to examine the effect of moral identity internalization as a moderator, and to rule out alternative explanations. Participants in the study included 139 undergraduate students ( $M_{age} = 22.03$ ). We randomly assigned them to one of the two conditions: non-disgusting recycled product condition vs. disgusting recycled product condition. Study 2 was very similar to Study 1 with some exceptions. First, in order to rule out alternative explanations, participants rated the bag on various dimensions (stylish, lightweight, multifunctional, waterproof, creative, and innovative) using scales from 1 ("not at all") to 7 ("very much"). We also asked participants how easy or difficult it is to make the bag (1 = very difficult to make, 7 = very easy to make) and how common or uncommon the bag is (1 = very uncommon, 7 = very common). Additionally, to test whether perceived fit between the identity of the bag and recycled products differ across conditions, identity overlap scale was drawn from Bergami and Bagozzi's (2000) visual scale. In a series of differentially overlapping pair of circles, participants picked the circle pair which

best reflects the overlap between the bag and each recycled product the bag was made from. Finally, participants rated how representative they found the website visual using three items ( $\alpha = .86$ ).

In this study, after evaluating the bag on provided dimensions, participants completed Aquino and Reed's (2002) moral identity internalization scale (1 = strongly disagree, 7 = strongly agree). Consistent with prior research (Aquino and Reed 2002), the five items that measure this scale were averaged to create a moral identity index ( $\alpha = .86$ ).

An analysis of variance (ANOVA) using product type as the independent variable and disgust index as the dependent variable showed that participants perceived wearing the bag more disgusting in the disgusting condition than in the non-disgusting condition ( $M_{disgusting} = 3.21$ ,  $M_{not-disgusting} = 3.21$ ;  $F(1,137) = 18.08$ ,  $p < .001$ ). A second ANOVA using attitude index as the dependent variable showed that participants had significantly lower product attitudes in the disgusting condition than in the not-disgusting condition ( $M_{disgusting} = 3.60$ ,  $M_{not-disgusting} = 4.24$ ;  $F(1,137) = 4.90$ ,  $p = .029$ ). Similarly, an ANOVA using product ethicality as the dependent variable showed that participants had significantly lower product ethicality perceptions in the disgusting condition than in the not-disgusting condition ( $M_{disgusting} = 4.75$ ,  $M_{not-disgusting} = 5.52$ ;  $F(1,137) = 4.90$ ,  $p < .01$ ). Additionally, none of the product-related measures used to test alternative explanations differed across two product-type conditions.

We conducted a moderated mediation analysis using (10,000 resamples) PROCESS (Model 8, Hayes 2017). In the model estimated by this analysis, recycled product type (disgusting = 0, not-disgusting = 1) was the manipulated independent variable, perceived product ethicality was the mediator, attitude toward the product was the dependent variable, and moral identity internalization was the measured moderator variable. Mediated moderation was supported because the indirect effect of the two-way interaction on attitude toward the product through perceived product ethicality was significant (indirect effect = .36, SE = .18; 95% CI: [.0303, .7584]). For participants with high moral identity internalization, the conditional indirect effect of product type was significant ( $\beta = .69$ , 95% CI: [.31, 1.12]) whereas for participants with low moral identity internalization, the conditional indirect effect of product type was not significant ( $\beta = -.90$ , 95% CI: [-.31, .56]).

This study reveals that recycled products can be perceived as disgusting which in turn, might decrease product ethicality perceptions and overall product evaluations. Additionally, this research shows that although individuals high in moral identity internalization perceive 'non-disgusting' recycled products as more ethical than 'disgusting' recycled products, individuals low in moral identity internalization perceive 'non-disgusting' recycled product and 'disgusting' recycled products as equally ethical.

The purchase of recycled products is one way by which consumers satisfy their desire to protect the environment. Although recent research has focused on green products, little is known about the role of recycled-product features on consumers' product attitudes and ethicality judgments. The current study contributes to the recycled product literature by showing that perceived ethicality of recycled products and their overall evaluations might vary depending on the type of recycled materials used for the manufacturing of the final product. In terms of managerial implications, this study shows that marketers need to take into account the type of feelings associated with recycled materials used in the manufacturing of new products.

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# Marketing's Ethical Blind Spot: The Problem with Catering to Customer Preferences

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## EXTENDED ABSTRACT

Whether in the context of teaching marketing classes, finding the best attributes of a product, or producing viral, revenue enhancing advertising, marketers are guided by a longstanding mantra: *Consumers preferences are king*. In many ways, to be the best marketer is to create products and services that are directly aligned with consumer preferences.

This paper focuses on the potential ethical issues associated with catering to consumer preferences. The preoccupation with consumer preferences leads marketers to prioritize them, even if the preferences are perverse. This preoccupation can trigger a kind of cultural, group based harm. Marketers and business ethicists alike have historically understood consumer harm narrowly, focusing only on how business actions can harm individuals. I argue that marketers have ethical obligations to prevent cultural harms and may even have to contribute to cultural diversity in their endeavors.

The contributions of this work are following: first, I use critical political theory to identify a harm that has gone unnoticed in the marketing ethics literature. Although marketing ethics has been sensitive to some aspects of problematic imagery including stereotypes, that work has still understood the harm of stereotypes and lack of cultural diversity narrowly. Broadening this harm to group based harms creates new sets of unethical products and practices. Second, no work has attempted to provide rationales for why problematic images and products still exist in the marketplace. By rooting this problem in catering to consumer preferences, I provide an easy and clear intervention for marketers (e.g. be skeptical of consumer preferences in some cases). Lastly, previous work on cultural diversity in marketing ethics has not provided normative justifications of why it is that firms have an obligation to prevent the sorts of harms I identify, even though those harms do not accrue to their customers. They may even benefit their customers, yet I argue marketers should not pursue actions that create cultural harms.

Traditional accounts of marketing and business ethics have used the theories of John Rawls to argue that certain practices are unethical because they harm individuals. (Rawls 1971) This harm can take multiples forms including marketing physically harmful products (smoking, guns), breaches of implicit social contracts, and violations of autonomy. This paper seeks instead to use Iris Marion Young's criticism of John Rawls to expand the scope of harms to which businesses should be attuned to. Young argues that Rawls has too narrow of a view of justice. According to her, the focus on individual level harm leaves a theory of justice blind to those kinds of harms or injustices that require appeal to group based categories such as race or gender. Her account focuses on harms that reinforce cultural norms while stereotyping minorities, females, and other under-represented cultural groups—so called “cultural imperialism.” (Young 1990)

In the first paper to analyze Young from a marketing ethics perspective, I highlight the distinctive cultural harms posed by tailoring products, services and advertising to consumer preferences. When marketers tailor their activities to majoritarian preferences they risk using predominately majoritarian models and imagery which not only further normalizes white, male, straight faces but also renders invisible their counterparts. This kind of discrimination reinforces cultural hierarchy. If images of minority and female models are primarily cast in stereotypical roles, this only validates such roles, creating a culture and set of meanings that stigmatize minorities and how they are perceived as members of a subordinated group. It is

this group harm that makes lack of cultural diversity in marketing so problematic.

Turning our attention to this kind of group-based cultural harm has two ethical implications for marketers. First, marketers should not cater to customer preferences in ways that create these harms by reinforcing social hierarchies and stereotypes. Doing so is unethical. Second, marketers may even have a positive obligation to counteract and mitigate this kind of cultural harm. Hence, managers should encourage their companies to be more culturally inclusive in their marketing strategies.

The political theorist Iris Marion Young in *Justice and the Politics of Difference* (1990) has a broad account of the scope of harm and justice that social institutions should take into consideration. The notion of marketing to consumer preferences contributes to what Young calls the harm of “cultural imperialism.” For Young, to experience cultural imperialism “means to experience how the dominant meanings of a society render the particular perspective of one's own group invisible at the same time as they stereotype one's group and mark it out as the Other.” (Young 1990: 58-59). This is a kind of group-based harm and Young makes clear that “mass entertainment media” which includes “movies, television, magazines and their advertisements” is a major producer of these dominant meanings.

Cultural imperialism occurs when a dominant group's cultures becomes the social norm which gives the dominant culture a type of power that sends a message to those groups outside of the norm. The message is that the dominant group's perspectives express the appropriate “experience, values, goals and achievements” in society (Young 1990 p. 59). Those that are labeled as “others” (not part of the dominant cultural group) suffer what Young calls “paradoxical oppression” where certain races, genders, and non-mainstream cultural groups are both stereotyped as well as “rendered invisible.” (Young 1990 p. 59).

In the U.S., the dominant cultural group has taken on the identity of the straight white male. With cultural imperialism, those not part of this cultural dominant group experience unique group harms that label those who are not white, straight, and male as deviant, unimportant, and voiceless. “As a result, the ‘privileged experience’ of white consumers stands as the ‘normal one’ against which non-whites’ experience is evaluated. In such instances, non-white communities are clustered into monolithic categories, while the oft privileged positionalities of white consumers are naturalized and normalized.” (Johnson & Grier 2017; Grier et al 2017).

Even when marketers have understood harms associated with stereotypes, they have routinely focused on the individual harms associated with problematic imagery. For example, arguments have been made that stereotypes offend people who may view them. This however, is still too narrow of a conception of harm. What if only those consumers who enjoy the stereotypes, see them? According to prevailing theory, this is not problematic. When we expand the scope of harms to group harms, we recognize that even when individuals who are presented with problematic imagery find it compelling, it still can be wrong. Understanding this kind of harm assists in broadening the scope of products and images that cause cultural harms and are hence problematic. For example, skin lightening cream creates no individual harm, in fact it is quite in demand by those individuals who use it. Yet, these lightning creams create cultural harms by promoting the idea that lighter is better and hence are problematic.

Other accounts of marketing ethics, even those that advise against stereotypes, do not encompass such problematic products.

When consumer preferences are discriminatory, tailoring products or services to consumer preferences creates these group-based cultural harms. A concrete example of tailoring to male consumer preferences that creates cultural harms includes the arguably sexist hiring practices of Hooters. (Barkacks & Barkacks 2011; Rhee 1997). Hooters is a paradigmatic case of creating a service tailored to straight male preferences for sexualized women. They routinely hire and fire women who do not satisfy the “ideal” body type of so called “Hooters Girl.” (Bedi 2016) (<http://www.originalhooters.com/careers>). This imagery is clearly geared towards men’s sexual appetite. It appeals to those exact consumers preferences that marketers care so deeply about.

Tailoring a service and product like the “Hooters Girl” to men’s preferences creates a broader cultural harm. The marketing of Hooters furthers the already problematic heteronormative perception of women in society. (Colker 1986) Hooters promotes the cultural agenda that women should be sexual entertainment for men and the agenda of what the ideal body type of a women should be.

This amounts to a hijacking of cultural norms by Hooters. By creating a product that is tailored to men’s preferences, Hooters has promoted cultural imperialism of the type that Young argues is problematic. Again, even if those who patron the store are not offended or harmed by the product, there is a broader group based cultural harm that’s at play.

In addition to cultural gender harms, race harms are also prevalent in marketing. Marketers use predominately white, male, heteronormative imagery to more effectively sell their products. Whereas studies show that diversity in the workforce may improve a business’ bottom line (e.g. Richard 2000, 2007; Carter 2010) and positively affect group dynamics and task performance (e.g. Bantel and Jackson 1989; Murray 1989;), cultural diversity in advertising may be detrimental to profitability precisely because consumers don’t prefer it. Including minorities in advertising could lower the purchase likelihood of non-minorities. (Kerin 1979; Whittler and DiMeo 1991; Grier and Deshpande 2001; Johson & Grier 2015). This fear may motivate white imagery in marketing campaigns. (Puntoni, Vanhamme, and Visscher 2011).

Even when minorities are included in advertising, they are often stereotyped. By focusing on these types of problematic representations, marketers make advertising more effective for the cultural majority because there is easy of processing. For example, the use of the Asian model minority or the perceptual foreigner image is easily processed by white consumers because these are the exact representations of Asians in the arena of the cultural majority (Taylor et al 2005; Jussim 1990). This extension of the stereotype only reinforces this cultural hierarchy and can have psychological effects on those minorities who do not fit the stereotype (Graham 1983; Taylor and Lee 1994)

This paper ultimately gives marketing managers a play book by which they can create products and advertising that do not create cultural harms even if all consumers who interact with the products and advertising prefer them.

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# Conjuring Creativity: The Impact of Fear

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## EXTENDED ABSTRACT

Consumer perceptions of creativity frequently drive marketing success (e.g., new products, advertisements). However, while prior research has examined factors influencing creativity *generation* (Hennessey and Amabile 2010; Burroughs et al. 2008), external factors that affect creativity *perception* have not been explored. Yet, the two are independent processes (Groborz and Necka 2003), so their drivers cannot be assumed to be the same. Given the positive consequences of perceived creativity and its subjective nature, there is value in identifying factors which could enhance perceived creativity. In this research, we identify a factor, fear, which enhances creativity perceptions, leading to more positive attitudes toward the ad and behavioral intentions. These effects are unique to fear (vs. other main negative discrete emotions (sadness, disgust, anger; Izard 2007), neutral emotion, and happiness, despite sharing similar appraisals or arousal).

Creativity incorporates two dimensions: novelty/unexpectedness and meaningfulness (appropriate/relevant to the audience and context). Thus, appreciating creativity requires the viewer to engage with the ad to connect the ad's unexpected elements in a meaningful way. Because fear increases visual attention (Dunn and Huegg 2014), supports the extra effort to decipher the environment (Smith and Ellsworth 1985), and heightens engagement with and attention to an immediate stimulus, those experiencing fear should be more likely to appreciate a creative ad's complexities. They should be more likely to connect divergent pieces of the ad and connect them together to form an overall meaning for the ad, leading to an increased appreciation of its creativity. Thus, we expect fear, but not other negative emotions, to positively impact creativity (H1). In addition, given prior work linking creativity to increased attitudes and purchase intentions, we expect fear will positively influence attitudes and behavioral intentions, and that these effects will be mediated by creativity perception (H2-H3). Four studies support these hypotheses using a variety of products and contexts and both integral and incidental manipulations of fear.

## Methods and Results

Study 1 used a 2(ad context: commercial/cookies ad, PSA) x 4(emotion: fear, sadness, disgust, neutral) between-subjects design (N=309 students). Emotion was manipulated integrally using IAPS images (with exception of sadness for which alternative image was selected). A pretest (N=56) confirmed that the advertisements induced the appropriate emotions. After viewing the ad, participants answered questions about creativity perception, attitude toward the ad ( $A_{ad}$ ), behavioral intentions, engagement, and emotions ( $\alpha's > .70$ ).

Manipulation checks were successful. Supporting H1, two-way ANOVA (IVs= ad context, emotion, their interaction) revealed a significant main effect of emotion ( $F(3,287)=6.98, p < .001$ ). Those in the fear condition perceived the ad as the most creative ( $M_{Fear}=4.51$  vs.  $M_{Neutral}=3.39, M_{Disgust}=3.89, M_{Sadness}=3.96; p's < .05$ ). The fear condition also had the greatest engagement ( $M_{Fear}=3.37$  vs.  $M_{Disgust}=2.59, M_{Sadness}=2.90, M_{Neutral}=2.71, p's < .05$ ; other  $p's > .1$ ) ( $F(3,283)=5.80, p < .001$ ). As expected, engagement mediated (5,000 bootstrapping) the effect of fear on perceived creativity ( $axb_{vs.Neutral}=.28, axb_{vs.Disgust}=.33, axb_{vs.Sadness}=.20; p's < .05$ ) (direct effect,  $p < .05$ ). Additional statistical tests supported H2-H3. Finally, a serial mediation analysis confirmed that fear had a positive effect

on behavioral intention through "engagement->creativity-> $A_{ad}$ " ( $\beta_{Neutral}=.06, \beta_{vs.Disgust}=.02, \beta_{vs.Sadness}=.03; p's < .05$ ; direct effects  $p's > .1$ ), supporting our proposed process.

In Study 2, we manipulate emotions incidentally using videos (Schaefer et al. 2010). After watching an emotion-evoking video (anger, sadness, or happiness), participants (N=258 Mturkers) saw a (print) juice ad and rated creativity perception, willingness-to-pay, and emotions. Control variables included whether participants had previously seen the film/video and time spent viewing it.

Manipulation check was successful. EFA supported the discriminant validity of our measures. Consistent with H1, a one-way ANCOVA ( $F(3,252)=2.48, p=.06$ ) showed that those in the fear condition perceived the ad as significantly more creative ( $M_{Fear}=5.99$  vs.  $M_{Anger}=5.38, M_{Sadness}=5.53, M_{Happiness}=5.56; p's < .05$ ), and reported higher willingness-to-pay ( $M_{Fear}=\$4.20, M_{Anger}=\$1.76, M_{Happiness}=\$2.66, M_{Sadness}=\$2.87; p's < .001$ ). Creativity perception mediated (5,000 bootstrapping) this relationship ( $axb_{Fearvs.Anger}=.13, axb_{Fearvs.Happiness}=.09, axb_{Fearvs.Sadness}=.10; p's < .05$ ) (direct effect  $p < .001$ ).

To further generalize our findings, Study 3 used 162 real advertisements about anti-texting and driving. 682 Mturkers viewed three advertisements and rated each on  $A_{ad}, A_{issue}$ , perceived persuasiveness, behavioral intention, creativity perception, and emotion ( $\alpha's > .93$ ). CFA supported the discriminant validity.

Using advertisements as the unit of analysis (each advertisement was evaluated by 12 people on average), a regression (DV=perceived creativity; IVs=emotions experienced (fear, disgust, sadness, anger)) revealed a positive effect of fear on perceived ad creativity ( $\beta=.45, p < .001$ ), while the other emotions had no or negative effect ( $\beta_{Sadness}=.09, \beta_{Anger}=-.08, p's > .3; \beta_{Disgust}=-.22, p < .05$ ), supporting H1. Additional analyses supported H2-H3. Path analysis also revealed that creativity perception mediated the effect of fear on attitudes, and fear positively impacted behavioral intention through serial mediation of creativity perception and attitudes.

To rule out arousal as an alternative explanation of our results, in Study 4, we used advertisements that evoked different emotions, but did not differ in uncertainty or arousal. Seventy-nine participants rated the viewed ad on creativity, emotions, uncertainty, arousal, and engagement ( $\alpha's > .8$ ).

The fearful ad was perceived as more creative ( $M_{FearCond}=4.79, M_{NeutralCond}=3.67; p < .001$ ) (H1), and induced more engagement ( $M_{FearCond}=4.80, M_{NeutralCond}=3.63; p < .001$ ) ( $F's > 11$ ). Engagement mediated (5,000 bootstrapping) fear's positive impact on creativity perception ( $\beta=.18, p < .001$ ), and a serial mediation analysis confirmed that the fearful ad positively impacted creativity perception through "self-reported fear->engagement" (partial mediation:  $\beta=.08, p < .01$ ; direct effect  $p < .07$ ). These findings replicate those of the prior studies while also suggesting it is fear (rather than mere arousal or uncertainty) that drives people to be more engaged with the ad, as the two ads did not differ in their appraisal and arousal, only in the overall emotions-induced.

While fear can trigger many responses which may not all be conducive to enhancing creativity, in our research, we do not find evidence for "flight" or "freeze" responses (cf., Blanchard et al. 2011) as response time data indicate that emotion condition does not impact amount of time spent looking at the ad. A "fight" response is consistent with increased engagement with the ad, which then leads to enhanced creativity perception.

### General Discussion

We show that fear impacts perceived creativity due to its positive impact on engagement, and this occurs in contexts where fear might be expected (Studies 1,3,4) or unexpected (Studies 1&2). This research extends the literatures on discrete emotions, incidental fear, and creativity, by exploring a new dependent variable, creativity perception (rather than generation), and a new factor (fear) that influences this construct. Further our findings suggest that the drivers of creativity generation and perception may differ since prior research shows happiness increases creativity generation, but it did not impact creativity perception (Study 2).

Practically, our findings indicate marketers can enhance ad effectiveness through perceived creativity by placing ads in fearful contexts (e.g., during a scary show/movie, at a doctor's office, during/after a haunted tour).

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# Symbolic Sustainable Attributes Improve Attitude Toward Low-Quality Products: A Warm-Glow Feelings Account

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## EXTENDED ABSTRACT

Firms are investing considerable amounts of money to develop sustainable offerings that respond to an important global consumer trend (Olsen, Slotegraaf, and Chandukala 2014). However, sustainable attributes can have either positive, neutral or negative effects on product evaluation (e.g. Bodur, Gao, and Grohmann 2013; Luchs, Naylor, Irwin, and Raghunathan 2010). In this research, we report on three experiments to demonstrate that sustainable attributes have a positive effect on consumer attitudes for low-quality (versus medium-) products or services. We also identify the mediating role of warm-glow feelings and of the relative weight of the sustainable attribute (vs utilitarian attribute) in forming product attitude.

When external cues signal that the overall quality of a product is low, it discredits performance-related product attributes in a process of quality disconfirmation (Golder et al. 2012). Therefore, in the case of a low-quality product, attributes that do not relate to product performance are likely to gain additional weight in consumers' formation of product attitudes. Accordingly, symbolic sustainable attributes, which do not relate to product performance (vs utilitarian attributes) should improve product or service attitude when external cues signal low quality (Hypothesis 1).

Research shows that sustainable attributes induce warm-glow feelings (Chernev and Blair 2015). Given our prediction that symbolic sustainable attributes may gain additional weight when consumers evaluate low-quality products, this change in weighting should in turn lead to an increase in warm-glow feelings. Hence, we expect that warm-glow feelings mediate the effect of a symbolic sustainable attribute on product attitude when external cues signal low product quality (Hypothesis 2). We also propose that this mediating effect is explained by the relative weight of the symbolic sustainable attribute in forming an overall evaluation (i.e. there is a serial mediation; Hypothesis 3).

Study 1 used a 2 (product quality: low vs. medium)  $\times$  3 (sustainable attribute vs. utilitarian attribute vs. no attribute) between-subjects design to test H1 and H2. We manipulated product quality with *Consumer Reports* ratings of a sunscreen product, which was presented as either "EcoConscious" (sustainable attribute), "Very Water Resistant" (utilitarian attribute), or without text (no attribute). A sample of 615 US citizens (52% women) completed a survey on MTurk. An ANOVA revealed main effects of product quality ( $F(1, 615)=359.85, p<.001$ ) and sustainable attribute ( $F(2, 615)=4.15, p=.016$ ) on product attitude, as well as an interaction effect ( $F(2, 615)=3.71, p=.025$ ). Planned contrasts revealed that eco-conscious attribute induced better attitude than no attribute and water resistant attribute in the low-quality condition ( $M_{EcoConscious}=2.99$  vs.  $M_{NoAttribute}=2.33, p=.003$ ;  $M_{EcoConscious}=2.99$  vs.  $M_{WaterResistant}=2.43, p=.054$ ). When quality was medium, no significant difference appeared across conditions, supporting H1. H2 was tested with a moderated mediation analysis (PROCESS Macro Model 8, Hayes 2017). A significant moderated mediation was observed (Index=.55, 95% CI=.13 to .97), whereby the indirect effect of symbolic sustainable attribute (vs. utilitarian attribute) on product attitude was more important in the low-quality condition ( $ab_{Low-quality}=-.90, 95\% CI=-1.24$  to  $-.58$ ) than in the medium-quality condition ( $ab_{Medium-quality}=-.35, 95\% CI=-.62$  to  $-.09$ ). These results support H2.

Study 2 tests the differential effect of symbolic sustainable vs utilitarian sustainable attributes. It used a 2 (product quality: low vs. medium)  $\times$  3 (symbolic sustainable attribute [fair-trade] vs. utilitarian sustainable attribute [organic] vs. no attribute) between-subjects design. "Fair-Trade" and "Organic" were successfully pre-tested as representing respectively symbolic and utilitarian attributes. We manipulated product quality with independent experts' quality ratings. Respondents (660 US citizens, 55.8% women) were asked on MTurk to evaluate a T-shirt. A main effect of product quality ( $F(1, 660)=398.15, p=.000$ ) on product attitude was again observed but not of sustainable attribute ( $F(2, 660)=1.56, p=.211$ ). Their interaction was not significant ( $F(2, 660)=1.31, p=.270$ ). Yet, planned contrast indicated that when quality was low, attitude was more favorably rated in the symbolic sustainable attribute condition ( $M_{FairTrade}=2.75$ ) than in the no attribute condition ( $M_{NoAttribute}=2.30, F(1, 660)=6.67, p=.010$ ). All the other contrasts revealed no significant differences across conditions ( $p's>.10$ ). These results provide further support to H1 by showing that adding a symbolic sustainable attribute (but not a utilitarian sustainable attribute) increases product attitude when the product quality is low. H2 was tested using the same procedure as in study 1. As expected, a significant moderated mediation was observed (Index=.43, 95% CI=.09 to .77), whereby the indirect effect of symbolic sustainable attribute (vs. utilitarian sustainable attribute) on product attitude was significant and more important in the low-quality condition ( $ab_{Low-quality}=-.34, 95\% CI=-.60$  to  $-.07$ ) than in the medium-quality condition ( $ab_{Medium-quality}=.09, 95\% CI=-.11$  to  $.30$ ).

Study 3 used a 2 (hotel quality: low vs. medium)  $\times$  3 (attributes: symbolic sustainable first [then utilitarian] vs. utilitarian first [then symbolic sustainable] vs. utilitarian only) between-subjects design. Respondents (728 US citizens, 55.5% women) were asked on MTurk to evaluate a Hotel. Quality ( $F(1, 728)=533.65, p=.000$ ) and sustainable attributes ( $F(2, 728)=10.841, p=.000$ ) had a main effect on attitude. Their interaction was marginally significant ( $F(2, 728)=2.724, p=.066$ ). Planned contrasts indicated that when quality was low, the order of attribute presentation had no effect on attitude ( $M_{SustainableFirst}=4.02$  vs.  $M_{UtilitarianFirst}=4.32, p=.128$ ) but both conditions generated more favorable attitudes than utilitarian attributes only ( $M_{UtilitarianOnly}=3.53$  vs.  $M_{SustainableFirst}=4.02, p=.001$ ;  $M_{UtilitarianOnly}=3.53$  vs.  $M_{UtilitarianFirst}=4.32, p=.000$ ). By contrast, when quality was medium, the attitude was not different across conditions ( $p's>.10$ ). These results provide further support to H1 and show that the order of attribute presentation does not influence the hypothesized effects. To test H3, we performed a serial mediation (PROCESS Macro Model 6, Hayes 2017) with the relative weight of attributes and warm-glow feelings as mediators. Results support our hypothesis: sustainable attribute importance and warm-glow feelings had a negative sequential indirect effect on attitude (indirect effect=-.07, 95% CI=-.12 to  $-.03$ ), whereby hotel quality decreased sustainable attribute importance, which negatively influenced warm-glow feelings, resulting in a less favorable attitude.

Using different implementations of quality cues (provided by independent experts and other consumers) and sustainable attributes, this research contributes to the literature on sustainable attribute effects by showing that the presence of a symbolic sustainable attribute increases attitude when product quality is low (vs. medium). More-

over, this research shows how the attribute weight influences warm-glow feelings and attitude.

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# I'm Scared, Want to Listen? Fear's Influence on Self-Disclosure

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## EXTENDED ABSTRACT

Extant research has considered various antecedents that may influence consumers' engagement in self-disclosure (Derlega et al, 1993). For example, trust in another person can motivate an individual to self-disclose (Derlega et al, 2008). However, scant research has examined the impact of incidental emotion on self-disclosure. For example, it is common for consumers to experience fear regularly. Yet, research has not considered incidental fear's potential influence on self-disclosure motivations. In this research, we explore the impact of fear on self-disclosure and how this self-disclosure may be beneficial for brands.

Fear is a basic negative emotion elicited in response to perceived threat (Izard, 2013). Several theories examine the antecedents to and outcomes of fear. For example, cognitive appraisal theory suggests that fearful individuals are risk-averse and express pessimistic risk estimates of future events (Lerner and Keltner, 2001). Emotion regulation, however, has found that people cope with fear through affiliation with others (Schachter, 1959; Sarnoff and Zimbardo, 1961), a mechanism that has been shown to enhance brand attachment (Dunn and Hoegg, 2014).

These theories provide divergent predictions on fear's effect on behavioral outcomes. While cognitive appraisal theory would predict that fearful individuals are risk-averse, affiliation theory would predict that fearful individuals are motivated to affiliate with others. Such affiliative behavior could potentially put an individual at risk of rejection or exploitation, if it involves self-disclosure (Derlega et al, 1993). Previous literature has suggested that individuals divulge private information when it provides a "net benefit" (White 2004), and are more likely to be open and honest when they do disclose (Derlega et al. 1993). This vulnerability results in self-disclosure being an inherently risky activity. If self-disclosure can enhance affiliation, but is also perceived as risky, which motivation (risk-aversion vs. affiliation) would exert greater influence over a fearful individual?

Across five experimental studies and one field study, we observe directional and significant effects of fear on self-disclosure. Specifically, we expect affiliation (via measurement and moderated by affiliative experience) as the underlying process. We predict that individuals who experience fear alone will engage in significantly greater amounts of self-disclosure than individuals who have experienced fear in a group.

Study 1 tested whether a) self-disclosure is seen as a risky activity and b) fear leads to higher perceptions of risk. Using several measures of self-disclosure behavior [i.e., private information, personal information, use of private and personal information (Vogel and Wester 2003; Fogel and Nehmad 2009)], we find a consistent pattern for fear: those who experienced fear perceived directionally greater risk in different domains of private and personal information than those in the control group.

Study 2 was conducted as a field study. Participants at a local haunted house experienced a haunted attraction alone or in a group and then had the option to complete a short survey. Lone participants, as compared to group participants, showed significantly greater engagement in the survey and marginally greater discussion in personal regrets.

Study 3 was a 2 (emotion: fear vs. control) x 2 (experience: alone vs. with others) between-subjects design used to test the mod-

erating effect of experience on incidental fear's influence on self-disclosure. Participants were told that they would either be watching a movie clip alone or with everyone in the lab and were then randomly assigned to watch either a fear-inducing or control movie clip. All participants were told that they had been selected for a pre-screening for a future focus group conducted by a brand. Scared lone participants believed they would demonstrate significantly greater openness and honesty with the brand if they were selected for the future focus group (Figure 1).

Study 4 utilized a similar setting and design as Study 3. Scared lone participants provided significantly longer responses about what they were most guilty about in life. Additionally, these participants were directionally more likely to agree to release their photo to an unknown brand moderator than other participants.

Study 5 tested fear's impact on self-disclosure in a general perspective, rather than explicitly stating to an individual that their self-disclosed material would be shared with a specific entity, such as a brand or brand representative. Participants were randomly assigned to conditions similar to Study 3's design. Participants in the alone condition reported significantly greater amounts of needing to be with others than participants in the together condition. Scared lone participants, as compared to scared group participants, provided significantly longer responses to describe their relationships with their mothers as well as were more likely to engage in self-disclosure about their childhood and about expectations for the future.

Study 6 tested a brand's anthropomorphism level as a moderator to self-disclosure under moments of fear. Participants were randomly assigned to watch a fear or control movie clip. Individuals who experienced fear reported a significantly greater need for affiliation than control participants. Participants were then randomly assigned to read about an anthropomorphized TV or a non-anthropomorphized TV as designed by Hur and colleagues (2015). Participants were asked about their typical television and streaming habits. A marginal interaction between fear and anthropomorphism was observed for disclosure of indulgent viewing behavior. Additionally, a significant interaction was observed between fear and anthropomorphism on inappropriate viewing behavior.

Our contribution to theory is three-fold. Firstly, we present a novel consideration of cognitive appraisal theory and affiliation theory in the domain of fear. Secondly, we extend the current knowledge of incidental emotional research within marketing (Achar et al, 2016). Thirdly, we extend self-disclosure literature within marketing by offering fear as a novel antecedent. We believe brands can utilize our findings to create strategic plans for communication with their consumers after an unrelated scary event has occurred. By doing so, both parties within the relationship can benefit; consumers can have the opportunity to alleviate their fear by affiliating with the brand via self-disclosure and the brand can obtain valuable information about its consumers that it would otherwise not have access to, thereby strengthening the bond between consumer and brand. Future research will examine brand outcomes.

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# When Too Much “I” is Bad for “Us”: The Detrimental Effect of Selfie on Self-Brand Connection

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## EXTENDED ABSTRACT

In this social media era, the growing popularity of selfie is swarming the world into becoming a selfie - obsessed generation. Selfie is the act of taking self-portraits by using one's camera (Murray 2015). The selfie fever could not even spare the astronaut, Mark Vande, who very recently clicked his own “space-selfie”, during the first spacewalk of the year (Smith 2018). Now, the marketers are also trying to capitalize on the appeal of this selfie movement to connect their brand with the consumers.

Contradicting the conventional wisdom of the marketers, this research proposes that encouraging consumers to take a selfie with a brand actually inhibits the establishment of a strong self-brand connection. It shows that the act of taking a selfie, shifts consumers' attention away from the brand to themselves (i.e., exhibits greater self-focus). In such situations, the brand becomes peripheral and the person clicking his/her own selfie becomes the focus of attention. Considerable research has shown that a strong self-brand connection leads to various positive marketing consequences like increased customer loyalty etc. (MacInnis and Folkes 2017). In contrast, sufficient literature in psychology shows that too much self-focus may reduce relationship quality between couples and friends (Campbell, Brunell and Finkel 2006; Reiss and Wright 1996). Research also shows that individuals with personality dimensions like narcissism and materialism exhibit a lack of empathy towards others and are unable to form quality interpersonal relationships because of extreme self-love (Campbell et al. 2006; Richins and Dawson, 1992). Drawing from these findings, this research proposes that at times, too much self-focus may inhibit, instead of facilitating, the building of a strong self and brand relationship.

Instead of having consumers take a selfie with the brand, a more effective strategy will be for a third party to take a picture of the consumer with the brand. For example, in some restaurants, staff are encouraged to help their customers take a picture of their time in the restaurant. In such non-selfie contexts, consumers are less likely to focus on themselves, but on their relationship with the brand, leading to a stronger self-brand connection. Thus, we propose:

*Hypothesis 1 Selfie campaign is detrimental to the establishment of self-brand connection, relative to non-selfie campaigns.*

*Hypothesis 2 The above effect is mediated by heightened self-focus in selfie (versus non-selfie) campaigns.*

Study 1 (N=90) showed that asking consumers to take a selfie with a brand indeed led to a lower self-brand connection. They were randomly assigned to one of the three between-subjects conditions (Selfie-condition, Non-selfie condition, Control condition). Across all three conditions, participants were given a Lindt Chocolate bar. In the selfie-condition, participants were asked to take a selfie with the product. In the non-selfie condition, participants were told to hold the product in any way they like, and the researcher clicked a picture of them. In the control condition, participants were simply asked to take a picture of the product (the participants were not in the picture). A one-way ANOVA on the mean of the 7-items self-brand connection scale shows a significant main effect of campaign condition on

self-brand condition ( $F(2, 86), p = .012$ ). Specifically, as predicted, participants in the selfie condition exhibited significantly lower self-brand connection. More interestingly, contrasts also showed that self-brand connection between the self and control conditions were not significantly different. More interestingly, contrasts showed that participants in the non-selfie condition exhibited significantly higher self-brand connection than those in the control condition.

Study 2 (N=105) provided evidence for the mediating role of self-focus. Participants were randomly assigned to either the selfie or the non-selfie condition. In this study, a well-known tea brand “TWG” was chosen as the focal product. After completing the study, participants completed the self-brand connection scale. In addition, they were also asked to indicate the extent to which they were focusing on themselves while the clicking campaign. ANOVA on participants' self-brand connection revealed a significant main effect of type of photography ( $F(1, 103) = 4.41, p = .03$ ). ANOVA on the self-focus measure showed that participants in the selfie-condition reported significantly higher focus on the self, relative to those in the non-selfie condition ( $M_{\text{selfie}} = 4.49, M_{\text{non-selfie}} = 3.09; F(1, 103), p < .001$ ). To test if self-focus mediated the above effect, a mediation analysis using Model 4 by Preacher & Hayes (2008) with 5000 iterations was conducted. We entered condition (selfie versus non-selfie) as the independent variable, mean self-brand connection as the dependent variable, and response on the self-focus as the mediator. Results revealed a significant mediation by self-focus ( $B = -.1950, SE = .122, 95\% \text{ CI } [-.509, -.006]$ ).

Study 3 (N= 149) manipulates the participant's focus on the self in a (Self-focus: Low versus High) X (Campaign: Selfie versus Non-Selfie) between-subjects design. To elicit self-focus, participants in the high self-focus (low self-focus) condition were told to write their names (any two words) on the electronic board before taking the pictures in both selfie and non-selfie condition. ANOVA on participants' self-brand connection ( $\alpha = .96$ ) with self-focus and campaign as independent variables showed a significant main effect of self-focus ( $F(1, 145) = 12.91, p < .001$ ) but insignificant main effect of campaign ( $F(1, 145) = 1.43, p = .23$ ). More importantly, there was a significant interaction between self-focus and campaign type  $F(1, 145) = 4.58, p = .03$ ). Contrasts showed that in the condition of low self-focus, those in the selfie condition exhibited significantly lower self-brand connection relative to those in the non-selfie condition ( $M_{\text{selfie}} = 2.25, M_{\text{non-selfie}} = 2.81; F(1, 145)$ ). However, when self-focus was heightened, the difference in self-brand connection between participants in the selfie and non-selfie condition was eliminated ( $M_{\text{selfie}} = 2.01, M_{\text{non-selfie}} = 1.85; F(1, 145)$ ).

Findings from 3 studies provide converging evidence to support our proposition that contrary to conventional wisdom, selfie campaigns are not necessarily a good tool for brands to establish a strong relationship with their customers. This research provides an interesting nuance to the general belief that selfies are good for the brand.

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# Effects of Retail Food Sampling on Subsequent Purchases: Implications of Sampling Healthy versus Unhealthy Foods on Choices of Other Foods

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## EXTENDED ABSTRACT

The food-and-beverage industry spends over a billion dollars annually on food samples (Biswas et al. 2014). These food samples vary considerably in terms of their healthfulness levels. In that regard, we examine how sampling healthy versus unhealthy foods might influence subsequent food purchases in terms of caloric content and healthfulness levels.

Prior studies on food sampling have mostly examined the effects of sampling a particular product on the subsequent choice of that focal product (Biswas et al. 2014; Nowlis and Shiv 2005; Shiv and Nowlis 2004). Studies have also examined the reward seeking effects of sampling (Wadhwa, Shiv, and Nowlis 2008). Similarly, prior research studies have examined several factors that influence choices between healthy and unhealthy options (Biswas et al. 2017; Shiv and Fedorikhin 1999). Research has also examined anchoring effects of sequential evaluation of vices and virtues (Chernev 2011a). However, to the best of our knowledge, no research has examined the effects of sampling healthy versus unhealthy food items on subsequent *choices* of *other* food items. We make an important step in examining how the healthfulness level of a sampled food item might influence subsequent choices when choosing from a set of healthy and unhealthy options. We also examine the effects on total calories purchased and consumed.

It should be noted that our research differs from prior research that has examined how consumers balance healthy and unhealthy meals (Chandon and Wansink 2007; Dhar and Simonson 1999). These studies show that perceived unhealthy meals are balanced by selecting relatively healthier side dishes or drinks and guilt is often the underlying factor behind this behavior (Chandon and Wansink 2007; Chernev 2011b; Okada 2005). In contrast, we are not examining effects of full meals – instead, we are focusing on the effects of bite-sized sampling on subsequent choices. The focus on bite-sized sampling is practically relevant given the widespread popularity of sampling practices at retail stores and restaurants, as outlined earlier. Along similar lines, our research differs from research by Finkelstein and Fishbach (2010). They found that when participants ate the same food sample labeled as healthy (vs. tasty), they indicated feeling hungrier. In contrast, we did not label the foods in any of our studies and instead, participants sampled different food items that were either healthy or unhealthy; moreover, we examine subsequent choice for healthy versus unhealthy foods while Finkelstein and Fishbach (2010) examined perceived hunger and consumption amount of a neutral food. Similarly, Wilcox et al. (2009) examined the mere presence of a healthy item on subsequent choice while we examine actual sampling of food items.

Finally, our work differs from work in moral licensing where people get to *choose* a virtue item, which leads to subsequent indulgence (Effron and Conway 2015; Khan and Dhar 2006). That is, in the moral licensing literature, the individual makes the “moral” *choice* to earn the “license.” In contrast, in our research context, the choice has been *made* for the consumer (e.g., by the retailer or restaurant).

We hypothesize that initial sampling of a healthy (vs. an unhealthy) item will lead to feeling good, which in turn will lead to self-rewarding indulgence, which in turn will lead to subsequent higher

choice likelihood for unhealthy options. We test our hypotheses with three field experiments and two lab studies.

Study 1a tested our main effects hypothesis via a field experiment at a restaurant. The experiment had three between-subjects manipulated conditions (sampling a healthy food vs. sampling an unhealthy food vs. control condition of no food sampling). The results show that the restaurant patrons who were given a healthy (vs. an unhealthy sample or vs. no sample) subsequently ordered unhealthy items from the menu to a greater extent. We replicated these findings in a lab setting (study 1b).

Study 2 tested the serial mediation effects whereby sampling a healthy (vs. an unhealthy) item leads to feeling good, which in turn leads to self-rewarding indulge and a higher likelihood of indulging (i.e., choose unhealthy options).

Then study 3 (a field experiment) examined the moderating effects of presence of other foods and found that when the sampled food item was displayed in the midst of healthy items, consumers sampling a healthy (vs. an unhealthy) item subsequently chose the unhealthy option to a greater extent. These effects were attenuated when the sampled item was displayed in the midst of unhealthy items.

While Studies 1a-3 examined the effects on subsequent choice of a single item, Study 4 (a field experiment conducted at a food store at a farmers’ market, in collaboration with the store management) examined the effects of sampling on subsequent purchase of total calories of a basket of items. As predicted, customers who sampled a healthy (vs. unhealthy) item right after arriving at the store ended up purchasing a higher amount of total calories.

In conclusion, five experiments (three conducted in field settings and two in the lab) demonstrate interesting results for the effects of sampling a healthy versus unhealthy food item on subsequent choices and total calorie purchases. In the absence of any moderators, sampling a healthy (vs. an unhealthy) item led to greater subsequent choice of unhealthy items and also greater amount of calories purchased.

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# The Trusted Influencer: How They Do It and How Brands Can Benefit

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## EXTENDED ABSTRACT

Social scientists have long argued that individual's preferences and decisions are heavily influenced by opinions and actions of others (McPherson, Smith-Lovin and Cook 2001). Countless studies across numerous disciplines, including marketing, have shown that the social influence effects are large and exist in a wide variety of environments (Hartmann 2008, Nair et al. 2006, Van den Bulte and Lilien 2001, Iyengar et al 2010, Bernheim 1994, Bass 1969, Choi et al 2008, Nair et al. 2006, Godes et al. 2005). Research has further shown that while every individual can potentially influence everyone else, some people or entities have a much larger impact on others preferences or actions (Van den Bulte and Joshi 2007, Nair et al. 2006, Trammell and Keshelashvili 2005, Aral and Walker 2014). Often referred to as "influencers" or "opinion leaders", they can trigger adoption of a particular belief or practice in a large population quickly (Lazarsfeld, Berelson, and Gaudet, 1948; Watts and Dodds, 2007).

Companies recognize the power of such influencers and seek to engage with them to encourage consumers to buy a particular set of products. These influencers are paid for their endorsements and as their viewers discover the existence of such payments, they question the presumed impartiality of such broadcasters, thereby limiting their influence, or so we think. Our findings illustrate that trust and influence are still maintained between influencer and influencee, despite knowledge of the paid endorsement. Using data from a 15-month qualitative study of the industry, we identify two types of strategies: one related to the review process, and one related to community management that allow online influencers to maintain influence despite being paid. Our sample consisted of interviews with successful and unsuccessful influencers based in New York and Los Angeles, interviews with talent agencies in Los Angeles; public relations firms in Los Angeles, London, New York, Paris, San Francisco and Toronto; and international consumer goods companies (based in the United States) that had partnerships with online influencers.

Our findings revealed that the payments that influencers receive present a fundamental dilemma for the influencers themselves. On the one hand, they are an important source of influencers' revenue. On the other hand, the payments actively undermine the presupposed independence of the online influencers. Even influencers who do not explicitly talk about products are not immune to these concerns. To alleviate these concerns, we discovered that the influencers have developed two sets of practices that allow them to maintain their influence, even if their followers are fully aware of the payments they receive. The first set requires that influencers provide their followers with extensive comparisons of various products in use, as compared to examining product features, while refraining from explicitly telling the viewers what to do or buy. The second set is much more affective in nature, and requires that the influencers augment their discussions and reviews of different products while maintaining a seemingly personal relationship with their audience, often by providing extensive insights into their personal lives and personalities so that they appear loveable, entertaining and above all, aspirational.

The analysis we present has important industry implications for how to produce an effective influencer strategy; specifically, online influence is effective because it is not a controlled experience. The influencer has to be able to talk about a product freely, engage in direct comparisons with other brands, and identify flaws. These kinds of messages are key because these potentially negative messages

are critical to establishing consumer trust. This implies that engaging with online influencers will produce a somewhat uncontrolled environment, but given that the influencers have their own brand to contend with, they need to say certain things to resonate with the audience, and continue to have influence over them. This is very different from what marketing executives are used to. In fact, the kinds of skills that were really helpful in the previous era, such as tight execution, scripting, making sure that the message was always consistent, might actually work against brands in the era of influencer marketing.

Despite the apparent success of online influencer marketing strategies so far, relatively little academic work has explored who the influencers are, how they operate and how they engage with companies (for notable exceptions see Subramani and Rajagopalan 2003; Biran, Rosenthal, Andreas, and McKeown 2012; and Trammell and Keshelashvili 2005). Our paper seeks to help fill this gap as we investigate the nuances of the influencer landscape and how trust is built and maintained.

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# Exploring Consumers' Technology Dreams and Nightmares: A Collage-Elicitation Study

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## EXTENDED ABSTRACT

The study adopts a holistic view of the role of technology in (post-) modern life to uncover the latent meanings behind consumers' dreams and nightmares associated with living in a techno-connected world and to uncover the dynamics of how dreams may turn into nightmares. This study builds on the extant marketing literature dealing with how consumers perceive and react to technology-based personalized interactions with brands. Technologies form ideologies that influence consumer's thoughts and narratives (Kozinets 2008). Conflicts and paradoxes are aplenty in the context of technology: for all the benefits that technology offers, it also brings different kinds of fears and concerns (Mick and Fournier 1998).

We draw on the literature on dream interpretation (Freud 1900, Lacan 1966) to explore how consumers reflect on the role of technology in their lives. The dream approach enables a deeper exploration of unconscious and irrational feelings, yielding new insights about consumers' holistic experience of their technology-mediated consumer journeys. Dreams are a 'powerful condensed metaphor for irrational beliefs' that cannot otherwise be articulated. (Barrett 2002) and psychodynamic work today still relies on dreams to access the unconscious. This 'manifest content', which we can consciously recall and articulate, is used to reveal the underlying, latent content.

Data were collected through focus group discussions, group construction of collages and collage narratives. Group collages serve as a compelling projective technique to access latent meanings without explicitly asking for them (Belk, Ger, and Askegaard 2003, Zaltman 1997). Collages provide a creative, unbounded, projective task that bypasses participants' defense mechanisms, rationalization, and social desirability biases. In the spirit of Zaltman's (1997) metaphor elicitation technique, this interpretive tool is used here to uncover deep insights into how consumers reflect on their lived experience of a techno-connected world. The use of collages in a group context facilitated the sharing of irrational thoughts among participants and the co-construction of collective narratives as participants build on others' ideas by enriching and contrasting them (Morgan 2002).

Data analysis was guided by grounded theory as advocated in Glaser and Strauss (1967) and elaborated by Strauss and Corbin (1998); verbatim data were coded and themes distilled using the constant comparative method of analysis (Spiggle 1994). We identified latent content in analyzing informants' metaphors, for example images of superheroes, desires, big brother, clones, etc. in each collage stories. The focus group discussions were used to supplement the analysis of 'surface meanings' and identify how dreams and nightmares relate to lived experiences in consumer journeys. The second level of analysis compared dream narratives to nightmare ones, to uncover the transformation of dreams into nightmares.

The analysis of focus groups, collages and collage narratives signals that dreams and nightmares are interrelated (Kramer 1991) and puts forth three mechanisms through which digital interactions can transform consumer experiences into nightmares: inaccurate personalized messages, repetition of personalized messages, and consumers' overreliance on immediacy of technology.

Dreams of an ideal day in the hyper-connected world involved metaphors of superpowers and fairytale. The services delivered by connected objects provide consumers superpowers, multiplying their

capacities, such as the capacity to anticipate, to have the immediate information, the power of ubiquity. In such a wonder world, objects and applications access data to enable personalized recommendations as well as anticipate needs and wants. Nightmares bring up themes of harassment and human objectification. Attempts of personalized notifications are viewed as creating conformism and uniformity, where individuals lose their uniqueness as illustrated by the twins in a nightmare collage. Consumers become dependent on techno-based interactions, illustrated by a man held by the tie in a nightmare collage. They become objects, harassed by a system of hyper consumption.

Although technology facilitates personalization of the interactions that underlie a world of superpowers and fairytales, deeper analysis reveals that personalization and immediacy also cause nightmares. Indeed, many nightmare collages start as dreams. We use those to analyze the shift.

Findings highlight that the promise of magic with the use of personalized and immediate notifications through digital devices contributes to a self-centered world, driven by instant and personal gratification (Lipovetsky 2006). Such promises raise consumers expectations and clash with real life contexts. The three mechanisms of inaccurate information, repetition and over-reliance on technology first interrupt the dream process, and participate to change consumers' vision of themselves: from superheroes living in a wonder world to objectified individuals living in a world of nonsense. Such findings shed light on unexpected consequences of digital personalized interactions: beyond the personalization/ intrusiveness paradox (Aguirre et al. 2015), our findings reveal that attempts to personalize can instead lead to standardization of human behavior. Findings also uncover a contrast between consumers' critical sense regarding personalized digital interaction and their credulity for blindly relying on immediate information from their digital devices. This raises the need for further research on consumer vulnerability in relation to ideologies of the techno-connected world.

From a methodological point of view, the use of both declarative insights from focus group discussions and projective data through collages enables access to a more accurate understanding of the interrelatedness of dreams and nightmares. The combination of methods enables exploration of all facets of the phenomenon, including its paradoxical aspect (McGrath, Sherry and Levy 1999). Collages enable access to latent content because the process of creation of a collage is metaphorical (Zaltman 1997). The group dynamics boosted the creativity of collages by engaging informants into magical and absurd narratives. Focus groups narratives helped connect latent meanings and consumers' lived experiences.

Of course, caution is warranted to not over interpret dreams and nightmares and to not overstate the psychiatric meanings of collages, since none of the authors are professional psychotherapists even though one of them has previously worked on applications of psychodynamics in consumer research. Notwithstanding these limitations, the dream approach offers a novel lens through which to uncover consumers' reflections of their own experience in a technology-ridden world.

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# When Consumers Choose for Others, Their Preferences Diverge from Their Own Salient Goals

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## EXTENDED ABSTRACT

People's daily lives are filled with consumption decisions, which frequently involve making choices for others. In the current research we examine how choices for others differ from choices for oneself based on one important factor—the way these choices are influenced by consumers' own salient goals.

Extant research demonstrated that consumers are motivated to fulfil goals through consumption (Yang et al., 2015), that consumers evaluations and choices of products are based on instrumentality of those products to consumer-goal fulfilment (Garbarino and Johnson, 2001; Ramirez et al., 2015), and that goals with higher levels of activation (i.e., more salient goals) have a stronger influence on product evaluation and choice (van Osselaer and Janiszewski, 2012). In other words, consumers prefer products congruent with their salient goals because consumption of these products allows them to experience (or at least perceive experiencing) progress toward these salient goals. Prior studies examined situations in which consumers make choices for themselves; how consumers' salient goals influence choices made for others, however, remains an open question.

In the current research we predict that when consumers choose for others, their preferences diverge from their own salient goals. Perception of goal progress is not only influenced by a consumer's own goal-consistent or goal-inconsistent actions, but also by social comparison (e.g., Fishbach and Dhar, 2005; Fishbach et al., 2006). Consumers perceive making more (vs. less) goal-progress if they compare themselves to a lower (vs. higher) standard (e.g., Etkin and Ratner, 2012) or if they compare themselves to a person who is making less (vs. more) goal progress or engages in less (vs. more) goal-consistent actions (e.g., Fishbach and Dhar, 2005; Fishbach et al., 2006; Park and Hedgecock, 2016).

Based on the notion that consumption of goal-consistent products creates the perception of progress toward the goal and that comparing oneself to another who is making more (vs. less) progress undermines (vs. enhances) perception of one's own progress toward the goal we predict that choosing a product for another person (vs. for oneself) increases preference for products that are incongruent with a salient consumer goal compared to products that are congruent with a salient consumer goal. We contend that this effect occurs because the perception of consumer's own goal-progress is enhanced (vs. undermined) by goal-incongruent (vs. goal-congruent) products chosen for another person (vs. oneself).

Further, we suggest that this effect only holds for salient goals construed at a personal level. Goals construed at group- or societal-level will not influence preferences in the same way. A goal is set at a group level when a specific level of performance that is to be attained is measured by collectively assessing the level of performance of all group members (Weingart and Weldon 1991; Weldon and Weingart 1988). If a salient goal is set at a group/societal level, choosing a goal-congruent (vs. goal-incongruent) product for another person should contribute to the perception of progress on the salient goal (as long as the recipient belongs to the social unit of the goal level); hence consumers should prefer goal-congruent products for others for salient goals set at group/societal level.

In Study 1 participants were primed either with a goal of healthy eating or with a goal of taking pleasure in the food they eat. After completing a filler task, participants made a choice between an apple and a Twix bar to either keep for themselves or to give to a

friend. Participants who were choosing for themselves were more likely to choose a goal-consistent option (63%), while participants choosing for a friend were more likely to choose a goal-inconsistent option (58%;  $\chi^2(1) = 5.452, p = .02$ ). In study 2 female participants were primed with a goal of being beautiful and imagined buying a beauty or wine-tasting gift card either for themselves or for a friend. We measured goal-progress perception and purchase evaluation. Participants who imagined buying for themselves evaluated a goal-consistent purchase ( $M = 5.81, SD = 1.44$ ) higher than a goal-inconsistent purchase ( $M = 4.69, SD = 1.77, F(1, 172) = 11.150, p < .001$ ). Participants who imagined buying for a friend evaluated a goal-consistent purchase ( $M = 5.15, SD = 1.68$ ) lower than a goal-inconsistent purchase ( $M = 5.84, SD = 1.28; F(1, 172) = 4.175, p = .043$ ). Participants who imagined buying for themselves perceived more goal-progress if they imagined buying a goal-consistent product ( $M = 5.01, SD = 1.20$ ) than a goal-inconsistent product ( $M = 4.40, SD = 1.40; F(1, 173) = 4.183, p = .042$ ). Participants who imagined buying for a friend perceived less goal-progress if they imagined buying a goal-consistent product ( $M = 4.37, SD = 1.66$ ) than a goal-inconsistent product ( $M = 5.03, SD = 1.29; F(1, 173) = 4.734, p = .031$ ). Perception of goal-progress mediated the effect of choice recipient on purchase evaluation of a goal-consistent versus goal-inconsistent product. In study 3 participants were primed with a health goal either on a personal or societal level and imagined shopping for themselves or for a friend. Participants expressed purchase intentions either for goal-consistent or goal-inconsistent products. Among those who were primed with a health goal on a personal level: In the buying-for-the-self condition, purchase intentions were higher for goal-consistent products ( $M = 5.67, SD = 1.41$ ) than for goal-inconsistent products ( $M = 4.58, SD = 1.65; F(1, 200) = 13.364, p < .001$ ). In the buying-for-a-friend condition, purchase intentions were higher for goal-inconsistent products ( $M = 5.49, SD = 1.15$ ), than for goal-consistent products ( $M = 4.89, SD = 1.72; F(1, 200) = 4.059, p = .045$ ). Among those who were primed with a health goal on a societal level, there was only a main effect of product so that purchase intentions were higher for goal-consistent products ( $M = 5.35, SD = 1.38$ ) than for goal-inconsistent products ( $M = 4.78, SD = 1.64; F(1, 202) = 7.113, p = .008$ ).

This research contributes to the body of research on goal-directed consumption by demonstrating that choices made for others are influenced by salient goals differently than choices made for the self.

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# Can Implicit Theory Influence Construal Level?

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## EXTENDED ABSTRACT

Implicit theories (Dweck, 1999) influence people's beliefs about the malleability (incremental theory) versus stability (entity theory) of human traits and world disposition and account for a variety of differences in behavior exhibited by consumers. For example, entity theorists form strong attitudes about brands faster and with less cognitive elaboration than incremental theorists (Kwon & Nayakankuppam, 2015); entity theorists also form perceptions of people based on their brand use more readily than incremental theorists do (Park & John, 2018). On the other hand, incremental theorists are more susceptible to framing effects in advertising (Jain, Mathur, & Maheswaran, 2009), and are more accepting of brand extensions compared to entity theorists (Yorkston, Nunes, & Matta, 2010).

Is it possible that the implicit theory that an individual holds influences a fundamental aspect of the cognitive process—the level of construal (Lieberman & Trope, 1998) at which information is processed and organized? The answer to this question can provide a wealth of information about implicit theorists' tendencies as consumers, as construal level has been shown to impact which product features and attributes consumers value in product-choice (Zhao, Hoeffler, & Zauberaman, 2007), how they evaluate and select financial products (Ainslie & Haslam 1992; LeBoeuf 2006), and how they mentally organize product information (Lee, Deng, Unnava, & Fujita, 2014).

Abstract representations necessitate assignment of meaning to certain stimuli, and any concrete action can lend itself to “multiple abstract representations” (Lieberman, Sagristano, & Trope, 2002, p. 524). The transition from an observed concrete event to its abstract form occurs by considering pertinent situational information to determine which of the multiple possible abstract representations is most relevant (Lieberman et al., 2002). As such, this transition requires the individuals to efficiently switch between thinking about different superordinate concepts that could potentially represent the observed concrete action—the ability captured by a construct known as cognitive flexibility (Scott, 1962). Indeed, cognitive flexibility is an integral part of an abstract mindset responsible for exploratory and creative tendencies of abstract thinking (e.g., De Dreu, Nijstad, & Baas, 2011; Jia, Hirt, & Karpen, 2009).

Holding an incremental (vs. entity) theory makes people more flexible in their interpretation of observed outcomes. Entity theorists attribute observed events to “fixed” underlying dispositions, while incremental theorists rely on pertinent situational information to arrive at an explanation (Erdley & Dweck, 1993; Hong, 1994). As such, incremental theorists acknowledge that several alternative explanations of an observed outcome are potentially plausible, demonstrating that they are aware of multiple possibilities and alternatives in a situation—consistent with Martin and Rubin's (1995) definition of cognitive flexibility. In addition, entity theorists are often reluctant to adjust their thinking based on new information (Erdley & Dweck, 1993), indicative of lower cognitive flexibility (Deak, 2003) on the part of entity theorists. Lastly, incremental theorists endorse the belief that a person's behavior is not fixed by an underlying personality trait but rather is a response to the demands of a situation (Erdley & Dweck, 1993) consistent with Martin and Rubin's (1995) behavioral efficacy component of cognitive flexibility. We propose that incremental (vs. entity) theory leads to increased (vs. decreased) cognitive

flexibility and causes individuals to adopt a more abstract (vs. concrete) level of information construal. Study 1 demonstrated that individuals' implicit theory (measured via Levy et al.'s 1998 instrument) correlates with their level of action identification (BIF—Vallacher & Wegner 1989), so that stronger incremental (vs. entity) theory is associated with action identification on a more abstract level (vs. concrete level). Study 2 primed incremental (vs. entity) theory using Chiu and colleagues (1997b) manipulation and measured cognitive flexibility (Martin & Rubin 1995) and construal level. Manipulating incremental (vs. entity) theory led to greater cognitive flexibility. Increased cognitive flexibility, in turn, led to stronger preference for desirability/feasibility in product preference indicative of abstract/concrete construal (Yan, Sengupta, & Hong, 2016; Aggarwal & Zhao, 2015). In study 3, we primed implicit theory using the same procedure as study 2 and assessed construal using two measures. The first measure was a lottery choice (Aggarwal & Zhao, 2015): Lottery A offered a 1 in 100 chance of winning \$50, with the reward available immediately (preferred by concrete thinkers); Lottery B offered a 1 in 100 chance of winning \$65, with the reward available with a time-delay of three months (preferred by abstract thinkers). The second measure involved a product grouping exercise. Participants saw 6 groups of 4 products (one group at a time). Each group consisted of two product categories with two brands within each product category. For each group, participants indicated which products belong together (belonging to the same product category or to the same brand). We argue that product categories are superordinate to brands. Since product category reflects functionality of a product, it represents a primary feature, whereas brand reflects preference within a product category—a secondary feature. Incremental (vs. entity) theorists were more likely to select a lottery option with greater pay-off available after time delay (vs. lower pay-off available immediately) indicating abstract (vs. concrete) thinking. Incremental (vs. entity) theorists were more likely to organize products by product category (vs. by brand) also reflecting a tendency to think in superordinate (vs. subordinate) terms.

The current research furthers our understanding of consumer behavior by bridging two important theoretical frameworks—implicit theory and construal level. We identify that incremental theorists think more abstractly than entity theorists and that cognitive flexibility mediates this relationship. This finding is novel and has implications for the understanding of consumer behavior. As demonstrated by the results of our studies, incremental (vs. entity) theorists value desirability (vs. feasibility) in products choice, prefer financial products with greater pay-off amounts even if it requires time delay (vs. smaller pay-off amounts without time delay) and organize products by product category (vs. by brand). Future research should examine whether construal level may explain previously observed implicit-theory effects.

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# Which Healthy Eating Nudges Work Best? A Meta-Analysis of Field Experiments

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## EXTENDED ABSTRACT

Healthy eating nudges have generated a lot of excitement but, disappointingly, existing meta-analyses have only found average effect sizes ranging from null to moderate. Our work contributes to the many useful existing meta-analyses in terms of (1) scale and scope, (2) method, and (3) categorization of predictors.

In terms of scale and scope, we examine more than twice as many effect sizes as the largest existing meta-analysis. This is achieved despite focusing only on field experiments involving actual food choices (vs. perception, evaluation, or choice intentions) and conducted in field settings (onsite cafeterias, offsite eateries, or grocery stores) rather than in a laboratory or online. This allows us to offer guidance to restaurants, supermarket chains, and foodservice companies who want to help their customers eat more healthily but do not know which intervention will work best in their particular context; and to provide guidance for policy makers who need to forecast the effects that these nudges would have in real-world settings.

Methodologically, our meta-analysis differs from earlier ones on three levels. First, we formulate hypotheses about which healthy eating nudges work best and about the effects of eating behavior and of population and study factors. Second, to reduce the risk of confounds from univariate analyses, we employ a multivariate model incorporating all predictors simultaneously. Third, we include a three-level analysis to take into account the hierarchical structure of our data.

Finally, Figure 1 shows that we use a more granular predictor structure compared to existing meta-analyses, which either estimated the effect size of a single type of healthy eating nudge or compared the effect of one single difference (say, descriptive vs. evaluative labeling) and which rarely incorporated behavior, population, and study characteristics.

We distinguish between seven nudge interventions classified according to whether they are 1) cognitively-oriented, such as “descriptive nutritional labeling,” “evaluative nutritional labeling,” or “visibility enhancements”; 2) affectively-oriented, such as “hedonic enhancements or “healthy eating calls”; or 3) behaviorally-oriented, such as “convenience enhancements” or “size enhancements.” Our framework also accounts for the type of eating behavior (food selection or consumption) and distinguishes between healthy eating, unhealthy eating, and total energy intake. It also considers population characteristics such as age (children vs. adults), consumption setting (onsite cafeterias vs. offsite eateries vs. grocery stores), and location of the study (USA vs. other countries), as well as characteristics such as the duration of the study and its design.

Compared with existing univariate meta-analyses, our multivariate three-level meta-analysis of 300 effect sizes controlling for

eating behavior, population, and study characteristics yields smaller effect sizes overall. The average effect size of healthy eating nudges is  $d = .24$ , with a 95% confidence interval of [.16; .32].

In order to provide a more intuitive grasp of what this means, we computed the daily energy equivalent that one would expect from such an effect size using the method described in Hollands et al. (2015). Since  $d$  is the standardized mean difference, a  $d$  of .24 means that, on average, healthy eating nudges increase healthy eating by .23 standard deviations. Assuming that the standard deviation in daily energy intake is 537 kcal for an adult (Hollands et al. 2015), the average effect size of .24 translates into a  $.24 * 537 = 129$  kcal change in daily energy intake (-7.5% of the 1,727 kcal average energy intake). Given that a teaspoon of sugar contains 16 kcal, this is equivalent to about 8 fewer teaspoons of sugar per day.

Effect sizes increase as the focus of the nudges shifts from cognition ( $d = .12$ , -64 kcal) to affect ( $d = .25$ , -134 kcal) to behavior ( $d = .40$ , -215 kcal). Analyses at the level of each intervention type show even larger differences. For example, by switching from descriptive nutrition labeling to plate and portion size changes, cafeteria managers can expect to improve the effectiveness of their intervention by a factor of 14.

We also find that behavioral interventions are more effective in reducing unhealthy eating ( $d = .36$ ) than increasing healthy eating ( $d = .27$ ) or reducing total eating ( $d = .08$ ). Effect sizes are larger in the US than in other countries, in restaurants or cafeterias than in grocery stores, and in studies including a control group. Effect sizes are similar for food selection vs. consumption, for children vs. adults, and are independent of study duration. Compared to the typical study, one testing the best nudge scenario should expect a fourfold increase in effectiveness, with half due to switching from cognitive to behavioral nudges.

Overall, our results show that healthy eating ‘nudges work, help predict the impact of a particular intervention in a given environment, and highlight areas for future research. An online tool (<http://tinyurl.com/healthy-eating-nudge>) allows researchers to correct and update our data, turning our work into a “live” meta-analysis that can be continuously updated.

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# When Zero Prices Backfire: A Dual-Process Model for Understanding Consumers' Reactions to Zero Prices

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## EXTENDED ABSTRACT

Both intuition and prior research indicate that people like inexpensive products and that free products are particularly attractive. Therefore, compared to a low price, a zero price can substantially enhance consumer demand (Shampanier, Mazar, and Ariely 2007). In this research, we show that a zero price can also backfire. We argue that zero pricing produces two parallel tendencies: positive feelings resulting from not having to spend money, plus cognitive scrutiny of the offer for nonmonetary costs (e.g., time costs, worries that the product malfunctions, etc.). If the nonmonetary costs are high, a close scrutiny can lead to greater concerns, which might override the immediate positive affect elicited by the free signal. As a result, a zero (vs. low) price will decrease consumers' intentions to take the offer. But if the nonmonetary costs are low, the scrutiny may lead to a low level of negative concerns. In that case, the positive affect elicited by the zero price will still have a dominant impact. Therefore, we hypothesize that

*Hypothesis 1* When nonmonetary costs for obtaining or using a product are high, a zero (vs. low) price decreases consumers' intention to try the product.

*Hypothesis 2* When nonmonetary costs for obtaining or using a product are low, a zero (vs. low) price increases consumers' intention to try the product.

In study 1, we used a 2 (prices: zero or low)  $\times$  2 (nonmonetary costs: high or low) between-subjects design. The context is about making a decision of taking a stress management course. Participants were 205 students from a large Midwestern university in the United States. In the high nonmonetary cost conditions, we told participants that the course would be given on another campus, about a 40-minute trip from the main campus where they usually study and live. Therefore, taking the course requires them to spend a significant amount of time and effort on travel. In the low nonmonetary cost conditions, we told them that the course would be held online, so there would be no traffic hassles in these conditions. Then we told participants that they could take the trial lesson either for free (zero price) or by paying \$2 (low price). Participants indicated their willingness to attend the trial lesson (1 = not at all, 7 = very much). Then, we asked them to write down their thoughts when they made the decision. We also asked them to indicate their feelings when they saw the offer (1 = very unhappy, 7 = very happy).

Results supported our hypotheses. When nonmonetary costs were low, participants in the zero (vs. low) price condition were more inclined to attend the trial lesson (3.49 vs. 2.94,  $F(1, 201) = 3.75$ ,  $p = .054$ ,  $\eta_p^2 = .02$ ). But when nonmonetary costs were high, participants in the zero (vs. low) price condition were less inclined to attend (2.50 vs. 3.12,  $F(1, 201) = 4.81$ ,  $p = .029$ ,  $\eta_p^2 = .02$ ). A coder blind to hypotheses and experimental conditions coded participants' thoughts. We formed an index representing concerns about nonmonetary costs based on the following ratio: (number of unfavorable thoughts about

nonmonetary costs – number of favorable thoughts about nonmonetary costs)/number of all thoughts. Consistent with our prediction, we found that a zero (vs. low) price prompted more concerns about nonmonetary costs only when nonmonetary costs were high (.40 vs. 0.19,  $F(1, 192) = 10.98$ ,  $p = .001$ ,  $\eta_p^2 = .05$ ) but not when they were low (.17 vs. .24,  $F(1, 192) = 1.04$ ,  $p = .31$ ). The results of a moderated mediation analysis further showed that positive affect significantly mediated the effect of zero (vs. low) prices on intentions to attend the lesson, irrespective of nonmonetary costs,  $b_{\text{high nonmonetary cost}} = .26$ ,  $SE = .12$ ,  $BC\ 95\% \text{ CI } [.04, .53]$ ,  $b_{\text{low nonmonetary cost}} = .42$ ,  $SE = .15$ ,  $BC\ 95\% \text{ CI } [.16, .74]$ . However, the mediation effect through concerns about nonmonetary costs was significantly moderated by the level of nonmonetary costs; the mediation effect was significant only when nonmonetary costs were high,  $b = -.15$ ,  $SE = .07$ ,  $BC\ 95\% \text{ CI } [-.34, -.04]$ , but not when nonmonetary costs were low,  $b = .05$ ,  $SE = .05$ ,  $BC\ 95\% \text{ CI } [-.03, .18]$ .

In study 2, we tested our hypotheses using a secondary data from a smartphone application that provides auto repair solutions to car owners. This application allows registered users to post questions regarding problems with their cars. The auto mechanics will answer their questions. Before May-27-2017, car owners could post questions and receive answers either for free or by offering a small compensation to the mechanics. However, after May-27-2017, the free service was discontinued. All questions would then need to include a small compensation for the mechanics. The nonmonetary costs in this situation are likely to focus on the risk of getting incorrect advice and thus having a bad consumer experience. We hypothesize that these risk will loom larger to the extent that one owns an expensive car. We obtained data regarding users who registered within 30 days before the policy change (30-days-before) or within 30 days after the change (30-days-after). Based on the users' car price information, we used a median split method to classify the users into two categories: expensive-car owners (perceiving high nonmonetary costs) and cheap-car owners (perceiving low nonmonetary costs).

The usage of the service application is reflected in two behaviors: registration and question-posting. The results on both behaviors are consistent with our hypotheses. First, discontinuing the free service increased the number of registrations among expensive-car owners ( $N_{30\text{-days-before}} = 14,674$ ,  $N_{30\text{-days-after}} = 21,487$ ) but decreased the number of registrations among cheap-car owners ( $N_{30\text{-days-before}} = 27,102$ ,  $N_{30\text{-days-after}} = 18,361$ ). Second, among the newly registered members, discontinuing the free service significantly increased the proportion of expensive-car owners who posted questions (30-day-before vs. 30-day-after: 23.69% vs. 33.69%,  $\chi^2(1) = 418.34$ ,  $p < .001$ ), but the effect was reversed for cheap-car owners (30-days-before vs. 30-days-after: 55.96% vs. 16.64%,  $\chi^2(1) = 7047.82$ ,  $p < .001$ ). These results demonstrate that our hypotheses can be generalized into real-world business practices.

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# Consumers' Attitudes Towards Their Rights and Responsibilities in the Sharing Economy: An Ideological Perspective

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## EXTENDED ABSTRACT

Despite consumers being essential to the exponential growth of the sharing economy, knowledge of their context-specific attitudes towards their rights and responsibilities is scant. This research addresses this gap by testing a novel hypothesised model mapping how consumers' moral foundations influence their political ideologies which in turn influence their attitudes towards their rights and responsibilities. The research context consists of Uber customers in the United States.

### Consumer rights

In 1985, The United Nations adopted eight basic principles of consumer protection: the right to basic needs, safety, be informed, choice, be heard, redress, consumer education and a healthy environment (Consumers International 2017). The applicability of these well-established principles is now being tested in the sharing economy. For example, BEUC—The European Consumer Organisation—notes: “questions emerge such as how existing laws regarding information provision or the liability of each party, apply in these new business models. This is why policy makers need to have a close look at this ‘collaborative economy’ to ensure it is delivering for consumers” (2016, 1).

### Mutual self-regulation

Fitzmaurice et al. (2016) argue that the consumer attraction to the sharing economy centres on a longing for marketplace exchanges imbued by a sense of greater intimacy, community, and moral obligation. The descriptive language linked to the sharing economy reflects such aspirations: sharing rather than exchanging, collaborating rather than competing, and peer-to-peer rather than corporate-to-consumer. The peer-to-peer feature of sharing economy exchange may promote a sense of mutuality—defined as “the sharing of a feeling, action, or relationship between two or more parties” (Oxford Dictionary 2017). An important part of this mutual self-regulation involves transparency and information sharing that fosters trust that exchanges will be fair. Reflecting this idea, this research proposes that consumers in the sharing economy may perceive such mutuality as an alternative form of (self) regulation to that of (or in addition to) imposed government regulation and/or onus on individual responsibility.

### The role of political ideology

Henry (2010) in his study of consumer rights and responsibilities employed a one-dimensional approach to political ideology that ranged from libertarian (individual autonomy) through to liberalism (social equality)—a case of self-reliance versus social support. The libertarian position abhors government intervention that impinges in any way on individual autonomy (Hayek 1978; Kekes 1997; Nozick 1974). Hence, small government is good government with heavy regulation of consumer rights likely to be rejected. Liberalism is less black and white. Rather, liberals recognise that a certain amount of inequality exists in everyday sociality, being a by-product of belief in significant motivation for individual advancement. These ideas suggest that liberals are likely to support both regulatory protection and individual responsibility. In particular liberals are likely to advocate

regulation to a far greater degree than libertarians, but place comparatively lesser onus on individual responsibility.

### Moral foundations

Haidt, Graham, and Joseph (2009) argue that political ideology is underpinned by distinctive moral foundations. These foundations can be thought of as a “system that enables people to perceive actions and agents as either praiseworthy or blameworthy” (Haidt, Graham and Joseph 2009, 112). They describe five categories of moral foundations that include avoiding harm/care for others, fairness/reciprocity in equal treatment of others, in-group/loyalty to your immediate group, authority/respect for hierarchy, traditions, and purity/sanctity, which refers to sense of virtue, decency and adherence to dominant norms of behaviour. Liberals are distinguished from the other ideologies in that they display a greater emphasis on avoiding harm/care for others and fairness/reciprocity. Conservatives are distinguished by a propensity for placing the greatest emphasis on in-group/loyalty, authority/respect, and purity/sanctity. These authors found that Libertarians are the least bound by moral foundations.

### Method

Consumers in the USA, who had used Uber at least once, formed the site of study. The Uber business model is typical of the sharing economy in that the Uber Corporation does not own the vehicles or physically interact directly with either drivers or passengers. Rather it acts as a platform that connects the driver and passenger. We employed two studies. The first was designed to develop and test measures for the three political ideologies (liberalism, libertarianism, and conservatism) and the three mechanisms that consumers perceive as facilitators of fair exchange (regulation, individual responsibility and mutual self-regulation). The second study added the Moral Foundations questionnaire (Graham et al. 2011) and tested the hypothesised model that flowed from left to right with moral foundations influencing political ideology which in turn influences consumer rights and responsibilities.

In study one, we developed and assessed a pool of 32 items set up as a Likert-type survey format with seven-point scales and administered the initial questionnaire via Amazon's M-Turk survey panel in the USA. The completed sample consisted of 496 consumers who had used the Uber app. From this sample we derived a theoretically appropriate solution of twenty items (3 rights items, 4 mutual self-regulation items, 3 individual responsibility items, 4 libertarian items, 4 liberal items and 2 conservative items). We then took this 6 factor solution into the second study. In study two, we included the thirty item Moral Foundations Questionnaire (Graham et al. 2011) along with the 6 factor solution derived in study one. We then used a second sample of 769 respondents to test the model using SEM.

### Findings

Overall, the hypothesised model displayed an excellent fit with all statistics exceeding recommended cut-offs (Hu and Bentler 1999). In summary, our hypothesised structural model - where moral attitudes tend to be associated with political views, which in turn influence consumer rights and responsibilities - is substantially veri-

fied. Liberals tend to emphasise Avoiding harm/Fairness, conservatives tend to emphasise Authority, and libertarians are influenced by Loyalty and Purity to a lesser extent. In terms of Consumer Rights and Responsibilities, liberals tend to equally emphasise Consumer Rights and Mutual Self-regulation, whilst conservatives emphasise all three aspects (Consumer Rights, Mutual Self-regulation and Individual Responsibility). Libertarians, not surprisingly, tend to focus exclusively on Individual Responsibilities.

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# Pro-Environmental Waste Receptacle Labeling Can Increase Recycling Contamination

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## EXTENDED ABSTRACT

Early research has suggested that point-of-disposal signage and recycling receptacle modifications can increase recycling rates (Austin et al., 1993). However, the once steady increase in overall recycling rates over the past few decades appears to be stalling, with the most recent data showing only a 0.6% increase from four years prior (US EPA, 2014). At the same time, there has been a substantial rise in the rate of contamination from placing unrecyclable materials in recycling receptacles, which has created significant additional costs in the follow-up processing (Grodén, 2015).

In four field and online experiments, we show that point-of-disposal signage aiming to encourage recycling (such as the term “landfill” on garbage bins) could also increase recycling contamination. Prior research suggests people are generally averse to being wasteful (Bolton & Alba, 2012) and that failure to recycle could engender feelings of guilt (Viscusi et al., 2011). Therefore, we reason that labeling garbage bins with pro-environmental terms could make emotions evoked by the negative consequences of garbage more salient and thus increase the likelihood that individuals will incorrectly categorize unrecyclable items as being recyclable.

In study 1 ( $n = 259$  observations), as part of a new product sampling event by a well-known brand of coffee and related products, we offered passersby on a university campus the opportunity to sample a carbonated beverage (served in an unrecyclable foam cup). The study site featured two swing-top bins to dispose of their used sample cups. The label on one bin was experimentally manipulated to be either “Landfill” or “Trash”. The other bin was labeled as “Recycle” in both conditions. The rate of (incorrect) recycling increased to 54.5% (67 out of 123 cups) when the “Landfill” label was used compared to 25.0% (34 out of 136 cups) for the “Trash” label ( $\chi^2(1) = 23.58, p < .001$ ).

In study 2 ( $n = 122$  observations; minimum of 33 observations per condition), during a separate beverage sampling event several weeks after the study 1, using the same procedures and unrecyclable cups as study 1, we tested additional types of labels including (i) control: “Trash” and “Recycle”, (ii) avoid garbage: “Don’t Destroy the Earth, Trash Less” and “Recycle”, (iii) encourage recycling: “Trash” and “Save the Earth, Recycle More”. Compared to the control condition, the recycling rate of the foam cups significantly increased in the avoid garbage condition (19.6% vs. 60.5% respectively;  $\chi^2(1) = 15.58, p < .001$ ) and marginally significantly increased in the encourage recycling condition (19.6% vs. 39.4% respectively;  $\chi^2(1) = 3.76, p = .052$ ).

Study 3 ( $n = 225$ ; minimum of 51 participants per condition) provided some preliminary evidence of the underlying mechanism. Participants were randomly shown one pair of receptacles used in Studies 1 or 2 and an image of an empty potato chip bag. They were asked to imagine that they had disposed of the chip bag in the trash/landfill bin and to indicate how much they felt ashamed/guilty/embarrassed/bad/happy/good/proud/pleased (scale endpoints: 1 – Strongly disagree; 7 – Strongly agree; Donnelly et al. (2017) and Sun & Trudel (2017)). Participants then were asked how likely they were to retrieve the potato chip bag and instead dispose of it in the Recycling Bin (scale endpoints: 1 – Very unlikely; 7 – Very likely; Trudel et al. (2016)). We found that the mean intention to recycle of the “Saving the Earth” condition was not significantly different from the

baseline condition ( $F(1, 102) = 1.92, p = .17$ ) but the mean intention to recycle in the “Don’t Destroy the Earth” condition ( $F(1, 105) = 6.59, p = .01, \eta_p^2 = .06$ ) and the “Landfill” condition ( $F(1, 109) = 7.09, p = .01, \eta_p^2 = .06$ ) were significantly higher than the baseline condition. Similarly, the negative emotion index in the “Saving the Earth” condition was not significantly different from the baseline condition ( $F(1, 102) = 0.048, p = .83$ ) but the mean intention to recycle of the “Don’t Destroy the Earth” condition ( $F(1, 105) = 4.09, p = .046, \eta_p^2 = .04$ ) and the “Landfill” condition ( $F(1, 109) = 15.11, p < .001, \eta_p^2 = .12$ ) were significantly higher than the baseline condition. Lastly, the positive emotion in the “Saving the Earth” condition ( $F(1, 102) = .09, p = .76$ ) and the “Don’t Destroy the Earth” condition ( $F(1, 105) = .73, p = .40$ ) were not significantly different from the Baseline condition, but the mean positive emotion index of the “Landfill” condition ( $F(1, 105) = 15.49, p < .001, \eta_p^2 = .12$ ) was significantly higher than the baseline condition. We tested the mediation role of positive and negative emotions in each pairwise comparison. The results showed that across all mediation analyses, negative emotions were consistently mediating the effect while the results for positive emotions were less consistent.

Study 4 ( $n = 60$  observations; 30 per condition) explored a way to mitigate the previously observed contamination by incorrect recycling of unrecyclable items. Specifically, we conducted a before-and-after field experiment involving six different garbage/recycling bin pairs on a university campus to test the mitigating effect of a pictorial guide illustrating proper item disposal. We measured the contents of these bins in the first week as the baseline condition. In the next week, both garbage bins and recycling bins were labeled with pictorial guides featuring appropriate items to be placed in each bin. The results show that the proportion of unrecyclable items (excluding wrappers) placed in the recycle bin was marginally significantly reduced when the bins featured pictorial guides (26.7% vs. 32.5%;  $t(29) = -1.48, p = .075$  (one-tailed)). The proportion of unrecyclable wrappers placed in the recycle bin was also marginally significantly reduced when the bins featured pictorial guides (21.4% vs. 27.7%;  $t(29) = -1.54, p = .067$  (one-tailed)). And there was no statistically significant change in the proportion of recyclable items placed in the recycle bin (80.2% vs. 79.7%;  $t(29) = .09, p = .464$  (one-tailed)).

In sum, our studies suggest that if proper steps to educate people about accurate disposal are not taken common efforts to increase recycling rates through receptacle labeling (e.g., using the term “landfill” on garbage bins) could lead to higher recycling contamination because of the emotions evoked by these labels.

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# Understanding Trust Formation in Peer-to-peer Social Commerce

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## EXTENDED ABSTRACT

Many users perform informal commercial transactions (e.g., no contracts, invoices, or official guarantees) on Instagram to sell and buy clothes, accessories, art, or even puppies. We call these informal, peer-to-peer social media markets “Insta-shops.” Insta-shop activities fit within the scope of social commerce because they comprise a commercial activity platform on one of the most popular social networking sites, Instagram, which allows for peer-to-peer interactions (Liang and Turban 2011). Insta-shops are fascinating to study because it not only contributes to the academic literature on peer-to-peer social commerce markets, but also provides significant insights on trust formation when the risk of vulnerability is involved.

Researchers have extensively discussed the issue of trust and its significance in the context of e-commerce (e.g., Morrison and Firmstone 2000). However, since social commerce is a relatively new research domain, studies on trust formation in this setting are scarce. Also, while some studies (e.g., Liang et al. 2011; Hajli et al. 2017) have investigated how peer recommendations, reviews, and ratings increase familiarity with the platform and, thus, positively influence the perceived trustworthiness of a particular social commerce site, no prior research has considered who the reviewer is and how the online identity of that reviewer affects trust formation. Within the Insta-shop context, this study attempts to analyze the links between online identities, trust formation, and purchasing behavior. For this purpose, we employ the media credibility framework, which has three theoretical dimensions: medium credibility, source credibility, and message credibility (e.g., Cosenza et al., 2015). With this study we propose a new dimension to these existing credibility evaluations: social credibility.

Since this study focuses on trust formation in social commerce by investigating the motivations and experiences of both consumers and sellers, a qualitative inquiry using semi-structured, open-ended, in-depth interviews was appropriate to provide a greater breadth of data (Fontana and Frey 2000). Seventeen semi-structured, in-depth interviews were conducted with Insta-sellers and Insta-consumers. For an overall understanding of a given phenomenon, a combination of visual and textual imagery is crucial (Highfield and Leaver 2014). Therefore, we gathered images from our informants to fully understand the influence of Instagram visuals on trust. A total of 51 images were analyzed regarding their textual and graphical components, and the results were incorporated with the textual analysis.

All transcripts were examined manually using the open-coding method by one researcher who was more familiar with the research setting. Once the labeling process was complete, the findings were grouped for each interview. Similar patterns and irregularities between transcripts were checked. As suggested by Creswell (2003), to achieve reliability in the analysis, researchers identified the core categories using selective coding. Two researchers carried out regular checks of the transcripts, codes, their self-reflectivity, and theory to achieve credibility in the findings until they came to a substantial agreement.

Our findings reveal three primary motivations of sellers and consumers to shop from and sell on Instagram: 1) social influence, 2) convenience, and 3) economic gain. There is a significant relationship between these motivations and trust formation toward the medium. Social influence is linked to the logic of “following the crowd.” Convenience is related to the platform’s ease of use. Both consumers

and sellers trust a medium that is easy, time-efficient, and does not require advanced technical knowledge. Consumers find the entire Instagram shopping journey, from search to purchase, fast and straightforward, while sellers consider Instagram to be the most interactive selling tool. Lastly, consumers choose Instagram to have a smooth shopping experience with competitive pricing, and sellers believe Instagram is a way to make money more quickly compared to using other social media platforms. The unique benefits of Instagram, its popularity, and the opportunity for economic gain positively influence trust formation towards the medium.

Since the source communicates cues that are more specific about a vendor’s trustworthiness, medium credibility is followed by source credibility (Lucassen and Schraagen 2011). On Insta-shops, consumers check cues such as product presentation; user reviews; and the number of followers, likes, and comments. After checking the shop’s background, if consumers decide to communicate with the seller, they use WhatsApp, which leads to the formation of message credibility.

Aware of the increasing number of phishing scams by fake accounts (e.g., having paid followers, likes, and comments), consumers feel the need to extend their evaluations beyond the seller and the shop and look for personal and social proof based on other users. Beyond the examples mentioned above for medium, message, and source credibility, a new dimension appears in our research. Trust is also formed by “cyberstalking” the personal Instagram accounts of strangers who are customers, fans (i.e., followers, likers, and reviewers), or sales representatives (i.e., Insta-sellers). We call this new dimension “social credibility” and define it as the influence of others’ online identities on trust formation in a social commerce environment. We found social credibility as an important characteristic of social commerce that is not seen in B2C or peer-to-peer e-commerce environments such as Amazon, E-Bay, and Etsy as these shopping sites do not allow consumers to view the social media profiles of others. Although it is possible to read third-party insights about the quality of the products and the shopping experience in the form of reviews, it is not possible to find personality clues about the owners of the reviews.

In the Insta-shop context, consumers prefer to shop from people they know, like, and trust. Instagram hosts a great amount of personal information—such as one’s hometown, living arrangements, social circles, occupation, travels, hobbies, leisure activities, family, and appearance—to allow a user to know a person. For social credibility, consumers randomly choose someone from an Insta-shop’s followers, likes, and comments and lurks about that person’s Instagram profile to collect social cues. If a consumer can identify with others based on their appearance, such as body type and size; the way they dress; the brands they use; their hobbies and lifestyle; their occupation; places they have checked in; their possessions; social circles; travels; and the way they take photographs, then trust is established.

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# Magic Hands? How Hand-Holding Appeal, Food Type, and Contamination Effects Impact Food Advertising Effectiveness

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## EXTENDED ABSTRACT

Hand models are prevalent in advertising where advertisers want close ups of the product being handled. Observations from massive amount of ads suggest numerous ways to present a hand. For example, a common way is to present a visual hand holding a product directly. Sometimes, advertisers present a visual hand holding a product with its package to reduce consumers' worry feelings of contamination. Instead of using a visual hand, advertisers ask consumers to imagine hand-holding through verbal description in the tagline (e.g., "Enjoy your curry with hands"). Because of the overwhelming use of hand images in food advertising and the divergence in the type of images used in practice, the current research attempts to examine how the three hand-holding appeals above (visual hand holding the product directly [VH] vs. visual hand holding the product package [VHP] vs. verbal hand [VRH]) impact consumer outcomes and responses toward the product.

Physical touch plays a double-edged sword in the evaluation of consumer products (Mooy and Robben 2002; Peck and Childers 2003). Merely touching an object increases an individual's perceived ownership of the object and such psychological ownership enhances affective response and product evaluation (Peck and Shu 2009). Negative contamination effects may result in decreasing product evaluation when a consumer aware of the product has previously touched by another consumer (Argo et al. 2006).

We propose that the choice of hand-holding appeals is subject to different types of foods. Virtue foods are purchased and used primarily to satisfy the practical or functional needs of consumers—health-oriented utilization (Rozin, Ashmore, and Markwith 1996). As people believe the source transfers a contagious essence to the target through touch, product cleanness and hygiene are closely associated with health benefits (Castro, Morales, and Nowlis 2013). People often react mindlessly to stimuli that trigger certain automated responses (Cialdini 2001). When consumers see a virtue food being held with VH in an ad, the worry of microbial contamination and negative contamination should profoundly decrease virtue food evaluation. VRH may remove such perceived risk of contamination. Furthermore, consumers can experience mental simulation (Bower and Morrow 1990). VRH is expected to work in virtue product evaluation.

Vice foods are more difficult to justify because the pleasure and enjoyment they provide come at the expense of long-term health (Okada 2005; Shiv and Fedorikhin 1999). Vice food generates positive affect (pleasure, delight and gratification) and negative cognition (harmful health-related, Kilgore et al. 2003) simultaneously. When the impact of the positive affect is greater than that of negative cognition, consumers will feel less conflict in the interplay between affect and cognition (Nowlis and Shiv 2005; Shiv and Nowlis 2004), resulting in increased taste and subsequently preference for unhealthy choices (Poor, Duhachek, and Krishnan 2013). Compared with VRH, VH indicates a stronger haptic element in advertising, strengthens indulgent feelings, and increases feelings of pleasure and reward. Visual cues of food serve as reinforcement cues that can lower self-control (Forzano and Corry 1998). VH is expected to be more persuasive than VRH in vice product evaluation.

In Study 1, we conducted a 3 (ad type: VH vs. VRH vs. no hand at all) X 2 (food type: virtue vs. vice) between-subjects experiment. The no-hand ad condition served as a baseline group. Orange juice and orange soda served as the virtue and vice food respectively. The results showed that for virtue food, VRH was more effective in generating positive attitudes toward the brand than VH. For vice food, opposite results were found.

In Study 2, we examined whether the effect of a visual hand with the product directly (VH) or indirectly (VHP) and VR on advertising persuasion is differed subject to food type. A 3 (hand-holding appeal: VH vs. VHP vs. VRH) X 2 (food type: virtue vs. vice) between-subjects design was conducted with chicken wrap as the test product. The results indicated that when facing virtue food, participants exposed to the VRH ad showed the highest purchase intention, followed by those exposed to VHP and finally the ones exposed to VH. When facing vice food, participants exposed to VH showed the highest purchase intention, followed by those exposed to VRH, and finally the ones exposed to VHP. The contamination effect was tested as the underlying mechanism.

In Study 3, the experimental design was the same as that in Study 2, but conducted in a field setting. The experiment was conducted in collaboration with a café on the campus of the university. Participants were told that a new cupcake would be launched, and they could decide the cupcake price only for these three days since the café were collecting customer feedback. Each person could purchase only one cupcake. The actual amount spent on a cupcake served as the dependent measure. For the virtue condition, participants exposed to VRH paid most, followed by the ones exposed to VHP and the counterparts exposed to VH. For the vice condition, participants viewing VH paid the most, followed by those exposed to VRH, and the ones exposed to VHP.

Our findings make several theoretical contributions. First, we examine how hand-holding appeals may serve as a heuristic cue to increase or decrease product evaluation, and such effects are subject to food type. Second, the current research contributes to this evolving research stream by adopting both objective and attitudinal measures in its examination of product evaluation behavior. Third, this investigation also contributes to food lay theories, which have received recent attention.

This research provides important practical implications. Our findings raise the issue of how marketers might leverage a hand-holding appeal to enhance product evaluation. Our research suggests that VH can be a double-edged sword. Restaurants can benefit from our study as well. Those that wish to offer virtue foods on their menus should avoid using VH in their posters. However, restaurants should show VH when promoting their vice foods. Therefore, marketers need to be judicious when using VH, VRH or VHP to make sure they take food type into consideration.

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# When Negative Observations Broaden Generalization of Product Attributes to Novel Products

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## EXTENDED ABSTRACT

Consumers often face decisions involving generalizing knowledge from known to novel products. For example, consumers who plan to purchase stocks of “tow trucks” may need to generalize their knowledge from “cars” to “tow trucks” if they know that the stock prices of “cars” will drop due to new tariffs. Extensive research has focused on examining the effect of adding positive premises (i.e., those that confirm the knowledge can generalize to some specific categories) on the likelihood to generalize (e.g., Smith et al. 1993; Hayes, Heit, & Swendsen 2010; Osherson et al. 1990). However, in many situations, consumers face a mixed set of premises. Prior research about generalizing processes either was silent in the effect of negative premises or documented mixed findings (e.g., Voorspoels et al. 2015, Heussen et al. 2011).

One stream of research documented that individuals generalize knowledge as a function of the number of positive premises and how diversified the premises are. For example, monotonicity rule suggests that the likelihood to generalize tends to increase as the number of positive premises increases (Smith et al., 1993; for summaries, see Hayes, Heit, & Swendsen, 2010). Diversity principle indicates that individuals are more likely to make generalizations when the positive premises constitute a more diverse set of evidence (Lopez 1995, Osherson et al. 1990). They converge to imply that negative premises will decrease the likelihood to generalize given the symmetry between positive and negative evidence. In contrast, reasoning-based processes suggest that individuals tend to make generalizations when they can reason about generalizing in light of available premises (McDonald et al. 1996; Bruner 1957). Specifically, individuals often formalize the initial proposition about positive premises and their relation to unknown, novel stimuli, and further evaluate the proposition in light of other available premises (Medin et al. 2003). This implies that a negative premise from a distantly related product category may help consumers verify the temporarily held proposition. Since consumers often believe that dissimilar products feature the attributes different than those of similar products (Noseworthy et al. 2012), a negative premise about a product dissimilar to a novel product may increase the likelihood to generalize these attributes to the novel product.

This paper investigates an under-studied pattern of generalizing in which consumers are more likely to generalize to novel products when a negative observation from a distantly related product category was added. Results from three experiments documented this effect and shed a light on the underlying mechanism.

Study 1 supported that consumers are more likely to generalize knowledge to novel products when a negative premise from a distantly related category is added comparing to when a positive premise from a close category is presented alone. The design was a 3 premise conditions (i.e., positive premise alone vs. positive premise + a close negative premise vs. positive premise + a distant negative premise; between-subject) X 8 scenario replicates (within-subject) mixed design. In each of the eight scenarios (i.e., cheese, leisure activities, payment methods, Airbnb rates, vegetable, drink, music, sports activities), participants were presented a set of premises depending on which premise condition they were randomly assigned to. Then, they were asked to indicate the likelihood to generalize what they learned in the premises to a novel product on a 100-point sliding scale. The

analysis yielded a main effect of premise condition ( $F(2, 119) = 34.00, p < .000$ ), with participants reporting a greater likelihood to generalize to novel products when a distantly related negative premise was added comparing to presenting a positive premise alone. In contrast, an additional, closely related negative premise decreased the likelihood to generalize.

Study 2 replicated the effect in study 1 in the contexts more related to consumers and showed that the effect could carry over to influence purchase intention. The design was a 3 premise conditions (between-subject) X 3 scenario replicates (within-subject) mixed design. Different from study 1, after reporting the likelihood to generalize to novel products, the participants in study 2 also indicated their intention to purchase the novel products on a 7-point scale. The analysis revealed that the participants exposed to an additional, distantly related negative premise were more likely to make generalizations about novel products ( $F(2, 87) = 29.80, p < .000$ ) and intend to purchase the product later on ( $F(2, 87) = 14.39, p < .000$ ) and those receiving an additional, closely related negative premise indicated the otherwise.

Study 3 explored when the effect of a distantly related negative premise would be offset. In line with reasoning-based processes, we propose that the effect is offset when the initial proposition covering positive premises and unknown, novel stimuli is not utilized. Specifically, this occurs when consumers can immediately access more diagnostic information than the proposition that they need to make efforts to formalize. Thus, different from study 2, we imposed a prior belief in terms of breadth of generalizability among participants at two levels: broad versus narrow generalization. We predict that consumers imposed with a prior belief in broad generalization will be forced off the path of forming the initial proposition and further evaluating the proposition in light of negative premises, leading to a null effect of negative premises. The study was a 2 premise conditions (P1+ vs. P1+PD-; between-subject) X 2 levels of generalizability (broad vs. narrow generalization; between-subject) X 3 scenario replicates (within-subject) mixed-design. The analysis revealed a significant interaction effect of premise condition by prior belief in breadth of generalization ( $F(1, 96) = 5.30, p = .024$ ). When the participants held a prior belief in broad generalization, the effect of a distantly related negative premise was offset. In contrast, the effects observed in study 1 and 2 were replicated for the participants who held a prior belief in narrow generalization.

This paper documented a puzzling effect in which consumers broaden generalization of product attributes to novel products in presence of an additional, distantly related negative premise. We also showed that the effect only occurs when consumers hold a prior belief in narrow generalization.

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# Accounting for Gains From Discounted Credit

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## EXTENDED ABSTRACT

Purchasing and spending “discounted credit” is becoming increasingly prevalent. Discounted credit is store credit that can be purchased at a price lower than its redeemable value, such as when a consumer pays \$80 for a \$100 restaurant voucher. When a consumer buys discounted credit and later redeems that credit for a store purchase, that purchase indirectly has a lower cost to that consumer than the purchase’s market price. Discounted credit appears on the market either through retailers and third-party businesses selling directly to consumers or through the customer-to-customer gift card resale market (Groenfeldt 2014).

This project explores the mental accounting of how consumers organize the gains derived from discounted credit. Specifically, as a consumer applies a single discounted credit to make multiple purchases across time, an open question is how do the gains derived from the credit gets divided across these perceived purchase costs. This topic pertains to mental accounting, defined as the ways consumers psychologically organize money into different accounts as an act of self-control (Heath and Soll 1996; Thaler 1999). Because mental accounting is known to be malleable (Cheema and Soman 2006), several mental accounting possibilities may occur when spending discounted credit. A first possibility is that consumers mentally decrease their perceived cost of each purchase proportional to the credit’s discount percentage (e.g. “I purchase this credit at 20% off, so all purchase made with this credit feels 20% off). However, another possibility is consumers can mentally divide their credit gains to offset subsequent purchase costs in a more disproportional manner (e.g. “Purchase 1 feels like it is \$20 cheaper, but Purchase 2 feels undiscounted”). In this paper, we find that discounted credit is frequently *disproportionally* mentally allocated to offset redeemed purchase costs and explain why this occurs.

In study 1, university student participants were randomly assigned to receive one of two promotional offers at a donut store: 1) discounted credit (pay \$12 for a 12 donut punchcard) vs 2) control discount (get \$50% off each donut). Donuts are labeled to cost \$2 each. Participants reported how much they feel like their first donut would cost upon getting the promotion. Participants in the discounted credit condition (vs control condition) reported feeling that their first donut in the store costed an average of \$2.24 (vs \$1.26);  $F(1,186)=7.19, p<.01$ . Participants in the discounted credit condition were reluctant to mentally discount the cost of their initial donut even though it was redeemed with a discounted credit. This is initial evidence that consumers do not evenly distribute savings derived from discounted credit towards redeemed purchases in equal proportions, as they did not perceive their initial purchase to be less expensive by 50%.

In study 2, we introduced all participants to the following scenario: “Imagine that you purchased a \$200 gift card from Target for \$100, a 50% discount. Later, you make four separate \$50 purchases with that gift card (in sequence Purchase 1, Purchase 2, Purchase 3, and Purchase 4). Knowing this, how much do you perceive each purchase to cost?” Participants filled in their perceived cost values for each purchase. Results suggests that 48.5% of participants wrote \$25 for each Purchase 1 to Purchase 4, but the remaining participants wrote different amounts across the four purchases. For those whose

answers differed across purchases, here are the average perceived costs for each purchase: Purchase 1=\$39.24, Purchase 2=\$24.45, Purchase 3=\$16.32, Purchase 4=\$19.98. This study exposes us to the idea that consumer don’t necessarily discount all purchases made by the same discounted credit equally; further, participants tend to feel that purchases made later in a sequence feel less expensive than purchases made earlier.

We theorize that consumers are reluctant to mentally take a consistent percentage off all purchases made by one discounted credit because they naturally weigh in, at different redemption points, the likelihood of redeeming the entire value of their credit when they estimate perceived costs of each redeemed purchase. In study 3, we track how consumers’ uncertainty of being able to redeem an entire discounted credit across multiple redemption points influences perceived costs of redeemed purchases. Participants imagined buying a new pass (pay \$48 upfront for a \$96 value pass) that can be used on four classes. Those in a certain (uncertain) condition were told they will definitely (possibly not) go to all four classes. We sequentially asked participants to report how much they perceived each class (Purchases 1-4) to cost. We ran a mixed ANOVA analysis with uncertainty as the between subjects variable, purchase number as the within subjects variable, on perceived cost and found a significant interaction effect (Wilks’ Lambda=4.05,  $p=.008$ ). Within-subject contrasts suggested that the interaction had a linear trend ( $F(1,297)=11.32, p=.001$ ), suggesting that those who were uncertain that their discounted credit would be depleted thought that their purchases felt dramatically sequentially less expensive as they depleted more of the credit while those who were certain that their discounted credit would be depleted more frequently recorded that each of their purchases’ costs felt equally discounted.

We found initial evidence that under a range of contexts, consumers who pay for purchases using a single discounted credit do not mentally distribute their derived gains to offset the perceived cost of multiple purchases by a consistent proportion. Initial purchases made by a discounted credit feels more expensive than last purchases (when the credit is about to be depleted), suggesting that sequence of purchase when redeeming discounted credit impacts perceived costs consumers are paying. This finding suggests that consumers using discounted credit can dramatically alter how they perceive present purchase costs depending on their assessment of the likelihood of future decisions and makes an addition to mental accounting theory.

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# Stigma at Every Turn: Exploring Bi+ Consumer Experiences

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## EXTENDED ABSTRACT

The lesbian, gay, bisexual, transgender, and queer (LGBTQ) community has commonly been considered a 'Dream Market' segment for mainstream marketers in the United States (Peñaloza 1996), with a purchasing power nearing \$1 trillion (Green 2016). Within this community bi+ consumers make up the largest segment: about 40% (Pew Research Center 2013). Bi+ individuals are those that experience attraction to more than one gender (Burchard 2006). Despite being the largest group within the LGBTQ community, this social category remains understudied in consumer research. In response to this oversight, this study explores the consumer behavior of bi+ individuals, with an emphasis on how they interact with marketing communications and servicescapes.

Given the scant academic knowledge of this social category, we employ a grounded-theory approach (Charmaz 2014; Glaser and Strauss 1967). We sampled twenty-two consumers who self-identify as bi+. They were recruited through LGBT Resource Centers on two different college campuses, one city Pride Center, informal networks, and snowball sampling. Informants' ages ranged from 19 to 48, with interviews lasting between 25 and 95 minutes.

Interviews covered informants' generic experiences in the marketplace. They also included a projective section (Heisley and Levy 1991), in which the first author used mainstream LGBTQ-themed ads to further probe participants to share their experiences as consumers. Interviews were tape recorded and transcribed. Analysis relied on data-driven coding, the constant comparison method, memoing, and an iterative engagement with the literature on representation and stigma (Charmaz 2014; Spiggle 1994). We developed themes to represent informants' distinctive consumer experiences.

Bi+ individuals are the largest group in the LGBTQ community. Whereas one may think that this leads to them being well accepted, instead we find that they experience stigma both inside and outside the community. This dual stigma is shaped by two gender normative discourses. One is heteronormativity, a long-standing notion that prescribes as normal people who have sexual interest in what is culturally construed as the opposite sex (Meyer 2010). The other is homonormativity, a more recent expectation that emerged with the gay rights movement and further marginalizes queer identities that do not fit into traditional gender norms (Ng 2013). Bi+ identities are not visible in either heteronormative or homonormative representations. Bi+ individuals cope with this multi-layered stigmatization in two main ways, by seeking representation and confronting representation in the marketplace.

Bi+ consumers look for representation of their identity in marketing communications. For example, Eleanor seeks out media that she feels offer positive representations of lesbian women. This tangential identification offers bi+ individuals the ability to feel a sense of belonging in the LGBTQ community. Bi+ consumers also actively search for representation. For example, Suzanne has started a LGBTQ book club. According to her, bi+ literary representations are not as vivid as visual depictions, or as easy to find as a bestseller, but they help individuals find some way of seeing their identity represented. In seeking representation, bi+ consumers find a sense of self that is often invisible in mainstream marketing communications.

When confronting negative representations or invisibility, bi+ consumers are critical when interpreting ads and in their purchase behavior. Cherrie notes that anytime two women are pictured together

er they are assumed to be representing lesbianism, not bisexuality, and are hypersexualized. Jess recalls an experience when she and her partner attended a Pride event in the downtown part of their city and needed a place to stay overnight. Seeing the rainbow colors that signify Pride on the Marriott hotel, Jess felt secure in staying there. By using community signifiers, Marriott signaled that it is a legitimate brand of the LGBTQ community (Kates 2004), or a company that offers services to the community such as a sense of safety. Informants educate themselves about legitimate brands by paying attention to marketing communications, community initiatives, and how the brand ranks on workplace equality. These efforts help bi+ consumers avoid stigma and vulnerability (Rowe and Rowe 2015).

In short, bi+ individuals hold a unique position, at the boundary between straight society and the LGBTQ community. Goffman (1963) discusses the ways in which members of a subordinate group face stigma at the hands of the dominant group. However, bi+ individuals make up a stigmatized identity status between the dominant (straight) and subordinate (LGBTQ) groups. They must cling to the closest representations they can find of bisexuality in mass media and patronize places that only occasionally embrace their marginalized identities.

These findings offer insights for marketing academics and practitioners. First, businesses that wish to cater to the LGBTQ community may be unaware that the largest portion of the community feels unwelcome and unsafe in their establishments. Informants shared experiences of violence in mainstream establishments as well as those that serve the LGBTQ community. This work shines a light on a unique type of dual stigma that has implications for all service providers, especially those in the LGBTQ community.

Second, consumers with bi+ identities challenge representational norms as they interpret advertising messages and firm motives. Informants are critical of negative representations and erasure of their identities (Bennett et al. 2016). Bi+ identities have been stereotyped as sexually greedy and non-monogamous (Meyer 2010). Therefore, an advertising norm, sex, does not sell within this demographic. Advertisers seeking to tap into this segment of consumers should educate themselves on community values and incorporate them into their marketing communications.

While this project explores the consumption behavior of individuals with bi+ identities, further work must examine the consumption of other "in-between identities," such as biracial and bicultural consumers. Bi+ individuals find themselves walking a tightrope at the boundary between two communities to which they should belong yet experience stigma at the hands of each. Additionally, bi+ individuals make up a distinct market segment, yet experience either negative, stereotypical portrayals or all out erasure in the marketplace. Similarly, biracial consumers live in two social worlds, experience invisibility of their unique identity, and make up a viable market segment (Harrison, Thomas, and Cross 2015). Future work must explore the similarities and differences between these multiple identities and further develop the notion of dual stigma.

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# Potions and Antidotes for Jekyll: What Summons Moral Identity in Product Choices

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## EXTENDED ABSTRACT

Many consumers identify themselves as advocates of human rights and environmental sustainability. Does this mean they are also loyal customers of sweatshop-free garments and compostable bags of chips? Prior findings suggest this is often not the case. Rather, the effect of moral identity seems particularly weaker in product choice domain. The “30:3 phenomenon,” coined by Cowe and Williams (2000), refers that while about 30% of consumers claim their moral intention when asked, only 3% of consumption choices represent such intention. Studies have shown that though consumers maintain product morality is an important purchasing factor, it does not portend actual choices (e.g., Aaker, Vohs, and Mogilner 2010; Obermiller et al. 2009; Auger et al. 2008). One line of reasoning suggests that this is because products with moral traits are perceived to have inferior qualities in comparison to those without (Aaker, Vohs, and Mogilner 2010; Obermiller et al. 2009), and also because most consumers choose functionality over morality in a tradeoff between moral and functional product attributes (Auger et al. 2008).

Understanding why such attitude-behavior gap is observed irrespective of the strength one’s moral identity, and how this partiality can be attenuated is of both theoretical and practical importance. The present research provides insights into this matter. As will be elaborated next, we expect that the impact of moral identity diminishes under consumption context, as the moral relevance of decision is obscured by the prevailing commercial, self-benefit focused mindset.

Research has shown that moral identity increases a wide range of moral behaviors (e.g., Aquino and Reed 2002; Frimer and Walker 2009; Hardy 2006). Unlike charity donation and volunteering that are typically used in the moral identity research, consumption is not socially defined as a moral behavior. Rather, a traditional code of conduct in consumption is to make an economic and self-beneficial decision. We assume that unless the imminent choice act in the domain of consumption is perceived to be highly related to morality, moral identity may be overridden by another identity, thus decreasing the likelihood of making moral choices. Consistent to the identity-based-motivation model (Oyserman 2009), we further predict that contextual factors that make the consumption choice task deem more morally relevant can increase the impact of moral identity. We suggest simply informing consumers about ethical attributes is not enough, because consumers will process the information after having already been subjugated to the norm of consumption context: that one should opt for the most self-benefitting alternative. For a consumption choice task to be deemed morally relevant, we propose that cues need to alter the framing of the choice act. Five experiments provide consistent support for this theorization.

Study 1 (N=109) provide evidence that the effect of moral identity decreases in consumption purchase context, such that moral behavioral intention reduces. In particular, the effect of moral identity on moral behavioral intention was lower when participants were asked to decide whether to choose a morally superior product over a functionally superior alternative, versus when they were asked to make a donation to a charity ( $b = 3.39, t(107) = 2.84, p < .01$ ).

Studies 2 and 3 provide further evidence that the impact of moral identity on moral consumption choice is augmented when the choice context becomes more morally relevant. In study 2 (N=93), a same choice act between a more environmentally friendly and a more

powerful detergent was framed as related to either moral context (donation) or non-moral consumption context (personal shopping). We found that participants’ moral identity increases the ethical choice of in the moral context, but not in the consumption context ( $b = -.56, z = -2.08, p < .04$ ). Study 3 (N=252) varied the perceived relevance of a choice task to morality by manipulating the presentation order of product information. Presenting the ethical attribute first versus last made the product choice task more ethically relevant, thus making the effect of moral identity more pronounced ( $b = -0.23, t(250) = -2.16, p = .03$ ). These results together suggest that the factors which induces people to attend and process the difference along ethical attribute in details can increase the perceived moral relevance of the choice task and thus the impact of moral identity on choice.

Based on this inference, the following studies investigated the role of moral thinking style (deontological vs. consequential thinking) as a moderator for the impact of moral identity. To elaborate, Tanner and his colleagues (Tanner & Medin, 2004; Tanner, Medin, & Iliev, 2008) found that consequential thinkers are more concerned about losses and gains in outcome, while deontological thinkers simply focus more on an action itself, whether the action abides by rules. Their findings suggest that individuals with outcome-based thinking style are more capable of thinking beyond the mere act of decision-making, which requires one to employ more deliberate information processing procedures (Eyal et al. 2008, Körner & Volk 2014). We conjecture that individuals with rule-based thinking style will adhere more to the rule of the confronted consumption situation, which is to select the most self-beneficial choice. In contrast, individuals with outcome-based thinking style will be more capable of assessing the outcome of a choice from various angles and will therefore be more likely to draw their decisions from their moral identities. The following two final studies test this hypothesis.

In study 4 (N=128), participants were first asked to perform either a moral priming task or a control priming task, based on the procedure used by Aquino and Reed (2002). They then rated their preferences between the two detergents same as in study 2. Consistent with our predictions, participants in moral priming conditions rated moral identity as more important than those in control conditions ( $t(126)=2.49, p = .01$ ). We also expected that the preference for the ethical product was greater in moral priming (vs. control) conditions among participants with consequentialist thinking style, whereas the difference was not significant among relatively more deontological thinkers. Indeed, the result was consistent to this assumption ( $b = -.44, t(126) = -2.44, p < .02$ ).

Study 5 (N=263) replicated the results of study 4 while experimentally manipulating the moral thinking style and measuring individuals’ moral identity. Participants were asked to write either about a time when they made a choice based on its positive consequences (consequentialist thinking style), or about an example of actions that someone can do to strictly follow rules or guidelines (deontologist thinking style). Following this priming task, participants were given a product choice task after which their moral thinking style was measured. While the scores of a thinking style scale (Lammers and Stapel 2009) from a subset of the sample (N=171) indicated that the manipulation was successful ( $t(169) = 2.69, p < .01$ ), we found the hypothesized interaction of thinking-mode priming and moral identity scores ( $b = 0.51, z = -2.50, p = .01$ ) in which participants’ moral

identity significantly increases ethical choice under consequentialist-thinking priming, whereas the impact of moral identity was negligible under rule-based thinking priming, replicating the results of study 4.

In the present research, we theorize that it is the consumption itself that bars consumers from accessing their moral values and thus their moral identity from having an influence. Consistent with this assumption, our five studies show that introducing the factors that can increase the perceived moral relevance of the product choice tasks also increases the impact of moral identity in ethical choice. Thus, the present investigation not only delineates why the effect of moral identity diminishes in consumption decisions, but also shows how consumers' moral values to be impactful in consumption decisions, thereby making both theoretical and practical contributions. Nevertheless, our studies are all scenario-based. Therefore, future research that replicates our findings in real choices is awaited.

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# Consuming Products with Experiences: Why and When Consumers Want Mementos

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## EXTENDED ABSTRACT

While recent research has advanced our understanding of the differences between experiences and material goods, experiences are often accompanied by the consumption of material goods, most notably in the form of mementos. The prevailing account for why consumers desire mementos of experiences is that mementos provide memory-related benefits (Belk, Wallendorf, & Sherry, 1989). In this research, we propose further understanding mementos as a way for consumers to alleviate sadness that arises from the end of positive experiences. Based on this understanding of mementos, we further propose that the desire for mementos is additionally prompted by the end of a positive experience and the heightened sadness associated with that ending.

*Hypothesis 1* Having a memento of an experience lessens sadness arising from the end of the experience.

*Hypothesis 2* Consumers are more likely to keep mementos when the end of an experience is approaching or salient.

In Study 1, we build on existing research showing that endings of meaningful positive experiences, such as graduating from college or visiting a meaningful location for the last time, leads to heightened sadness (Ersner-Hershfield, Mikels, Sullivan, & Carstensen, 2008). We used a 2 (regular visit vs. last visit) x 2 (memento vs. no memento) between subjects design. Graduating undergraduates at a west coast university either imagined visiting a meaningful campus location on a regular visit or for the last time as an undergraduate at the university. Those in the memento conditions were additionally prompted to think about college mementos that they owned. Participants then rated various positive and negative emotions. A two-way ANOVA revealed a significant main effect of last visit ( $F = 6.361$ ,  $p < .02$ ) on sadness, thus replicating increased sadness when facing an ending. Importantly, we find a significant last visit x memento interaction ( $F = 7.159$ ,  $p < .01$ ), such that the rise in sadness among those visiting for the last time was significantly lower among those thinking of mementos compared to those who were not thinking of mementos, supporting hypothesis 1.

In Study 2, we replicate our findings for a different experience and also examine appraisal theory, which holds that sadness arises from appraisals centered on irrevocable loss (Smith & Lazarus, 1993). Participants rated their emotions and appraisals during a recent vacation and toward the end of their vacation. Half of the participants were additionally asked to think about mementos from their vacation. A two-way ANOVA revealed a statistically significant time x memento interaction ( $F(1, 150) = 4.259$ ),  $p = .041$  such that the increase in sadness was smaller in the memento condition than in the no memento condition. We further find that changes in appraisals of loss mediate the effect of mementos on sadness ( $a \times b = .4256$  with a 95% confidence interval excluding zero (.0410, .8750)). This suggests that mementos alleviate sadness at the end of an experience by reducing appraisals of loss.

In Study 3, we test hypothesis 2 by tracking photo-taking behavior, a form of memento-keeping, among graduating undergraduates

facing the end of their college experience via their Instagram posts. We manipulated the salience of the end of college using surveys that students completed over a two-week period and examined Instagram photos that they posted over the same two-week period. While all participants were graduating undergraduates, only half received salient reminders about their upcoming graduation (salient condition). As predicted, photos posted by participants in the salient condition were more related to the university compared to photos in the non-salient condition as rated on a university relatedness scale ( $t(169) = 2.092$ ,  $p < .04$ ) and were more likely to be taken at the university ( $\chi^2 = 5.798$ ,  $p < .02$ ).

In Study 4, we further test hypothesis 2. Graduating university students either wrote about the most interesting class taken during college (control condition), or were reminded about the upcoming end of their college experience and asked to write about their college experience (salient end condition). Participants then chose between a pack of chocolates featuring the university logo on each wrapper (a memento item) or a variety pack of chocolates (a non-memento item). To test whether the likelihood of keeping mementos when facing an ending increases apart from memory considerations, we intentionally selected consumable material items that would be unlikely to provide future memory benefits and pretested these items. As predicted, participants in the salient end condition were significantly more likely to choose the memento chocolates than those in the control condition (29% vs. 51%,  $\chi^2 = 3.921$ ,  $p = .048$ ).

In Study 5, we provide additional process evidence for the effect demonstrated in Studies 3-4. Tourists visiting a famous beach location completed a brief survey asking how close the end of their trip felt and rated their emotions. They then imagined choosing between two different mugs to receive that day: a Starbucks mug (non-memento) and a mug depicting an image of the beach location (memento). Using a bootstrap analysis to test for mediation, we find that the mean indirect effect of the closeness of the end on choice of memento through sadness was positive and significant ( $a \times b = .2084$ ) with a 95% confidence interval excluding zero (.0399, 1.5278), providing evidence for sadness mediating the effect of perceived closeness of the end on preference for mementos. In contrast, neither memory concerns nor the value of the experience mediated the effect of the perceived closeness of the end on preference for the memento mug.

While the existing literature often contrasts experiences with material goods, this research studies both types of consumption together in a broader context to yield novel insights.

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# Powerful Buy Time: Why Social Power Leads to Prioritizing Time over Money

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## EXTENDED ABSTRACT

In this paper we examine how social power influences a consumer's willingness to buy time-saving options.

Both money and time are valued resources but their relative value may vary amongst different individuals and different contexts. Money is a familiar, fungible, and unambiguous resource. In contrast time is difficult to account and more ambiguous (Soman 2001; Okada and Hoch 2004; Saini and Monga 2008). Given such difference between perceptions of temporal and monetary resources, we argue that spending time to save money can be viewed as a conservative investment where one is exchanging an ambiguous currency (time) for a relatively stable, fungible one (money). In contrast, spending money to buy additional time is a relatively audacious move because the returns on such an exchange are uncertain.

Power is defined as asymmetric control over valued resources in social relations (Rucker, Galinsky and Dubois 2012). Power has been associated with risk taking capacity (Anderson and Galinsky 2006), increase approach- and action-tendencies (Smith and Bargh 2008) and invoke optimism and confidence (Fast, Gruenfeld, Sivanathan, and Galinsky 2009). Therefore, social power, by making a person more risk tolerant and action-oriented, leads people to save time by spending money. In a series of studies we examine how and why the state of felt social power influences people's decision to exchange money for time.

In study 1a, participants ( $n = 150$  undergraduates) made two hypothetical decisions involving trade-offs between time and money. Alongside, the Sense of Power scale (Anderson and Galinsky 2006) was administered. We averaged the responses to the time-saving option in the two scenarios. A linear regression with measured power as an independent variable revealed that greater willingness to spend money to save time was associated with a greater power of participants ( $b = 13.38, t = 3.15, p < .01$ ). In study 1b, participants ( $n = 155$ ) read the scenario that involves time-money trade-offs, and answered if they would buy a time-saving option. Participant's chronic sense of power was measured using the same scale. Study 1b included a gender, age, subjective economic status questions, and a "frugality" measure to control for possible confounds. As predicted, a logistic regression revealed that participants with higher power chose time-saving option more ( $\beta = .37, \chi^2 = 4.51, p < .05$ ), and this relationship persisted even after controlling for all other measured variables ( $p = .02$ ). In study 2 ( $n = 160$  undergraduates), participants were randomly assigned to either high-power or low-power conditions. We manipulated power using a recall task (Galinsky, Gruenfeld and Magee, 2003). Next, participants read three scenarios where they were asked to make time-money trades-offs (Whillans, Weidman and Dunn 2016). We summed the number of time-saving decisions that participants made in response to the three scenarios. Comparison across high and low-power conditions revealed a main effect of power ( $\beta = 1.81, t = 2.15, p < .05$ .) As predicted, participants who were primed to have high power chose to have purchase more time-saving options.

Thus far we have demonstrated that power leads people to prioritize time over money. However, there is one prominent context where powerless people prioritize time over money. Recently, Bellezza, Paharia and Keinan (2016) demonstrated that displaying busyness and time scarcity can be status enhancing. Separately Rucker and Galinsky (2009) and several others have demonstrated that powerless people are highly motivated to convey positive social

signals engaging in conspicuous consumption. Therefore, we suggest that social visibility will enhance the powerless to exchange money for time. This will lead to a reversal of our core result that power leads to greater preference for time (vs. money).

In study 3 ( $n = 310$  mTurkers), participants were randomly assigned to high- or low-power conditions where social power was manipulated with a role-playing task (Rucker, et al., 2012). Then, participants were assigned to one of the four conditions in a 2 (power: low vs high)  $\times$  2 (social visibility: high vs low) design. Both high (diner with friends and picking up relatives) and low social visibility scenarios (doctoral visit and post office) involved a binary choice decision between valet parking (time-saving option) and garage parking (money saving option).

Confirming our hypothesis, a logistic regression confirmed that the interaction effect of power and social-visibility was significant ( $\beta = -1.147, \chi^2 = 5.75, p < .05$ ). In the low-social visibility conditions, powerful consumers chose time-saving option more, replicating our previous results ( $M_{hi-power} = 38.0\%; M_{lo-power} = 20.2\%; \chi^2 = 25.51, p < 0.0001$ ). In the high-social visibility conditions, powerful and powerless consumers did not vary significantly in their time buying tendency ( $M_{hi-power} = 40.0\%; M_{lo-power} = 47.1\%;$  Pearson's  $\chi^2 = 0.80, p > 0.30$ ). More pertinent to our moderation hypothesis, while the powerful consumers remained entirely uninfluenced by social visibility, powerless consumers were more likely to engage in time-buying in high- (vs. low-) social visibility conditions (Powerless:  $M_{hi-visib} = 47.1\%; M_{lo-visib} = 20.2\%;$  Pearson's  $\chi^2 = 12.06, p < 0.0001$ ).

In multiple studies we amassed converging evidence that power leads people to prioritize time over money (studies 1a, 1b and 2). However, powerless consumer's stronger social signaling motives reverse this tendency (study 3). Give our results, companies selling time-saving products and services should appeal to the consumer by showing them as more dominant and powerful entities. Alongside, low-power consumers can also be targeted to buy such time-saving products and services if their positive social signaling externalities are highlighted.

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# Doing Good by Buying from a Peer: When and Why Consumers Prefer Peer Economy Purchases

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## EXTENDED ABSTRACT

The term “peer economy” has been used to describe organizations that facilitate market-based transactions between private individuals (Sundararajan, 2016). Implicit in the peer-to-peer business model is the notion of connecting with other individuals (i.e., one’s peers) directly rather than making a purchase from a business. Based on this distinction, we propose that rather than focusing on the firm, as they would in a traditional economy purchase, in a peer economy purchase, consumers focus relatively more on the peer providing a good or service rather than on the underlying firm facilitating the peer-to-peer transaction. As a result, consumers perceive peer-to-peer purchases as inherently more prosocial than purchases from traditional economy firms because these purchases are seen as helping another individual (vs. simply providing profits for a firm). Hence we predict:

*Hypothesis 1 Purchases from peer-to-peer economy firms are perceived as more prosocial than purchases from traditional economy firms.*

*Hypothesis 2 Consumers’ perceptions of peer-to-peer providers as more prosocial will drive greater purchase likelihood for peer economy options as compared to traditional economy options.*

We argue that the default in a peer economy transaction is to focus on the individual, but external factors may shift the consumer to focus more on the for-profit firm facilitating the transaction. This shift decreases perceptions of prosociality and preference for peer-to-peer options since consumers no longer see their purchase as benefiting an individual.

*Hypothesis 3 When consumers focus on the underlying for-profit organization facilitating a peer to peer purchase rather than on the individual peer provider, the effect proposed in hypothesis 2 will be attenuated.*

We argue that the underlying process driving increased preference for peer-to-peer purchases is caused by the belief that these purchases are more prosocial. Therefore, any marketing action that changes consumers’ perceptions of purchases from traditional economy firms to be more prosocial, such as cause marketing (Krishna and Rajan 2009), should attenuate this difference in preferences. Because peer-to-peer economy firms are already seen as prosocial, they are less likely to benefit from such an action.

*Hypothesis 4 When traditional economy firms link consumer purchases to charitable donations via cause marketing, the effect proposed in hypothesis 2 will be attenuated.*

In study 1 (three conditions) participants were asked to imagine taking a trip where the only option available in their desired location was a hotel or an apartment on Airbnb. In the Airbnb individual condition, the person renting the apartment lived there. In the Airbnb

agent condition, the person renting the apartment “works as an agent for a property owner who is renting out multiple properties on Airbnb’s website as a business.” Next, participants rated how prosocial they felt this purchase was with four statements ( $\alpha = 0.82$ ). Because the Airbnb agent should not be seen as a true “peer” in the sense that he/she is someone working on behalf of a business, we did not expect perceptions of prosociality to differ across these conditions. Analysis using Bonferroni-adjusted contrasts revealed that there was no significant difference in the perceived prosociality of the purchase in the Airbnb agent ( $M = 4.26$ ) versus hotel condition ( $M = 4.02$ ). Supporting H1, however, the purchase in the Airbnb individual condition was seen as significantly more prosocial ( $M = 4.80$ ) than the Airbnb agent ( $p = .01$ ) and hotel conditions ( $p < .0001$ ).

In study 2 we test H2 and H3 by showing participants an advertisement for Lyft (a peer-to-peer rideshare company) or Yellow Cab (a traditional alternative) that featured photos of three individuals, either identified as drivers or corporate employees (e.g., VP of Partnerships) in a 2 (Company: Lyft vs. Yellow Cab) x 2 (Advertisement Focus: Drivers vs. Corporate employees) design. An ANOVA analysis of purchase likelihood revealed a significant interaction ( $p = .027$ ) with simple effects showing a significant difference between the Lyft ad focus conditions ( $M_{\text{driver}} = 5.70$ ,  $M_{\text{corporate}} = 4.91$ ,  $p = .036$ ) but not the cab conditions ( $M_{\text{driver}} = 3.18$ ,  $M_{\text{corporate}} = 3.58$ ). To test H2 and H3, we conducted a moderated mediation analysis using PROCESS model 7 (Hayes 2013) with company as the IV, ad focus as the moderator, prosociality as the mediator, and purchase likelihood as the DV. Supporting our predictions, this analysis indicated significant moderated mediation.

In study 3a we partnered with a real peer economy firm to conduct a field study. We manipulated the platform’s promotional materials (e.g., download cards) with one condition focusing on the individual provider and the other focusing on the company itself. We predicted that the individual provider-focused condition will be more effective, with number of download cards taken serving as our dependent variable. As predicted more cards were taken in the individual provider condition (379) than the company condition (281,  $p = .001$ ). A follow up lab study (study 3b) was conducted with the same stimuli. The results showed that promotions focusing on an individual provider led to higher download likelihood as mediated by prosociality perceptions.

In study 4 we test H4 using a 2 (Company: Lyft vs. Yellow Cab) x 2 (Cause Marketing: Cause Marketing vs. Control) design. Participants see a billboard for Lyft/Yellow Cab and are either told that a portion of their purchase will be donated to the United Way (CM condition) or not given additional information. Analysis of purchase likelihood revealed a significant interaction ( $p = .046$ ). Further analysis of this interaction’s simple effects revealed that while tying a purchase to a cause made individuals in the Yellow Cab condition significantly more likely to make a purchase ( $M_{\text{Control}} = 4.38$ ,  $M_{\text{Cause}} = 5.04$ ,  $p = .024$ ), that cause marketing made no significant difference in the Lyft conditions ( $M_{\text{Control}} = 5.54$ ,  $M_{\text{Cause}} = 5.37$ ). We conducted another moderated mediation analysis to test H4. Supporting our prediction, this analysis indicates significant moderated mediation.

In this research we demonstrate that consumers perceive peer-to-peer purchases as more prosocial than purchases from traditional economy firms and express greater purchase intentions for peer

economy firms compared to traditional economy firms. This work contributes to the literatures on non-traditional business models, pro-social consumer behavior, and cause marketing.

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# Hedonic Consumption Fosters Prosocial Behavior

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## EXTENDED ABSTRACT

Hedonic experiences abound. Despite their universal appeal, a common intuition is that besides enjoyment, hedonics elicit guilt or regret (Okada 2005). Hence, pursuing pleasure has been considered generally suboptimal (Keinan and Kivetz 2008). To redress this misconception, we contend that under particular conditions hedonic consumption fosters prosociality.

Hedonic experiences are sought for their inherent affective and sensory attributes, and the enjoyment they provide (Holbrook and Hirschman 1982). When pursuing pleasure, consumers escape functional goals and derive satisfaction from hedonic consumption per se without further goals (Botti and McGill 2011). Based on this, we propose that when deliberately engaging in hedonic experiences, consumers break free from other endeavors. Because hedonics are highly immersive, they prompt a higher focus on the consumption experience and render consumers more impulsive and less inhibited. On these premise, we argue that freely engaging in hedonic consumption induces behavioral disinhibition.

Extant research suggests that disinhibition is a direct precursor of prosociality (Rand, Kraft-Todd, and Gruber 2015; Van den Bos et al. 2009). Within moral psychology, the social intuitionist model stipulates that moral judgments (i.e., favoring cooperation over defection) ensue from relatively automatic intuitive processes (Haidt 2001). Building on this and on the notion that most people adhere to prosocial values (Van Lange et al. 2011) recent studies propose that our innate impulses are geared towards cooperation and that such predispositions are often overshadowed by deliberation (Rand 2016).

Prior research has suggested competing antecedents of prosociality such as positive mood (Isen and Levin 1972) and guilt-induced helping (Strahilevitz and Myers 1998; Zemack-Rugar et al. 2016). However, hedonic episodes do not unequivocally trigger positive affect or guilt, but concurrent positive and negative responses (Ramanathan and Williams 2007). Thus, we extend existing work by documenting a qualitatively different relationship between hedonics and prosociality. Specifically, we propose that following free hedonic consumption, prosociality ensues as an intuitive response, and that disinhibition underlies this effect.

Results from four experiments using real hedonic food consumption lend support to these hypotheses. To exclude the possibility that the effect is due to potential physiological correlates of food consumption (i.e., glucose), we utilized a yoked between-participants design across all studies, where hedonic consumption (free vs. instructed) was the manipulated factor. In the instructed condition, each participant consumed the same food amount as another participant consumed in the free condition. Therefore, the intake was identical across conditions. We systematically ruled out mood by measuring it before and right after the eating task in all studies.

Study 1 tested whether free hedonic consumption fosters behavioral helping. Hedonic consumption (free vs. instructed) was manipulated. We measured behavioral prosociality by asking participants to help checking written exams for the Exam Office. A Poisson regression revealed that free hedonic consumption had a positive effect on helping ( $\beta = 0.44$ ;  $\chi^2(1) = 25.69$ ;  $p < .001$ ) (12.6% refusals coded as zero). Participants who experienced free chocolate consumption voluntarily checked 55.3% more exams than those who consumed

the same chocolate amount instructed. Besides mood, we also ruled out post-consumption conflict.

To test whether the effect is germane to hedonic consumption, Study 2 employed a 2 (consumption: free vs. instructed) x 2 (food: hedonic vs. non-hedonic) between-subjects design. A control condition void of consumption was included to capture baseline prosociality. After consuming either chocolate truffles (hedonic) or rice crackers (non-hedonic), participants were asked how much of their experimental payment they wanted to donate to a charity of their own choice. Participants in the control condition proceeded directly to the prosociality measure.

A 2 (consumption: free vs. instructed) x 2 (food type: hedonic vs. non-hedonic) ANOVA on charitable donations revealed a main effect of consumption ( $F(1, 157) = 4.48$ ;  $p = .03$ ) and a main effect of food type ( $F(1, 157) = 13.52$ ;  $p < .001$ ). As predicted, free hedonic consumption led to more generous donations relative to instructed hedonic consumption. This was not the case for non-hedonic consumption. In the two non-hedonic conditions, the donation level did not differ regardless of consumption being free or instructed. Donations in the control condition ( $M = 22.58$ ) were lower than donations in the free hedonic consumption condition ( $p < .001$ ), but did not differ from the two non-hedonic conditions. Thus, non-hedonic consumption was analogous to no consumption. As predicted, the effect was not driven by consumption per se, but germane to hedonic consumption. Additionally, we tested whether psychological reactance alters prosociality. Results disconfirmed this potential explanation.

So far, we ascribed the differences in prosociality to disinhibition induced by free hedonic consumption. To test this hypothesis, Study 3 measured consumers' chronic predispositions to disinhibit. We utilized the same design (free vs. instructed hedonic consumption). Prosociality was measured as in Study 2. Following the donation task, participants completed the Behavioral Inhibition System (BIS) scale where lower scores reflect higher disinhibition. Results indicated a significant main effect of hedonic consumption on donations ( $F(1, 97) = 6.62$ ;  $p = .01$ ) qualified by an interaction with BIS ( $b = 28.21$ ;  $t(95) = 2.74$ ;  $p = .007$ ). Thus, Study 3 showed that disinhibition measured as the chronic tendency to "let go" underlied the effect.

Study 4 provided additional process evidence by directly measuring disinhibition. We used a consequential prosociality measure: real donations. Each participant had the payment in an envelope next to the computer. The hedonic eating task (free vs. instructed) was followed by an ad for Save the Children. Participants were asked to leave the desired donation amount (if any) in the envelope. Results indicated a significant main effect of hedonic consumption on real donations ( $F(1, 83) = 7.21$ ;  $p < .01$ ). Importantly, the direct effect was not significant when including disinhibition in the model ( $p > .09$ ; 95% CI [.577; 7.93]; Hayes 2009) indicating full mediation.

Considered jointly, the current studies support our central hypothesis that free hedonic consumption promotes spontaneous non-monetary helping, hypothetical and real charitable donations. We augment the current understanding of hedonics and contribute to the prosociality literature. Besides providing actionable insights for marketers that offer hedonic products and experiences, this work is highly beneficial for charity organizations.

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# Globalizing from the Periphery: The Role of Consumer Paratextual Translation

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## EXTENDED ABSTRACT

Much of the debate on the assimilation of global cultural products has focused on how Western cultural products and brands are adopted, resisted, and hybridized in other 'foreign' regions and countries (Alden, Steenkamp, and Batra 1999; Izberk-Bilgin 2012; Kjeldgaard and Askegaard 2006; Thompson and Arsel 2004). Yet, globalization is becoming increasingly dislocated from Western centers due to the rise of cultural, economic, and political institutions within different regions of the world (Bhambra and Santos 2017; Ger 1999; Goldstein-Gidoni 2005; Iwabuchi 2002) – what Ger (1999, 66) refers to as the “peripheries talking back.” Some popular materializations include the worldwide popularity of Indian Yoga (Askegaard and Eckhardt 2012), Manga comic books from Japan (Iwabuchi 2002) and, more recently, the international expansion of K-pop from South Korea (Shin 2009).

Despite the growing popularity of cultural products originating from the 'periphery', there are limited insights about how their meanings become globally accepted. Scholars seem to agree that peripheral cultural products face higher barriers to internationalization compared to their established American counterparts (Cayla and Arnould 2008; Eckhardt 2005; Iwabuchi 2002) due to 'cultural discounting', whereby “a particular [cultural product] rooted in one culture and thus attractive in that environment will have a diminished appeal elsewhere as viewers find it difficult to identify with the style, values, beliefs, institutions and behavioural patterns of the material” (Hoskins and Mirus 1988, 500). Peripheral cultural products thus lack transcultural intelligibility because they are less aligned with the established global cultural models (Thompson and Arsel 2004); consequently, international consumers may lack the necessary interpretive frames of reference to make sense of, activate, and negotiate their meanings. Given these theoretical asymmetries, we ask: what sociocultural and consumption processes enable peripheral cultural products to become transculturally intelligible?

Our answer to this question is informed by the interdisciplinary field of cultural translation studies (Cain 2001; Chidlow, Plakoyianaki, and Welch 2014; Freeman 2009; Gal 2015; Wolf 2007) and Genette's (1997) concept of paratextual translation. Beyond processes of interlingual transfer, translation more broadly refers to the “expression in one semiotic system of what has been said, written, or done in another” (Gal 2015, 227). Scholars of translation theory point toward two key 'problems of translation' relevant to the challenges of cultural globalization from the periphery. The first problem is cross-cultural incommensurability, where the meanings of cultural products posed within a culture of origin may not convey the same resonance in the context of another foreign culture (Chidlow et al. 2014; Freeman 2009; Reiss and Vermeer 1984), making translated cultural products feel somehow inferior or not original. The second problem is asymmetrical global power relations which implicitly favor Western cultural meanings, resulting in the erasure of difference on its own terms (Venuti 2008). Even as translation bridges intercultural differences, it is at the same time a “practice which in fact produces the 'Other'” (Wolf 2002, 180). That is, peripheral cultural products face implicit disadvantages because they must foster transcultural intelligibility in the context of asymmetrical power relations within which such cultural products are, by default, framed as 'foreign' (Cayla and Arnould 2008).

The concept of paratextual translation helps develop insights about how peripheral cultural products can become globally accepted despite these problems of translation. A paratext is defined as any written, audiovisual, or mediated content which enables the reading of a focal text (Cain 2001; Genette 1997). Paratextual translation can help potential international consumers map routes to intelligibility by expanding the repertoire of cultural images available to these consumers, or by crafting links between previously disparate cultural frames of reference.

Our analysis focuses on the paratextual translation practices of English-speaking consumers of K-pop, a cultural product described as “South Korea's greatest export” (Mahr 2012). Our findings show how three consumer paratextual translation practices help international K-pop consumers to locate this 'foreign' cultural product in relation to their existing cultural frames of reference. These extend beyond linguistic intelligibility to involve the translation of embodied practices, as well as complex negotiations in relation to local cultural identities and geopolitical positionalities. Even though K-pop contains a host of unfamiliar cultural elements, consumer-generated translation practices help craft connections between the familiar and the unfamiliar, thereby building the frameworks of intelligibility required to consume its multi-layered meanings.

This study helps advance our understanding of cultural globalization processes in two ways. First, beyond the well-documented ideological tensions between the 'global' and the 'local' which erupt in the consumption of global cultural products (Dong and Tian 2009; Izberk-Bilgin 2012; Thompson and Arsel 2004), our findings show the emergence of a quasi-nationalistic geopolitics within the transnational consumption field of K-pop; identity politics now plays out on a transnational scale, intriguingly inverting traditional Western center-periphery dynamics. Second, our analysis underscores the rise of the consumer-mediator as a key agent in processes of cultural globalization. Even though studies of market-mediated globalization processes have previously framed consumers as active *readers* and *appropriators* of plurivocal cultural product meanings (Dong and Tian 2009; Kjeldgaard and Askegaard 2006; Thompson and Arsel 2004), this study extends this perspective by showing how consumers are also productive *intercultural translators* of interpretive frames for globalizing cultural products. Consumers do not only *draw on* culturally specific interpretive frames to interpret the plurivocal meanings of a global cultural product, but also *shape, modify, and expand* these interpretive frames. Overall, the transcultural paratextual field of K-pop emerges as a key node, a productive site of translation which facilitates the globalization of this peripheral cultural product.

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# Consumer Attachment Styles and Preference for Sharing Products

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## EXTENDED ABSTRACT

Sharing in its pure form has innate developmental attributions (e.g. caring, giving, interdependence, non-reciprocity) (Belk 2010; Belk 2014b; John 2012). These attributions are typical features of interpersonal attachment bonds (Bowlby 1973; Hazan and Shaver 1987; Park et al. 2006) that are often based on mother-child relationships (Belk 2010). In this research, we suggest that consumers' likelihood to participate in different types of sharing systems should be influenced by their attachment styles, which is a reflection of their relationship tendencies. We expect that consumers will perceive non-commercial sharing (non-market mediated sharing forms) without monetary exchange and commercial sharing facilities with monetary exchange (Belk (2010; 2014a) differently based on their attachment styles. First, we anticipate that as the sharing systems become commercial, they lose their collective nature, thus core aspects of pure sharing such as caring, giving, interdependence and non-reciprocity no longer play a role. Further, we propose that consumers with anxious attachment style compared to avoidant attachment style, would be more willing to use non-commercial shared resources.

Study 1 investigates the effect of attachment styles (anxious vs. avoidant) and type of sharing systems (commercial vs. non-commercial) on willingness to use home sharing facilities. This study employed 2 (attachment style: anxious vs. avoidant) x 2 (type of sharing facility: non-commercial vs. commercial) between subjects' design (N=140). For manipulating attachment styles, participants were asked to think about a relationship that fits the description provided to them and to picture in their mind a person whom they had this type of a relationship (Bartz and Lyndon 2004; Swaminathan et al. 2008). After attachment style priming, individuals were randomly assigned to a hypothetical scenario about an either commercial or non-commercial house sharing situation. Finally, participants indicated their likelihood to stay in such a house sharing facility. As hypothesized, our results showed that, for non-commercial sharing facilities, participants in the anxious condition were more likely to use others' facilities, compared to participants in the avoidant condition. On the other hand, there was no difference in likelihood to use shared housing facilities at different conditions of attachment style for commercial facilities.

Study 2 investigates the effect of chronic attachment styles and type of sharing systems (commercial vs. non-commercial) on willingness to use home and bag sharing facilities. This study employed a between subject design (type of sharing facility: non-commercial vs. commercial) between subjects' design (N= 220). Chronic attachment styles (avoidant and anxious) was measured (Thomson, Whelan and Johnson 2012). After filler items, individuals were randomly assigned to two hypothetical scenarios about either commercial or non-commercial sharing facilities (both home and bag). Finally, participants indicated their likelihood to stay in a house from a sharing facility and use a bag from a sharing site. We also controlled for the effect of acquisition centrality. Higher levels of anxious attachment style had a positive effect on willingness to share non-commercial housing, yet there was no significant effect of avoidant attachment style on non-commercial housing. Further, as shown in Study 1, the effect of anxious attachment style on sharing non-commercial housing was higher than avoidant attachment style. In addition, our results showed that the effect of anxious attachment style on staying in

non-commercial shared housing facilities persists controlling for the effect of acquisition centrality. For commercial house sharing facilities, the effect of attachment styles was not significant on willingness to stay. Yet, there was a positive effect of acquisition centrality on willingness to stay in the house from a commercial sharing facility. This effect was not significant for non-commercial house sharing facility. The results for bag sharing were the same as house sharing, providing robustness for our findings.

Another important aspect of sharing goods is that they include some form of previous contact of another user. As sharing includes use of the same object by many others (simultaneous use or taking turns), each time there is a new user, an essential residue of previous users is transferred to the new ones (Bloom, 2010). Sharing possessions is also seen as a tool for achieving intangible assets such as establishing intimacy and solidarity in groups (Appadurai, 1981) and feeling of connection among members of communities (Mauss 1972). We predict that contagion aspect of shared products might help individuals with high levels of anxiety to feel connected to others through use of the products. Contagion could fulfill their drive for forming relationship with others. Since commercial reasons for sharing housing suggest, to the anxious individual, a lack of personal interest, non-commercial reasons indicate a deeper commitment (Feeney and Noller, 1990). Thus, we predict that higher levels of contagion in shared goods would increase willingness to use shared products among individuals with higher levels of anxiety. Given that we have not found the effect of avoidant style on willingness to share resources, in the next study, we have explored the effect of anxious compared to secure attachment styles.

Study 3 investigates the moderating role of contagion on using non-commercial sharing facilities under different levels of attachment styles. In this study, 2 (attachment styles: anxious vs. secure) x 2 (contagion level: high vs. low) between subject design was employed (N=155). For manipulating attachment styles, the same method in Study 1 was used. After the attachment style manipulation, participants were asked to imagine themselves in a scenario that describes a story about searching a suit for a job interview from a non-commercial sharing community. In the high contagion condition, participants saw a suit worn by a man (face not shown) and asked to imagine the person with this suit (i.e., visualizing him in an interview). In the low contagion condition, participants saw only a suit. Next, participants in both conditions were asked to rate the "likelihood to wear" item on a 7-point scale (not at all likely/very much likely). As hypothesized, we found a significant interaction between attachment style and contagion level. While there is no difference in likelihood to wear the suit at different levels of contagion for participants under secure attachment condition, there is a significant difference in likelihood to wear the suit at different levels of contagion for participants under anxious attachment condition. Taken together, the results show that for consumers with anxious attachment styles, contagion is one of the factors that drive willingness to use non-commercial sharing.

Taken together, the results demonstrate that attachment styles determine consumers' willing to use shared facilities. Most importantly, in non-commercial systems, consumers with anxious attachment styles are more likely to use shared goods or services, and this effect is moderated by the level of contagion.

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# Intentionally “Biased”: People Purposely Use To-Be-Ignored Information, But Can Be Persuaded Not To

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## EXTENDED ABSTRACT:

Research has repeatedly shown that people make judgments based on information they should ignore: jurors don't disregard inadmissible evidence (Stebly, Hosch, Culhane & McWethy, 2006), people exaggerate how predictable outcomes are after they have occurred (Fischhoff, 1975), people use private information when estimating other's valuations (Camerer, Loewenstein & Weber, 1989), participants continue to believe information provided during a study after it has been discredited (Anderson, Lepper, Ross, 1980), etc. We refer to this behavior as “use of to-be-ignored information”. Research demonstrating use of to-be-ignored information has contributed to the popular notion that once people learn information, they are unable to ignore it. In this paper we revisit this proposition. In a nutshell, we will argue and provide evidence that very often the problem is not that people cannot ignore information. But rather, that people do not want to ignore information. People often pay attention to information they shouldn't, not because they are unable to ignore it, but because they (sometimes fallaciously, sometimes defensibly) believe they are better off using it.

Many papers have investigated different types of use of to-be-ignored information (e.g. Camerer et al., 1989; Fischhoff, 1975; Steblay, Hosch, Culhane & McWethy, 2006), mechanisms for use of to-be-ignored information (for a review of many see Hawkins & Hastie, 1990), and moderators of use of to-be-ignored information (e.g. Arkes, Faust, Guilmette, & Hart, 1988). However, this research was not designed to investigate whether or not use of to-be-ignored information is intentional; it often used experiments designed to maximize the number of participants who intend to ignore the to-be-ignored information, but didn't check to see if participants actually intended to ignore it. Past research has attempted to persuade participants to disregard to-be-ignored information by explicitly instructing participants to ignore the to-be-ignored information (see Fischhoff, 1975), by giving participants incentives for accuracy (see e.g., Hell et al., 1998), and by constructing scenarios in such a way that they believe participants would necessarily try to ignore the answer (e.g. Fischhoff (1975) asking participants to predict the responses of uninformed others). However, it would be inaccurate to assume that all participants in these experiments intended to ignore the to-be-ignored information without checking. For example, if participants don't believe that ignoring the to-be-ignored information is beneficial (a premise supported by Studies 1-2 in this paper) these instructions and incentives are likely to fail (and potentially backfire).

There are many reasons why people may use to-be-ignored information intentionally. First, people may believe that using to-be-ignored information improves their accuracy, and in some cases they may be right. For example, imagine a participant who reads a multiple choice question that she does not know the answer to, learns the correct answer, and is then asked how others would answer the question. One option that she has is attempting to completely ignore the correct answer, and answer as she would have if she hadn't learned it. Alternatively, if she believes that some uninformed others would know the correct answer to the question (presumably *some* people know the answer), she could shade her answer towards the correct answer and ostensibly increase her accuracy. Additionally, people may use to-be-ignored information: in an attempt to “appear intelligent, knowledgeable, or perspicacious” (see Hawkins & Has-

tie 1990 p.316; see also Campbell & Tesser, 1983), as a shortcut if they believe that they would have figured out the correct answer with enough effort, because relying on the to-be-ignored information requires lower effort than generating an independent answer, because they misunderstood or chose not to follow the instructions, or for other reasons that we have not considered. Given that people have many compelling reasons to use to-be-ignored information, we propose that people often use of to-be-ignored information intentionally.

From the premise that use of to-be-ignored information may be intentional we arrive at several predictions that we test in studies reported here. First, we predict that when asked whether or not they want to ignore to-be-ignored information, a substantial share of people will indicate they do not want to ignore it. As predicted, across Studies 1-3, only 34% of participants in classic paradigms from past research agree that to-be-ignored information should actually be ignored. Second, we predict that people who desire to ignore the information do so, and that the previously documented biases are driven by the (majority) of participants who want to use the information. As predicted, in Studies 3 and 4 we do not find that obtaining to-be-ignored information has a significant effect on participants' estimates, *after accounting for their plan to use that information*. Third, we predict that giving people persuasive arguments about the importance of disregarding information will increase the degree to which such information is in fact disregarded. As predicted, in Study 4 we find that such arguments reduce people's plan to ignore the to-be-ignored information, and their use of that information as a result. We conclude that when people use to-be-ignored information, they may not be acting rationally, but they are often acting intentionally.

These findings not only suggest revising our understanding of the psychology behind use of to-be-ignored information, but also revisiting the implications of this body of research. For example, our findings suggest that we can sort people based on their use of to-be-ignored information. As an illustration, a judge could ask jurors whether or not they are attending to inadmissible evidence, trust that jurors have the ability to accurately report the truth, and dismiss jurors who report that they are using such information. Our findings also suggest methods for de-biasing individual decision makers: persuade decision makers to ignore information that needs to be ignored. For example, our research suggests that consumers can ignore fallacious negative information about a product if they are given a persuasive reason to do so. An interesting demonstration of this idea comes from a natural experiment - In 2007 the trusted magazine Consumer Reports publically retracted a botched safety-ranking of infant car seats and demand for the affected car seat models returned to baseline almost immediately (see Simonsohn, 2011).

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# How Materialism Shapes Spending on Friends

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## EXTENDED ABSTRACT

Materialism is a set of centrally held beliefs about the importance of possessions in one's life and is a pervasive value in the United States and other developed nations (Richins and Dawson 1992). While researchers have provided numerous insights into decision making by materialists (vs. nonmaterialists), not much is understood regarding the influence of materialism on social life spending (i.e., spending on friends). The idea that materialism should influence how consumers spend on others has been raised in the literature, but prior theories and initial findings are inconclusive and sometimes even contradictory.

On the one hand, previous studies suggest that materialists are asocial, finding that materialists lack feelings of community (Kasser and Ryan 1993) using a heterogeneous noncollege sample, extends these findings by showing that a high centrality of aspirations for financial success is associated with interview ratings of lower global adjustment and social productivity and more behavioral disorders. Discussion is focused on the deleterious consequences of materialistic world views and the need to examine differential aspects of content regarding goals and values. (PsycINFO Database Record (c and exhibit low social engagement (Bauer et al. 2012). Based on these findings, one might reasonably expect materialists to spend less than nonmaterialists on others. In contrast, other research suggests that materialists might not cut off social connections entirely. In particular, Richins and Dawson (1992) reported that materialists scored fairly high on the need for warm personal relationships. These results suggest an apparently contradictory view of the social lives of materialists, and thus further investigation is warranted.

We contend that the differences observed in the literature may be due to a subtle but important balance between being removed from social life (Kasser and Ryan 1993) using a heterogeneous noncollege sample, extends these findings by showing that a high centrality of aspirations for financial success is associated with interview ratings of lower global adjustment and social productivity and more behavioral disorders. Discussion is focused on the deleterious consequences of materialistic world views and the need to examine differential aspects of content regarding goals and values. (PsycINFO Database Record (c while still maintaining social connections (Richins and Dawson 1992). Our premise is that while materialists may not be overly successful in terms of their social lives (vs. nonmaterialists), they may still want to maintain some level of social connectedness. This expectation is built on a fundamental motivation for human beings, the *need to belong* (Baumeister and Leary 1995) stable interpersonal relationships is evaluated in light of the empirical literature. The need is for frequent, nonaversive interactions within an ongoing relational bond. Consistent with the belongingness hypothesis, people form social attachments readily under most conditions and resist the dissolution of existing bonds. Belongingness appears to have multiple and strong effects on emotional patterns and on cognitive processes. Lack of attachments is linked to a variety of ill effects on health, adjustment, and well-being. Other evidence, such as that concerning satiation, substitution, and behavioral consequences, is likewise consistent with the hypothesized motivation. Several seeming counterexamples turned out not to disconfirm the hypothesis. Existing evidence supports the hypothesis that the need to belong is a powerful, fundamental, and extremely pervasive

motivation. (PsycINFO Database Record (c. Importantly, materialism is positively associated with attachment anxiety (Norris et al. 2012). While materialists tend to experience higher anxiety related to relationships, they do not give up those social connections (Hazan and Shaver 1994). Relatedly, materialists have strong beliefs in the transformative powers of acquisition and are more likely than others to manage unpleasant psychological states through consumption (Richins 2017). Therefore, we propose that materialists are likely to perceive that spending on an important other will be interpreted more positively, and thereby enhance the connections with the other person. Materialists' willingness to spend more on others is motivated by a perceived obligation to spend a greater amount of money, in order to develop and strengthen a friendship.

Study 1 was designed to provide evidence of the relationship between materialism and consumers' spending on friends. We predicted that materialists would likely spend more on friends than nonmaterialists. This spending tendency, we propose, is more likely to occur in new friendships than in established ones, because of high uncertainty in new relationships. Moreover, another objective was to provide evidence for our process claim that materialists spend more because of perceived obligation. Participants were randomly assigned to 2 experimental conditions (Friendship stage: New vs. Established); materialism was a measured variable using the Material Value Scale (Richins 2004). As expected, the findings suggested that when friendships were relatively new, materialists spent more than nonmaterialists. For established friendships, in contrast, materialists did not differ from nonmaterialists. Moderated mediation analysis confirmed the proposed mediator of perceived obligation.

Study 2 had two purposes. The main purpose was to further test our theorizing by using manipulation approaches (Spencer, Zanna, and Fong 2005). Specifically, given that materialists spend more on friends to secure a friendship, it may be the case that, in certain circumstances, the tendency for materialists to spend more might also occur within established friendships. For example, when a good friend moves to another city, the greater spatial distance might increase the uncertainty of the friendship, motivating the materialist to attempt to secure the friendship by spending more on the friend. Thus, study 2 manipulated spatial distance (far vs. close) as a proxy for friendship certainty. Second, the present study aimed to identify boundary conditions for the effect of spending more in new friendships. Given that the main purpose for such spending is to build the new friendship, we would expect this effect to be attenuated when the friendship objectively can no longer continue to develop in the future (e.g., the new friend is moving to another city). As expected, our results suggested that (1) materialists would spend more than nonmaterialists even in an established friendship when uncertainty was present; (2) materialists would not spend more than nonmaterialists in a new friendship when the friendship could not grow in the future.

## CONCLUSION

Decades of research on materialism, based largely on seminal works from Belk (1985) and Richins and Dawson (1992), offers consumer researchers and marketing practitioners a better understanding of both antecedents and consequences of this fundamental construct in marketing. Adding to this stream of literature, the findings of study 1 indicate materialists spend more on new friends compared

to nonmaterialists. To back up our explanation of perceived obligation, we also provide direct evidence for the proposed underlying mechanism. Study 2 further tests our theorizing using a moderation approach to show that willingness to spend more occurs in not only new friendships, but also established friendships.

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# Can Fear Be Eaten? Emotional and Behavioral Consequences of Intake of Fear-inducing Food or Drink

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## EXTENDED ABSTRACT

While past studies focused on food consumption as a means to meet people's physiological and hedonic needs, this paper ventures into another psychological driver and consequence of food consumption – a sense of mastery over what is being eaten. We predict that the intake of fear-inducing food will not only reduce (rather than increase) people's fear arising from a prior threatening activity(H1), but will also increase people's tolerance of a prospective threatening activity(H2), and self-confidence is a mediator to explain the above effects(H3).

Study 1 is a 2 (movie clip color: red vs. green) x 2 (drink color: red vs. green) experiment (N=67). Red horror movie clip feature red blood splashing from the body whereas the green one featured green fluid pouring out of the body. We manipulated the color of drinks with red or green grape juice (red vs. green) with the same taste. After viewing the movie clips, participants were asked to report their fear level and drink a cup of grape juice. For those who had viewed the red movie clip, the red grape juice was the fear-inducing drink and the green grape juice was the non-fear-inducing drink, vice visa. Fear level was measured again, as well as self-confidence.

In study 1, we found support for H1 and H3. An ANOVA analysis revealed that the interaction between the movie clip and drink colors was significant ( $F(1, 63) = 6.81, p = .01$ ). After watching the red movie clip, the participants experienced a greater drop in fear after drinking the red grape juice than the participants who drank the green juice. Furthermore, the participants who had watched the green movie clip reported a more substantial decline in fear after drinking the green (vs. the red) grape juice. The indirect effect of the interaction of the movie clip and drink colors through self-confidence was found to be significant, with a point estimate of .96 and a 95% confidence interval (CI) excluding 0 (.30 to 1.94).

Study 2 was designed to test whether the intake of fear-inducing food would increase or decrease people's tolerance of a prospective threatening activity (N=59). The fear-inducing cookies resembled human fingers and were presented in the shape of hands, in sharp contrast with the appearance of the non-fear-inducing cookies. Two sets of cookies were identical in terms of ingredients, size and taste. Participants were asked to indicate their preferred horror level for the movie clip for the next stage (it is a disguised question. No more movie at all) after being served with the cookies. Self-confidence was measured.

Results of study 2 supported H2 and H3. ANOVA revealed that the participants who ate the fear-inducing cookies chose movie clips with significantly higher preferred horror levels than those who ate the non-fear-inducing cookies ( $F(1,57) = 12.89, p = .001$ ). These results indicated that the intake of fear-inducing food increases people's tolerance of a prospective threatening activity. Moreover, self-confidence was proved to be the significant mediator for such a relationship.

Study 3 predicted that the participants with high regulatory-emotional self-efficacy (RESE) would possess greater self-confidence in dealing with threatening activities than those with low RESE. A 2 (RESE: high vs. low) x 2 (food type: fear-inducing vs. non-fear-inducing) factorial design experiment was conducted (N=115). We manipulate RESE by a sentence-unscrambling task in which the participants had to construct four-word sentences from five-word jumbles containing adjectival terms representing high ("calm") or low ("impulsive") levels of RESE. We manipulated food type using the same cookie as in Study 2. Participants were asked to watch a horror movie clip before completing the sentence-unscrambling task, and then answered questions about their fear level and preferred level of horror for another movie clip to be watched before the end of the experiment. Subsequently, Participants were served with the cookies and reported their fear level and preferred horror level again.

ANOVA revealed that the interactive effects of food type and RESE on both fear reduction and the change in preferred horror level were also significant, fear reduction ( $F(1, 111) = 7.48, p < .01$ ); change in preferred horror level ( $F(1, 111) = 14.93, p < .001$ ). The intake of fear-inducing (vs. non-fear-reducing) cookies significantly reduced fear and increased preferred horror level for the participants in the low-RESE group, fear reduction ( $F(1, 111) = 22.09, p < .001$ ); change in preferred horror level ( $F(1, 111) = 32.35, p < .001$ ). Results showed that self-confidence played a mediating role in fear reduction and increased preferred horror level only for the participants in the low-RESE group.

Our research contributes to food consumption research by finding another psychological driver. Ample evidence has shown that there are two types of needs of food consumption: homeostatic needs and hedonic needs (Witt *et al.* 2014; Wansink and Chandon, 2014). While homeostatic needs arises from energy deprivation, hedonic needs is a function of people emotional state (e.g., feeling of stress and exhausted), exposure to palatable food (e.g., a chocolate bar) and social occasions (e.g., eating out with family and friends) (Haedt-Matt and Keel 2011). Our study finds that beyond hedonic needs, gaining self-confidence to cope with fear emotion is another important driver in food consumption.

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# When do More Options Produce Worse Choice?

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## EXTENDED ABSTRACT

A major difference between economic and psychological analysis of choice concerns the effect of having more options. Economic theory postulates that more choices should result in better outcomes because there will be a better match between the goals of the decision maker and the selected product. However, much work in psychology and consumer research has questioned this assumption (e.g., Iyengar and Lepper, 2000; Reibstein, Youngblood, and Fromkin, 1975; Schwartz, 2004), suggesting that choice overload occurs. This theory suggests that people have difficulty making choices when presented with larger choice sets in comparison to smaller sets, with choice set being defined as the number of alternatives in a choice set. Several studies have found that consumers have poorer subjective feelings regarding their choices when presented with larger choice sets (for a different perspective, see Scheibehenne, Todd and Greifeneder, 2010). Chernev, Bockenholt and Goodman (2014) recently conducted a large meta-analysis on the existing literature on choice overload. They looked at four subjective measures of choice: satisfaction/confidence, regret, choice deferral, and switching likelihood. With 99 meta-analytic observations ( $N = 7,202$ ), they document a significant effect of choice set size on these subjective outcomes across studies without controlling for moderating effects. Specifically, they find that increases in choice set size lead to a detriment in subjective experience of choice.

Yet there is another, perhaps more important, question: Does adding options improve the quality of choice? While several studies have explored people's ability to choose the correct choice under varying choice set sizes, they have not been subjected to a systematic assessment. In this paper, we look at if and when choice set size influences choice accuracy. While more options might increase accuracy by providing options that are closer to the preferences of the decision-maker, more options might make finding the better option more difficult, decreasing the quality of the chosen option.

While either outcome is possible, we suggest the following:

*Hypothesis 1* Greater choice set size will have a negative impact on choice accuracy: more options will hurt accuracy.

*Hypothesis 2* However, the presence or absence of choice architecture will significantly moderate the effects of an increase in the number of options. More specifically, the presence of one of a large set of choice architecture tools may enable individuals to do better with larger choice sets enabling decision makers to overcome, and perhaps even exploit an increase in the number of options.

Our meta-analytic study includes papers that use the number of alternatives as an independent variable and a measure of choice accuracy as the dependent variable. These studies usually determine better choices by giving people a set of preferences, or by looking for errors in choice. Dependent measures are usually whether the best choice (binary yes or no) was selected, or some continuous measure (the average amount of money lost, or average quality measure).

In total, our meta-analysis includes 76 observations originating from 21 studies published in 16 articles. ( $N=12,077$ ). Each observation was coded to reflect the corresponding dependent variables, and we recorded each dependent variable as a separate observation. Since we were interested in the impact of choice architecture and the impact of set size, we also coded each observation to reflect these two potential moderators.

To combine all the individual studies into one meta-analytic model, we calculated Cohen's  $d$  to capture the difference effect between the small and large number of alternatives. In the context of our study, a positive  $d$ -value is associated with participants making better choices with a larger number of alternatives, and a negative  $d$ -value is associated with participants making better choice with a smaller number of alternatives.

We find that larger choice set sizes do lead to lower choice accuracy,  $d^+ = -0.20$ ,  $CI_{95} = [-0.30, -0.11]$ ,  $p < .0001$ ,  $I^2 = 78.21\%$ . This result is robust to running the model at either the study or article level,  $d^+ = -0.26$ ,  $CI_{95} = [-0.39, -0.14]$ ,  $p < .0001$  and  $d^+ = -0.33$ ,  $CI_{95} = [-0.49, -0.18]$ ,  $p < .0001$ , respectively. Adding our moderators further refines our story. First, we find that the presence of decision aids does increase the accuracy of choice with a larger number of alternatives,  $b = 0.37$ ,  $t(71) = 3.81$ ,  $p = .0003$ . Second, we do not find that choice overload is worse when the difference in the compared choice set sizes increases, as compared in a trichotomy of three levels (low, medium and high),  $b = -0.13$ ,  $t(71) = -0.85$ ,  $p = .4$ , and  $b = -0.18$ ,  $t(71) = -1.52$ ,  $p = .13$ . Finally, we find that the dependent variables converge in providing similar effect size results (all  $p > .05$ ).

Our results have important implications for both theoretical and applied work. First, choice overload influences choice on both subjective measures, as shown by Chernev et al. (2014), and objective measures, as shown here. In other words, there is evidence that choice overload extends not only to how choice feels, but to how good these choices are. Second, the analysis indicates that there are two ways of getting a more accurate choice. The first is to provide minimal options. The second is to present more options, but add choice architecture as well. These findings can serve as a basis for creating better choice sets for consumers across domains.

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# Let's Get Together and Make A Difference: Experiencing A Community In Donation-Based Crowdfunding

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## EXTENDED ABSTRACT

Social-causes campaigns are the largest category in crowdfunding and donation-raising campaigns hold a big portion of this category (www.statista.com). However, most of the research in crowdfunding focused on equity-based crowdfunding and very little research has focused on donation-based crowdfunding. While there is a common assumption that virtual communities benefit equity-based crowdfunding campaigns (Belleflamme, Lambert, & Schwienacher, 2013; Colombo, Franzoni, & Rossi-Lamastra, 2015; Kraut et al., 2012), this assumption has not been tested in donation-based crowdfunding. The potential effect of community in such campaigns is interesting given past findings on prosocial behavior in the context of others. Past studies have suggested that the existence of others promotes prosocial behavior (Fischbacher, Gächter, & Fehr, 2001; Frey & Meier, 2004; Van Bommel et al., 2012; Garcia et al., 2009; Levine et al., 2002) while other studies have shown that the existence of others may hinder prosocial behavior (Darley & Latane, 1968; Fischer et al., 2011; Garcia et al., 2002). In light of these contradicting findings, it is important to explore how emphasizing the existence of a community in donation-based crowdfunding campaigns influences prospective donors.

This research shows that when prospective donors' experience the existence of a community in such campaigns it substantially impacts the campaigns' bottom line. As humans we have a fundamental need to connect with others and belong to a group (Alderfer 1972; Baumeister & Leary 1995; Maslow 1943; McClelland 1987; Ryan & Deci 2000), this research shows that when experiencing the existence of such communities, even when donors are strangers to each other, this need is activated and influences donation-giving. Furthermore, the need to connect with others is heightened when concerned with social exclusion, but weakened when feeling socially secured (Maner et al. 2007). In doing so, this research demonstrates how subtle cues in the campaign webpage can induce the perception of a community, activating the psychological need to connect with others to influence online donations.

In the first study, the hypothesis that emphasizing the existence of a community increases donations was tested. An "A/B testing" procedure was administered on 22 campaigns active on a crowdfunding platform (Jewcer.com) during 10 days. Donors saw either one of two versions (for each campaign) which differed only in the main slogan. In the community version the slogan was "Join our community of supporters and we can make a difference." In the control version the slogan was: "Support this cause and make a difference." Out of 3,523 web visitors, 504 made a donation. T-test analysis (combining all campaigns) show that for the community versions, donations were higher ( $M=\$62.39$ ,  $SD=\$78.15$ ) than for the control versions ( $M=\$49.61$ ,  $SD=\$55.42$ ;  $t(502)=-2.11$ ,  $p=.035$ ).

In the second study the mediating role of donors' sense of connectedness to the community was tested. MTurk participants ( $n=144$ , \$1 compensation) randomly saw one of two versions of a hypothetical crowdfunding campaign. In the control condition, donors were presented on the main page as anonymous. In the community condition, presence of others was strengthened by presenting donors with their full name. Participants reported how much of their compensation money they would like to donate (scale 0-\$1) and how connected they feel to this group of donors (scale 1-7). Finally, they completed an Interdependence orientation scale ( $\alpha=.83$ ; Singelis 1994) to rule

out interdependence orientation as the main alternative explanation. Results show that in the community condition donations and connectedness are higher ( $M_{don}=0.20$ ,  $SD=0.30$ ;  $M_{con}=3.20$ ,  $SD=1.06$ ) than in the control ( $M_{don}=0.11$ ,  $SD=0.22$ ;  $M_{con}=2.73$ ,  $SD=1.24$ ;  $t_{don}(142)=-2.05$ ,  $p=.043$ ;  $t_{con}(142)=-2.43$ ,  $p=.02$ ). Mediation analysis (PROCESS Model 4; with 5000 resamples; Hayes 2013) show that feelings of connectedness fully mediate the effect of community perception on donations, controlling for Interdependence ( $B=0.019$ ,  $SE=0.011$ ; 95% CI: [0.003, 0.050]).

In the third study the model was tested with a different community manipulation and connectedness scale: MTurk participants ( $n=202$ , \$1 compensation) randomly saw one of two campaign versions. In the control condition participants read about the campaign with no mention of other donors. In the community manipulation condition at the end of the campaign webpage participants read posts of donors that supported the campaign. Participants completed the sense of connectedness scale ( $\alpha=.94$ ; Lee, Draper & Lee 2001) and their willingness to donate a bonus prize (scale 0-\$50). T-tests show that in the community condition, donations and connectedness are higher ( $M_{don}=13.06$ ,  $SD=13.67$ ;  $M_{con}=4.28$ ,  $SD=1.31$ ) than in the control ( $M_{don}=7.98$ ,  $SD=10.35$ ;  $M_{con}=3.69$ ,  $SD=1.31$ ;  $t_{don}(200)=-2.99$ ,  $p<.003$ ;  $t_{con}(200)=-2.96$ ,  $p<.002$ ). Mediation analysis (PROCESS Model 4; with 5000 resamples) show that feelings of connectedness fully mediates the effect of community perception on donations ( $B=0.069$ ,  $SE=0.026$ ; 95% CI: [0.024, 0.124]).

The fourth study demonstrated that the effect is more likely to occur when consumers fear social exclusion than when they feel socially secured. In a 2 (social exclusion) by 2 (community perception) design, MTurk participants ( $n=321$ , \$1 compensation) first completed an extraversion scale and received (randomized) feedback on their score describing their future as socially secure or socially excluded (Twenge et al. 2007). They then saw one of two versions of a campaign. The community condition included a slogan of a community (as in study 1) and pictures of donors. The control condition had no community slogan and donors were anonymous. Participants reported feeling connected (as in Study 3), completed the PANAS scale (Watson, Clark, and Tellegen 1988) and their willingness to donate a bonus prize (scale 0-\$50).

In the moderation mediation analysis (PROCESS Model 7, with 5000 resamples), community perception serves as the predictor, social exclusion as the moderator, connectedness and PANAS-Negative as the mediators, and donations as the dependent measure. Connectedness significantly mediates the effect when feeling socially excluded ( $B=1.518$ ,  $SE=0.679$ ; 95% CI: [0.436, 3.117]) but not when feeling socially secure ( $B=0.120$ ,  $SE=0.583$ ; 95% CI: [-1.097, 1.255]). PANAS had no mediating effect.

Taken together, the results of four studies show that activating the perception of a community increases donors' responsiveness and the important role that donors' sense of connectedness to other donors has on donation giving. These findings provide important theoretical contribution to the literature on donation, crowdfunding and group processes as well as important implications for charitable organizations, crowdfunding platforms and campaign creators.

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# Individual-level Carryover-Parameters in Reference-Price Models

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## EXTENDED ABSTRACT

Reference-price models applied to real purchase data have a long history in marketing and consumer research (Winer 2014). Here, the researcher assumes that product choice is driven by deviations between current prices and consumers' reference-price. There is the consensus that ignoring unobserved consumer heterogeneity in reference-price models will overestimate consumer response to gains and losses (Mazumdar et al. 2005, Kopalle et al. 2012, Neumann and Böckenholt 2014). However, previous research has neglected heterogeneity for the carryover-parameters that explain the short- vs. long-term memory of consumers in reference-price formation. Consumer research acknowledges individual differences in consumer's ability to remember prices (Monroe and Lee 1999, Vanhuele and Drèze 2002). Hence, the current practice in reference-price modeling may disregard realistic choice behavior.

To the best of our knowledge, only two previous studies have made attempts to partly account for heterogeneity in the carryover-parameters. Erdem et al. (2010) used a Maximum Simulated Likelihood approach to estimate the mean and standard deviation of a Normal mixing distribution to account for heterogeneity. To obtain individual-level estimates, this approach would require an additional Bayesian updating step (see, Revelt and Train 2000). In addition, the authors assumed no correlation in the heterogeneity distribution which simplifies identification but impairs capturing realistic choice behavior. A second study by Dayaratna and Kannan (2012) provides a mathematical reformulation of reference-price models. The authors estimate a finite-mixture heterogeneity distribution with three segments (and therefore only three segment-specific carryover-parameters). In this context, Dayaratna and Kannan (2012) discuss hierarchical Bayesian (HB) approaches as an avenue for future research to obtain individual-level carryover-parameters.

Our study aims to fill this research gap. Previous studies using HB models to obtain individual-level estimates have fixed the carryover-parameter to either zero (Chang et al. 1999, Klapper et al. 2005) or to some predefined value (0.7, see Kopalle et al. 2012). These authors allowed correlation across the individual-level estimates but did not estimate carryover-parameters at all. We assume that Gibbs sampling has failed to simultaneously estimate heterogeneity in the utility drivers and the carryover-parameters. We contend that this is due to the strong impact of the carryover-parameters on the structural quantity of the gains and losses, which ultimately affect their own parameter estimates in the utility function. Recent advances in MCMC methods have led to an increased use of the so-called Hamiltonian Monte Carlo (HMC) algorithm. HMC provides improved sampling methods for HB models and can deal with such highly correlated parameters (see, e.g., Neal 2011). Hence, we propose a reference-price model that captures individual-level estimates for the utility drivers and the carryover-parameters. Our contribution to the literature is twofold. First, our approach allows modeling more realistic choice behavior that is in line with the behavioral literature in the area of consumer's price memory. Second, our results allow new insights with respect to heterogeneity in short- vs. long-term memory in reference-price formation.

It is common practice to estimate the internal reference price (*IRP*) for consumer  $n$ , choice alternative  $j$ , and time period  $t$  as a smoothed average of past prices (see, e.g., Mazumdar et al. 2005):  $IRP_{njt} = \lambda \cdot IRP_{njt-1} + (1-\lambda) \cdot PRICE_{njt-1}$ . Here,  $PRICE_{njt-1}$  are the prices

observed in the last choice situation and  $IRP_{njt-1}$  are the internal reference-prices from the last choice situation. The carryover-parameter  $\lambda$  can take values between 0 and 1, and determines how past prices affect the current reference-price (Briesch et al. 1997). Smaller values put more weight on the prices from the last choice situation for the current reference-price, which we denote as "short-term price memory." A carryover-parameter equal to zero means that the reference-prices in the current period are formed only by the prices of the last choice situation. Larger values for  $\lambda$  put more weight on the prices from less recent choice situations for the current reference-price formation, which we denote as "long-term price memory." A carryover-parameter equal to one does not provide meaningful estimates because then *IRP* remains equal to the initial-condition over the entire choice sequence. Ultimately, the magnitude of  $\lambda$  determines the structural quantity of *IRP* which is used in the utility function of the reference-price model.

Previous research has shown that consumers differ in their ability to remember prices (Monroe and Lee 1999, Vanhuele and Dreze 2002). For example, price-conscious consumers tend to process price information more thoroughly, which results in more accurate recall and long-term price memory (Monroe and Lee 1999). Moreover, long-term price memory increases with increasing loyalty (Vanhuele and Dreze 2002).

We first tested our model using the hybrid Gibbs sampler proposed by Train and Sonnier (2005). We did not achieve convergence with individual-level carryover-parameters, even after a large number of draws (200,000). Hence, we contend that the HMC algorithm is more suitable. First, the Gelman-Rubin test (Gelman and Rubin 1992) indicates successful convergence using HMC. Second, we observe a higher model fit for our proposed model compared to a benchmark model with common carryover-parameters (log Bayes-Factor = 12.467; indicates "strong evidence," see Kass and Raftery 1995). Third, we observe significant heterogeneity for the carryover-parameters. The range of  $\lambda$  for *IRP* allows interpretation in terms of short- vs. long-term price memory. In our model, the individual-level  $\lambda$  for *IRP* range from 0.285 to 0.454. Consumers in our sample tend to weight the prices from the last choice situation more than prices from the less recent choice situation in the internal reference-price formation. Importantly, we show that the consumers differ in their short-term memory for reference-price formation.

Our approach enables follow up analyses to obtain new insights into consumer choice behavior. First, our model also provides a posterior distribution for the correlation matrix of all utility drivers and carryover-parameters. These estimates can be used to assess the relationship of the price memory to any utility driver of interest (e.g., price-sensitivity or loyalty). Second, our model provides the assignment of the individual-level carryover-parameters to the consumers. This information can be used as a dependent variable in a regression analysis with consumer-related explanatory variables that may influence the price memory in reference-price formation.

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# Brand Fan(atic)s: When Excessive Brand Loyalty Sends the Wrong Signal

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## EXTENDED ABSTRACT

Consumers use brands in many combinations—from mixing-and-matching multiple brands (*multi-brand combination*; e.g., Nike shoes, Adidas shirt, Asics pants) to using only a single brand (*mono-brand combination*; e.g., Nike shoes, shirt, and pants). Albeit its relevance in everyday life, it is yet a “largely ignored area of branding research” (Rahinel and Redden 2013, p.1291). Addressing this gap, eight studies examine how such brand combinations (mono- vs. multi-brand) affect observers’ trust in the target consumers’ recommendations.

A pre-study established managerial intuitions. MBAs (N=124) imagined being a brand manager for Nike running shoes, employing social media influencers to promote their shoes. All learned of an influencer who posted a photo wearing five branded running products; half learned the influencer’s products were all from Nike (“*mono-brand user*”), the other half learned the products were from multiple brands (“*multi-brand user*”). Both influencers had on Nike running shoes—however, MBAs were more satisfied with the mono-brand user ( $p < .001, d = .93$ ), believing s/he would be more credible in promoting the running shoes ( $p = .09, d = .31$ ).

However, seven experiments contradicted this intuition: observers actually found mono-brand users *less* credible. Studies 1A-1C established this main effect. Study 1A (N=200) participants encountered (within-subjects) a mono- and multi-brand user of 5 real clothing brands (between-subjects: luxury or non-luxury brands); both users had an identical focal product (Gap or Louis Vuitton work bag). Participants trusted the mono-brand user less for work bag recommendations ( $p < .001, d = .84$ ) and general clothing recommendations ( $p < .001, d = .87$ ). Study 1B (N=200) replicated the finding using a between-subjects design (work bag:  $p < .001, d = .60$ ; clothing:  $p < .001, d = .94$ ). Study 1C (N=300) replicated the finding using fictitious clothing brands (work bag:  $p < .001, d = .62$ ; clothing:  $p < .001, d = .71$ ).

In all studies, the focal product was identical—only the broader brand combinations varied. Thus, differences in trust cannot be due to the particular choice of item. Instead, we propose this difference is driven by *inferences* about the users’ underlying purchase decision (e.g., Barasz et al. 2016; *forthcoming*; Bellezza et al. 2014; Rahinel and Redden 2013; Shalev and Schrift 2018): that observers infer mono-brand users were motivated relatively more by brand than other features (e.g., quality)—in essence, that they had used brand as a heuristic for their purchase decision—and had therefore less carefully considered which item to buy.

Studies 2-3 established this process using branded toiletries (e.g., shampoo, condition, soap); the focal product was always Dove body lotion. Both studies replicated the main effect (Study 2:  $p < .001, d = .86$ ; Study 3:  $p < .001, d = .86$ ). In addition, the two studies investigated observers’ inferences about (1) *relative importance of brand* and (2) *careful consideration*. Study 2 (N=202) measured these two mediators: participants believed brand was relatively more important to mono-brand (vs. multi-brand) users ( $p < .001, d = 1.20$ ) and inferred they were less careful in considering what body lotion to buy ( $p < .001, d = 1.16$ ). Mediation analysis revealed a significant total indirect effect of brand combination on trust in recommendation via the two sequential mediators (95% CI [-21.63, -11.39]). Study 3 (N=406) manipulated the mediators to turn off the effect ( $p = .584, d = .08$ ).

Studies 4A-4B tested the effect of mono- (vs. multi-) brand combinations on the observers’ own behavior. Study 4A (N=115) used distance runners (recruited via the facebook page of a race organizer) and choices of running gear; Study 4B (N = 67) new parents (recruited via a special interest online forum) and choices of baby gear. Both studies replicated the main effect of reduced trust (Study 4A:  $p = .008, d = .51$ ; Study 4B:  $p < .001, d = .92$ ), which followed through to reduced interest in purchasing (Study 4A, 95% CI [-.09, -.87]) or learning more about the focal product (Study 4B, Sobel  $Z = 1.78, p = .075$ ), and reduced intention to follow the target consumer on social media (Study 4B, 95% CI [-.95, -.25]).

These findings contribute to the literature on social learning and influence, specifically in contexts where people simply observe one another’s choices (e.g., Barasz et al. 2016; *forthcoming*; Bellezza et al. 2014). Past research has examined the effect of observed choice on consumer attitudes and behavior (e.g., Ferraro et al. 2013). Our findings suggest that it is also critical to understand what inferences these observations elicit: seeing someone wearing a pair of Nike running shoes *may* increase an observer’s own purchase interest, but whether or not it does depends on the inferences people make about *why* and *how* those running shoes were purchased. In other words, even holding the actual observed choice constant, the inferences consumers make *about* that choice can reduce trust in recommendations and observers’ own purchase interest. Many factors may affect those inferences; our work identifies a critical one—brand combinations.

Our results also have important practical implications. Given the growing importance of influencer marketing, surprisingly little academic research has so far examined the specific factors affecting social media influencers’ ability to *influence*. Some research has begun to tackle this question (e.g., Sah et al., 2018). However, this area seems broadly ripe for additional research. Our investigation highlights one such factor affecting influencers’ trustworthiness—the brand combinations they have supposedly chosen to consume—and speaks to the broader question: Holding the actual influencer constant, how should brands best position themselves—quite literally—in order to maximize the influencer’s influence? While a marketer’s rational goal is to push one’s own brand—to the exclusion of its competitors—our results suggest there may be a signal benefit to embedding one brand within the context of others.

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# Compatibility Theory

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## EXTENDED ABSTRACT

How large is the amount of \$100? How good is an SAT score of 1200? How large is the number of 800 people left homeless by a natural disaster? Evaluating attribute values is a cornerstone of virtually every judgment or decision that humans make. In this paper we advance and empirically test a theory of how people evaluate attribute values.

We posit that individuals may rely on four processes (or inputs) when evaluating attribute values. We conjecture and provide empirical evidence that the four inputs are ordered, in the sense that an input that is perceived to be more diagnostic and/or requires less cognitive effort is more likely to drive an attribute's evaluation. An input is diagnostic for a judgment—in this case an evaluation—to the degree that it is relevant for evaluating the target attribute value. The use of an input is effortful to the degree that it consumes cognitive resources. We propose that normally less diagnostic-more effortful inputs exert a stronger influence on evaluations when otherwise more diagnostic-less effortful inputs are unavailable. We describe the four evaluation inputs below.

The first input entails an evaluation of a target value without reference to other information. The second input entails a comparison of the target stimulus's target attribute value with another value on the same attribute. The second input has a stronger impact on evaluations when the target attribute value is not highly evaluable in isolation (Hsee 1996; Hsee et al. 1999). The third input entails a comparison of the target value with a compatible value on another (reference) attribute. The third input has a stronger impact on evaluations when the target attribute is not highly evaluable in isolation and there is lack of information about other values on the target attribute. The fourth input entails an inference about the target value based on an incompatible value on a reference attribute. The fourth input has a stronger impact on evaluations when the target attribute value is not highly evaluable in isolation, when no comparison can be made with another value on the same attribute, and when no comparison can be made with a compatible value on a reference attribute.

We test our theory in 13 studies. Given that prior research provides ample evidence for the first two inputs, our investigation is focused on providing evidence for the third and fourth input. Importantly, we also provide process evidence for our overall framework by demonstrating that the impact of each of these inputs on evaluations is contingent on the evaluability of the target attribute and on the availability of information about other values on the target attribute. We further show that the impact of the fourth input on evaluations is contingent on the degree of compatibility between the target attribute value and the reference attribute value.

Studies 1a-1c provide evidence for the third input of the evaluation process across different contexts. We show that, holding target values fixed, targets are perceived to be smaller (or worse) as compatible reference values increase. Consistent with our framework, in Study 2 we show that this effect is moderated when more diagnostic inputs are made available. Next, we turn our attention to the fourth input of the evaluation process. Studies 3a-3c provide evidence for the fourth input across different contexts. We show that, holding

target values fixed, target evaluations increase (e.g., target attribute values are perceived as larger or better) as incompatible reference values increase. Studies 4 and 5 provide further process evidence for our theoretical framework. In Study 4 we find that the effect of the value on an incompatible reference attribute on judgments about the value on a target attribute is contingent on the degree to which the target is evaluable. In Study 5 we show that judgments about the attractiveness of the incompatible reference value correlate positively with judgments about the attractiveness of the target value consistent with the fourth input of the evaluation process. Further, Study 5 also shows that the impact of the fourth input on evaluations is attenuated in joint compared to separate evaluation mode, presumably because—previously argued—same-attribute information is seen as more diagnostic relative to information from another attribute. In Study 6 we test whether the extent to which the two attributes are seen as correlated moderates the impact of the fourth input. Finally, in Studies 7a, 7b, and 8 we provide further evidence for our theoretical framework by influencing whether participants evaluate a given target based on the third or fourth input of the evaluation process. We directly manipulate whether the two attributes are compatible, and show that the direction of the effect of the reference value on evaluation of the target value is contingent on the compatibility of the two attributes.

Evaluability Theory (Hsee and Zhang 2010)—the most prominent framework in psychology with respect to attribute-level evaluations—discusses factors that determine the evaluability of a given attribute. These factors include the evaluator's knowledge about the target attribute, the nature of the target attribute, as well as the evaluation mode. Nonetheless, Evaluability Theory remains rather silent about whether, when, and how evaluators use information about other (i.e., reference) attributes when evaluating a target. To our knowledge, our theoretical framework is the first to provide an answer to these three questions. We build on Evaluability Theory, which essentially represents the first two inputs of the evaluation process, and add two additional inputs whereby evaluators rely on information about other (reference) attributes when assessing the magnitude of target values on attributes that are not highly evaluable. Therefore, our framework is the first that explains how individuals use both within- and between-attribute information to evaluate a target.

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# When Small Predicts Large: The Effect of Initial Small Contributions on Subsequent Contributions in a Crowdfunding Project

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## EXTENDED ABSTRACT

Crowdfunding is becoming an increasingly popular means for entrepreneurs to raise capital through online platforms. When deciding whether to support a project, a potential backer evaluates the project not only based on information provided by the entrepreneur, but also based on the amount already invested in the project. Some research has suggested that larger contributions are likely to create contribution momentum and elicit backers' herding behavior (Agrawal, Catalini, and Goldfarb 2015). Accordingly, it is common for entrepreneurs to ask their friends or families to "seed" investments in the early stages of a crowdfunding project. But does this "friendship-giving" really benefit crowdfunding projects?

We propose that the opposite is true, such that "friendship-giving" may impede rather than benefit a crowdfunding project. Our proposition relies on potential backers' awareness of the amounts invested during the early stages of the project and on the "friendship-giving" lay belief, according to which people believe that entrepreneurs' friends contribute more to their crowdfunding projects than strangers do. This lay belief was supported in a pilot study ( $n=99$ ; 4.69 vs. 2.94, respectively;  $t(98)=4.87$ ,  $p<.001$ ). Additionally, in that study, when participants were asked to think of themselves as friends of the entrepreneur, they were significantly more likely to choose a larger contribution amount than did those who were asked to consider themselves as strangers (53.8% vs. 8.5%;  $\chi^2(1)=23.20$ ,  $p<.001$ ).

We suggest that since potential backers cannot know for sure the relationship between the entrepreneur and the other backers, they use the percentage of large vs. small contributions in the initial period as a relationship indicator. Consequently, given the "friendship-giving" lay belief, a high percentage of large initial contributions is likely to signal to potential backers that the early backers are friends of the entrepreneur, and that the project is not necessarily worthy. In contrast, a large percentage of small contributions is expected to signal that many strangers find the project interesting, thereby motivating subsequent contributions. Thus, contrary to common beliefs, we predict that small, rather than large, initial contributions lead to more positive inference-making and to larger subsequent contributions.

Both large-scale field data and lab experiments supported this hypothesis.

First, we analyzed 902 projects on DemoHour, one of the largest reward-based crowdfunding platforms in China. Models 1 and 2 show that "the percentage of small contributions in the first day" has a positive and significant effect on "the total money pledged" as well as "the probability of success", suggesting that the higher the percentage of initial small contributions, the more money a project will raise. Additional analysis indicates that small contributions have a positive and significant effect on subsequent backers' contribution amounts, especially in the early stages of the project (Model 3).

Importantly, we examined the validity of the "friendship-giving" lay belief by identifying friendships (or the lack thereof) between 738 entrepreneurs and 31,388 backers, on the basis of their online social networks on Weibo.com (China's Twitter equivalent). Model 4 shows that "friendship between an entrepreneur and a backer" has a positive and significant effect on "the amount of money a backer contributes", suggesting that friends contribute more than

strangers. Model 5 further indicates that more friends contribute in the early stages than in the late stages.

Study 1 confirmed that individuals are willing to contribute a higher amount when the majority of initial contributions consist of small rather than large amounts, and that this tendency is driven by the "friendship-giving" lay belief. Participants ( $n=100$ ,  $M_{\text{age}}=35.58$ ; 47% female) read a description about a crowdfunding campaign in which the entrepreneur is raising funds to develop a smartphone-camera stabilizer. We informed participants that the entrepreneur was offering a thank-you letter for a \$10 contribution, and a \$50 price discount to purchase the product (when launched) for a contribution of \$50 or above, and that the project had already secured 10% of the target amount. We also told them that among all individuals who had contributed to the project on the first day of its launch, a majority had contributed either \$10 (small-initial-contribution condition) or \$50 (large-initial-contribution condition). We found that participants in the small-initial-contribution condition were willing to contribute a larger amount compared with those in the large-initial-contribution condition (\$23.38 vs. \$13.44,  $t(101)=1.83$ ,  $p=.07$ ), and were more likely to believe that the initial backers were total strangers to the entrepreneur (4.86 vs. 3.80,  $t(101)=3.12$ ,  $p=.002$ ). The effect of large/small initial investment percentage on the amount participants were willing to contribute was mediated by the belief that initial backers were strangers to the entrepreneur ( $b=-2.68$ ,  $SE=1.79$ , 95% CI: -7.54 to -.21).

Study 2 used a process-by-moderation approach in which we directly manipulated the accessibility of the friendship-giving lay belief. Specifically, participants ( $n=235$ ,  $M_{\text{age}}=35.91$ ; 46% female) read a description about a specific crowdfunding campaign. However, one group of participants was encouraged to "correct" their lay belief prior to their contribution decisions. An ANOVA revealed a significant interaction effect between initial investment and lay-belief-correction on participants' willingness to contribute ( $F(1,231)=3.99$ ,  $p=.047$ ). Specifically, among participants in the lay-belief-not-corrected condition, those in the small-contribution condition were willing to contribute a larger amount to the project ( $M=.93$ ,  $SD=.61$ ) than were those in the large-contribution condition ( $M=.70$ ,  $SD=.69$ ,  $F(1, 231)=3.65$ ,  $p=.057$ ). In contrast, in the lay-belief-corrected condition, the effect was attenuated.

Study 3 tested a boundary condition for the effect observed. Participants ( $n=130$ ,  $M_{\text{age}}=37.23$ ; 46% female) were randomly assigned to four conditions: 2(initial investment: small vs. large) x 2(campaign progress: early vs. late stage). An ANOVA revealed a significant interaction effect between initial investment and progress on participants' willingness to contribute ( $F(1,126)=4.38$ ,  $p=.038$ ). Specifically, when the project was in an earlier stage (10% of the total amount secured), participants were willing to pledge a larger amount when the initial investment was small rather than large (\$30.26 vs. \$11.22,  $F(1,126)=3.84$ ,  $p=.052$ ). The effect was eliminated, however, when the project had secured 90% of the total amount ( $M_{\text{small}}=\$21.87$  vs.  $M_{\text{large}}=\$31.00$ ,  $F(1,126)=.96$ ,  $p=.33$ ).

Taken together, our results show that smaller initial contribution amounts predict larger subsequent contributions, by signaling that strangers (vs. friends) support the project.

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# Trapped in the Rabbit Hole: Life History Strategies Modulate the Impact of Mild Stress on Hedonic Consumption

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## EXTENDED ABSTRACT

The current research tests *how* and *when* consumer life history strategies (LHS) – short-term, reward-sensitive (fast) vs. long-term, goal-oriented (slow) foci- might drive food related decision making. Previous studies have pointed to the role of presently experienced stress, adversity or scarcity and have shown that under high levels of acute stress and anxiety, fast and slow strategists sometimes diverge in opposing directions –consumers with a fast LHS become more impulsive, reward seeking and less future oriented under severe stress or anxiety, whereas consumers with a slow LHS show the opposite and become more deliberate, less reward seeking and more future oriented (Griskevicius et al. 2011b; Mittal and Griskevicius 2016; Mittal et al. 2015). Yet, while illuminating, these studies have typically resorted to relatively “dramatic”, atypical, and impactful sources of stress and anxiety, such as (scenarios about) a severe economic crisis (e.g., featuring home foreclosure signs, unemployment lines, and emptied office spaces) or the salience of violence and death in one’s life and environment (Griskevicius et al. 2011a; Griskevicius et al. 2011b; Mittal and Griskevicius 2014). Thus, it is unknown whether, and if so to what extent, the distinction between a fast vs. slow LHS remains a meaningful predictor of health-related decision making under more mild, mundane conditions of stress, as faced by the bulk of consumers on a daily basis. Research suggests that it might –but not for everyone.

In particular, stress sensitization (or kindling) theory (Hammen et al. 2000; Post 1992) proposes that individuals who have experienced stressful and unpredictable conditions during early childhood become *sensitized* to such conditions and become more vulnerable to more proximate stressors, compared to individuals who have generally not been exposed to such conditions during childhood. Consequently, the *same* conditions that foster the cultivation of a fast LHS, also *lower* the threshold of stress tolerance later in life. We propose that mundane, mild and proximate stressors (e.g., the experience of daily hassles or time pressure) affect the decision making of fast, but not slow life history consumers. Hence, consumers who have experienced childhood stress and adversity and follow a fast LHS may become “trapped in a rabbit hole” –their past experienced stress levels have heightened their overall sensitivity to proximate stressors, such that their tendency for reward-seeking, opportunism and a focus on short-term gratifications can be triggered relatively frequently and easily by subtle, mild sources of stress. Under these conditions, these individuals may show an increased tendency for hedonic consumption, especially when such consumption presents itself as a scarce opportunity. Given the prevalence of such subtle, mild stressors in daily life, it stands to reason to assume that a fast LHS affects health related decision making to a larger extent than a slow LHS does, creating a possible self-perpetuating process, from which these consumers may not easily escape.

Stated more formally, we propose that life history strategies modulate the impact of acutely experienced stress due to mild stressors, such that experienced stress has an impact on food-related decision making for fast, but not slow LHS consumers. Under these conditions, we expect fast LHS consumers to show an increased

tendency for hedonic consumption, especially when such hedonic consumption presents itself as a rare, scarce opportunity.

Three experimental studies tested our hypotheses. Experiment 1 ( $N = 102$ ) set out to test the fundamental notion that acutely experienced stress due to a mild stressor may boost the tendency for hedonic consumption, as indicated by the willingness to pay for hedonic food products, particularly among consumers with a fast, rather than slow LHS. This experiment used a design with stress as a between subjects factor and individual differences in LHS as a continuous measured independent variable. Experiment 2 ( $N = 195$ ) aimed to replicate and extend our main findings, using the same design with a larger sample, a different proxy of hedonic consumption, and accounting for mood as an alternate explanation of our findings. Finally, experiment 3 ( $N = 101$ ) extended these results by assessing the impact on actual hedonic food intake and examined a direct corollary of the LHS logic. This field experiment used a design with stressor (time pressure present vs. absent) and scarcity cue (present vs. absent) as between subject factors and individual differences in LHS as a measured independent variable.

The three studies yielded consistent support for the notion that life history strategies modulate the impact of mild stress by boosting the tendency for hedonic consumption for fast, but not slow LHS consumers. Under these conditions, fast LHS consumers show an increased tendency for hedonic consumption as evinced by increased willingness to buy hedonic products (Exp. 1, Exp. 2), and actual consumption of hedonic foods (chocolate, Exp. 3.). Moreover, Experiment 3 showed that such hedonic consumption under these conditions is more pronounced when hedonic food items present itself as a rare, scarce opportunity. We advance the understanding of how people become sensitized to stress by revealing the role of experienced *levels* of current stress. Specifically, while it has been suggested that there are symmetrical effects of extreme levels of acute stress for fast and slow strategists (Griskevicius et al. 2011b; Mittal and Griskevicius 2014), our findings extend this research by building on a key assumption of stress sensitization theory demonstrating asymmetrical effects—mild stress levels affect behaviors of fast strategists but not that of slow strategists.

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# How Do Platform-Based Networks Shape Systemic Value Creation through Experiences?

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## EXTENDED ABSTRACT

Understanding how to create valuable experiences for consumers and firms has been a priority for marketing researchers and practitioners (Lemon and Verhoef, 2016) as experiences are increasingly responsible for creating competitive edge in contemporaneous markets (Duncan et al 2016; Pine and Gilmore 1998). New systemic (Akaka, Vargo, and Lusch, 2012) and network (Prahalad and Ramaswamy 2004) perspectives introduced a co-creative view of customer experiences, where customers are no longer considered as 'passive' receivers of an experience, but 'active' participants in the co-creation of their own experience (McCull-Kennedy et al 2017).

As noted by De Keyser et al (2015), marketing thought is evolving towards a network-oriented view of the experience environment, hence emphasis on how multiple actors connect to each other is a more appropriate way to study CX in contemporary contexts. Following this call, we examine the role of platform-firms, i.e. the firms that mediate the online interactions happening in collaborative networks (Scaraboto 2015), in shaping the process of value creation through experiences in networked environments.

Prior consumer research demonstrates that value can aggregate at a systemic level (Figueiredo and Scaraboto 2016) in platform-based environments when networked participants "integrate and exchange resources to co-create value for themselves and for others" (Akaka et al. 2012, 15). Hence, to understand how networked experiences create value, it is important to look beyond how an experience creates value for individual participants, focusing instead on how experiences aggregate to create value in networked environments. We ask: *How can platform-based firms shape systemic value creation through experiences?*

To address this question, we conducted a 12-month netnography (Kozinets, 2015) of Couchsurfing, a platform-based collaborative network in which consumers share free accommodation and social experiences. Couchsurfing was launched in 2003 to connect individuals interested in staying as guests at hosts' homes, hosting travelers, socializing with locals and other travelers, or joining a cultural or social event while traveling. Couchsurfing is an ideal context for this type of research because it emphasizes other types of experiential value (beyond economic) and considers all members (both providers and takers of accommodations) as capable of simultaneously producing and living experiences for themselves and for others.

Our analysis suggests that individual experiences aggregate to create value in platform-based networks in a three-step process involving stages of transvaluation, assessment and engagement. The first stage consists of the registration of expectations, performances, and responses on the platform, thus materializing the value of individual experiences. In the second stage, aggregate experiences are assessed by couchsurfers, generating multiple value outcomes for network participants. In the third stage, participants in the network associate these value outcomes with the network, constituting the value of the Couchsurfing network for its members.

Platform-businesses can shape systemic value creation through experiences by supporting value creation at the level of individual experiences (expectations, performances, and responses), and at the level of aggregate experiences (network level). To support value creation at the level of individual experiences, platform-firms act in four ways: 1) *Supporting the provision of resources by networked members*; 2) *Shaping the types of performances that emerge in the*

*network*; 3) *Stimulating the individual management of expectations for value-creating performances*; and 4) *Suggesting individual responses to the value-creating performances*.

To support value creation at the level of aggregate experiences, platform-firms can interfere in any of the three stages of the process of systemic value creation. Platform-firms shape transvaluation in three ways: 1) *Deincentivizing the registration and public sharing of negative experience*; 2) *Rechanneling negative experiences*; and 3) *Reframing registration*.

Platform-firms shape assessment in three ways: *checking, channeling, and curating* transvalued experiences. Finally, platform-firms shape engagement by *highlighting the network's multiple value outcomes*.

Although researchers have argued for a more systemic and dynamic view of customer experience (Lemon and Verhoef, 2016; Verhoef et al., 2009), few studies examine experiences in platform-based networks, in which individual experiences aggregate. This netnographic analysis explains and vividly illustrates the process through which performances integrate resources to create experiences and how platform-firms help transvaluation and collective assessments of the value created by many.

In platform-based networks, individuals lead value creation and experiences. This study has examined how platform-firms can support and shape systemic value creation through experiences even when these have been framed and developed by consumers themselves. These findings extend SDL work on ecosystems (e.g., Akaka et al., 2012; Vargo and Lusch, 2008) by developing knowledge on how resources can be managed in platform-networks. Finally, by theorizing the role of experiences in value creation, our study expands CCT researchers' understanding of the sociocultural aspects of value creation in experiences.

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# I, Me, Mine: The Effect of the Explicitness of Self-Anchoring on Consumer Evaluations

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## EXTENDED ABSTRACT

While research on the formation of consumer attitudes often focuses on the evaluation of product and service attributes, Gawronski, Bodenhausen & Becker (2007) suggest the self-concept is possibly the most fundamental factor impacting the formation of attitudes toward objects. They argue that the self serves as an anchor for evaluating objects when the self is salient by transferring meaning from the self to the object through elaborative associations. Research is needed to unpack the process of self-anchored attitude formation and potential factors influencing this process.

One such important factor to examine is the impact of positive and negative information about products and services on attitudes. While prior research demonstrates interesting results for attribute evaluation (a small piece of negative information made consumers more favorable towards products) (Ein-Gar, Shiv, and Tormala 2012), the effect of positive and negative information when the self is salient may be even more fundamental to understanding the process of how self-anchored objects are ultimately accepted or rejected. In addition, traditional attitude theories often focus solely on immediate attitude formation (Cohen and Reed II 2006), however, understanding temporal changes in attitudes may be more useful in explaining observed behavior. In two experiments, we examined how consumer attitudes are affected by positive and negative information about a product and service, over time, when the self is salient.

According to self-anchoring researchers, the self-concept influences attitudes towards objects through the creation of elaborative associations (Walther and Trasselli 2003). Self-salience when evaluating objects is said to be sufficient to build self-object associations; the mode for affective transfer of meaning from the self to object (Gawronski, Bodenhausen, and Becker 2007; Walther and Trasselli 2003). Self-anchoring researchers suggest excitatory associations between the self and accepted objects, and inhibitory blocks dissociating the self from rejected objects in order to protect the positivity of the self-identity (Gawronski et al. 2007; Otten 2003; Walther and Trasselli 2003). Similar to self-anchoring, self-referencing is defined as processing information in relation to oneself (Burnkrant and Unnava 2000). The self is said to create elaborative associations, since it is a complex structure (Burnkrant and Unnava 2000; Greenwald and Banaji 1995). Consistent with previous self-anchoring and self-referencing research, we predicted self-salience results in meaning transfer through self-object associations.

With Experiment 1, we sought to demonstrate empirical evidence of self-anchoring-induced associations between the self and object (in this experiment, a tablet computer serves as the object) using an implicit prime manipulation. Contrary to previous self-anchoring research, Experiment 1 showed that implicit self-anchoring does not result in meaning transfer. This suggests the implicitness of self-anchoring does not generate associations capable of meaning transfer. With no evidence of the formation of associations between the self and object, there cannot be dissociation. The lack of dissociation means that consumers are not able to resolve positive and negative information over time, and instead either automatically and immediately accept positively-perceived objects or reject negatively-perceived objects.

With Experiment 2, we sought to confirm the implicit self-anchoring results of Experiment 1 and explored the impact of ex-

PLICITLY associating the self and object (hereafter referred to as self-referencing). We confirmed that implicit self-anchoring does not result in elaborative associations capable of meaning transfer, and it instead 'fixes' initial positive or negative attitudes over time. As predicted in the second experiment, in the self-anchoring and positive message group, the positive initial impression was persistent. Typically, there is a decay in the favorableness of attitudes over time positive message groups, however, this effect was not present. In this case, self-anchoring fixed the initial positive impression without the need for further processing. The automatic negative reaction to negative messages was also persistent. Experiment 2 demonstrated that only when participants explicitly imagined themselves consuming an experience (staying at an island resort), elaborative associations capable of meaning transfer were formed. Consumers who self-referenced were more involved in deeply processing the positive and negative information, which de-stabilized attitudes over time. The self-referencing groups did form elaborative associations capable of meaning transfer, which particularly aided participants in processing conflicting messages. However, compared to the self-anchoring groups, attitudes in the self-referencing and positive message group decayed over time.

The results of the experiments distinguish between the effects of two factors previously formulated as similar, and identifies their differing impact on meta-cognitive mechanisms and attitudes over time. The findings of the first experiment demonstrate that implicit self-anchoring, contrary to Gawronski et al. (2007), does not create associations capable of meaning transfer between the self and object, but rather automatic and evaluation of the object. This led to a re-formulation of the hypothesized processes in Experiment 2, and confirmation that implicit self-anchoring instead creates an automatic and persistent effect in which the self is attracted to positively-perceived objects and immediately rejects negatively viewed objects. Importantly, this indicates that for elaborative associations capable of meaning transfer and explicit attitude change, a higher level of processing is required (Perkins and Forehand 2012). To induce a higher level of processing, consumers must explicitly self-reference. The results of the experiments lend clarity to previous research on the impact of the self on attitude formation toward objects, and demonstrates two distinctive effects on attitudes, which are only revealed over time. Future research should replicate the findings of the second experiment, and continue to empirically test the theoretical assumptions of contemporary models of attitude formation and for consumer research.

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# Major or Minor: When Foreign Language Increases versus Decreases Cheating

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## EXTENDED ABSTRACT

The world is witnessing dishonesty of all magnitudes, from minor shoplifting to astounding financial traps, from embellishing dating profiles to faking identities. Given the prevalence of dishonesty, researchers have endeavored to learn which factors encourage or curb cheating, such as self-control (Kouchaki & Smith, 2014), self-serving justifications (Shalvi, Eldar, & Bereby-Meyer, 2012), and the salience of moral standards (Shu, Mazar, Gino, Ariely, & Bazerman, 2012). However, the role of language, the very vehicle through which most cheating behavior happens, has been neglected. While most people cheat in their native language, foreign-language cheating is also common, such as international students cheating on exams and overseas travelers cheating on custom declarations. Over half of the world population speaks more than one language and the number of bilinguals is increasing rapidly due to globalization (Grosjean, 2010). Therefore, it is important to understand how language (native vs. foreign) shapes people's propensity to cheat. To this end, we investigate in a series of experiments whether language affects cheating behavior.

Unethical behavior has been described as affect-rich and driven by emotion (Dienstbier & Munter, 1971; Haidt, 2001, 2003; Tangney, Stuewig, & Mashek, 2007). For instance, reduced amygdala activation, which implies less negative affective reaction toward cheating, predicts an increase of the magnitude of dishonesty (Garrett, Lazzaro, Ariely, & Sharot, 2016). Following this line of research, we propose that language may influence cheating behavior through emotionality. Indeed, one prominent finding in the bilingualism literature is that people tend to experience less intense emotions when reading or hearing the same expression in a foreign language than in their native language (Dewaele, 2004; Harris, Ayçiçeği, & Gleason, 2003; Puntoni, de Langhe, & van Osselaer, 2009).

How people feel about cheating should vary across magnitudes of dishonesty. Cheating often grants access to undeserved financial or other rewards, elevating one's mood (Meloy, Russo, & Miller, 2006; Ruedy, Moore, Gino, & Schweitzer, 2013). This positive feeling should dominate minor cheating, when people can still flexibly justify their misconduct and get ride of guilt and shame (e.g., "I deserve the prize because I could have made it") (Shalvi, Dana, Handgraaf, & De Dreu, 2011). However, as the magnitude of dishonesty increases, negative emotions associated with cheating tend to intensify (Peer, Acquisti, & Shalvi, 2014) and should overwhelm the positive emotions in the case of major cheating. Because foreign language attenuates the intensity of emotions associated with cheating, we predict that minor cheating should be less likely and major cheating more likely in a foreign-language context compared to in a native-language context.

We developed a spot-the-difference task to test our hypotheses. Participants who passed the pre-screening of foreign-language proficiency were randomly assigned to complete the task either in their native or a foreign language. We asked participants to find 3 differences between two images in each trial and awarded them a fixed amount of money for each success (self-reported successful find: Yes or No). Unknown to participants, we manipulated the real number of differences between 0 and 3 across trials. Therefore, each success claim (i.e., "Yes" response) must be cheating when there were less than 3 differences between images. Moreover, as the real number of between-image differences decreased (2, 1, 0), the magnitude of

dishonesty that was necessary for monetary gains increased (no need to cheat, minor, moderate, major). The task had 9 cheatable trials in total (3 trials per magnitude of dishonesty).

We conducted four studies with a variety of language pairs. Study 1 and 2 recruited native Mandarin speakers who spoke English (N = 153 and 133 respectively). Study 3 recruited native French speakers who spoke English (N = 70). Study 4 recruited native Mandarin speakers who spoke Korean as a foreign language. (N = 119). We adopted a meta-analytical approach to analyze the data across the studies. The outcome variable was the binary response with a logit link (successful find/cheating = 1, unsuccessful find/honest = 0). The magnitude of dishonesty served as the trial-level predictor (continuous) and the language condition as the individual-level predictor (binary). The model accounted for nested random effects. Across studies, there was a significant interaction between language and magnitude of dishonesty ( $b = 0.90$ ,  $SE = 0.21$ ,  $z = 4.22$ ,  $p < .001$ ). In two-difference trials (which allowed minor cheating), people in the foreign condition were less likely to cheat than those in the native condition ( $b = -0.89$ ,  $SE = 0.30$ ,  $z = -2.94$ ,  $p = .003$ ). In zero-difference trials (major cheating), by contrast, people in the foreign condition were more likely to cheat than those in the native condition ( $b = 0.90$ ,  $SE = 0.34$ ,  $z = 2.65$ ,  $p = .008$ ). In one-difference trials (moderate cheating), there was no language effect ( $p = .975$ ).

The results support our hypotheses that foreign language decreases minor cheating and increases major cheating. Our findings add to the growing evidence that judgment and decision-making are vulnerable to the influence of language (e.g., the "Asian disease" problem in Keysar, Hayakawa, & An, 2012) and extend existing work from hypothetical dilemmas (e.g., the "Footbridge dilemma" in Geipel, Hadjichristidis, & Surian, 2015) to real-world moral behavior. Bilinguals, like monolinguals, encounter ethical dilemmas on a routine basis, such as whether to download illegal software, whether to keep a promise, and whether to help those in need. Our findings suggest that the language we use has a significant impact on everyday moral decisions.

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# Understanding the Framing of Recommendations

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## EXTENDED ABSTRACT

Consumers receive product recommendations on a daily basis. Whereas prior research mostly focused on how to improve the accuracy of recommendations (e.g., Bodapati, 2008; Swaminathan, 2003), research on how recommendations should be communicated to consumers (i.e., how they should be framed) is non-existent. This is particularly surprising, considering the billions of dollars companies like Netflix and Amazon invest per year in recommendation algorithms (Koblin, 2017).

Our research is intended to close this gap by exploring the impact of different framings of the same recommendation on consumers' likelihood to follow it. We distinguish between two types of recommendation framings: *User-based* framing which emphasizes the similarity between users (e.g., "People who like this also like") and *item-based* framing which emphasizes the similarity between items (e.g., "Similar to this item"). In this research, we suggest that consumers are more likely to follow a recommendation when it is presented with the user-based rather than the item-based framing, which we term as the 'framing effect'. This proposition is rooted in research on conformity documenting that people tend to conform to the preferences of ingroup others (Bearden & Etzel, 1982; Cialdini & Goldstein, 2004). We propose that user-based framing enhances the recognition of social clustering (i.e., categorization of users based on preference overlap) as the recommendation strategy and, thus, prompts people to conform to similar others' preferences. Here, we present four studies (one field experiment) that tested our theorizing.

Study 1 is a field experiment that corroborates the advantage of user-based framing relative to item-based framing. We collaborated with a media company that pushed daily articles to 70,488 subscribers on WeChat, the top mobile application in China. The experiment was conducted at the article level. We randomly assigned 31 pre-selected articles to the user-based framing and another 31 to the item-based framing. Each article in the user-based condition ("People who like this article also like") was randomly paired up with one article in the item-based condition ("More reports of scientific research"). The 31 pairs of recommendations were randomly distributed across 31 days, inserted to the end of daily headline articles. Controlling for the reads of focal articles, user-based framing attracted more reads to recommended articles than item-based framing (Mean increase of reads: 7.9% versus 3.6%,  $p < .001$ ).

To understand why the framing effect emerged, we approached 780 subscribers of the media company to complete Study 2 (67% females,  $M_{\text{age}} = 24.4$ ). Participants were randomly assigned to read either the user-based framing or the item-based framing used in study 1. On a 6-point scale, we measured participants' interest in the recommendation and how much they perceived social clustering as the recommendation strategy (1 = strongly disagree, 6 = strongly agree). Consistent with study 1, participants were more interested in user-based recommendations ( $M = 4.65$ ) than item-based recommendations ( $M = 4.48$ ),  $p = .028$ . In addition, the framing effect was mediated by perceived social clustering (95% CI of the indirect effect = [0.02, 0.97]).

One important reason of social conformity is informational influence, resulting from people's perception that others' preferences and actions are the most appropriate ones (Deutsch & Gerard, 1955). This influence should weaken as people possess more consumption knowledge and thus have a lower need to rely on information from

others. Study 3 tested this proposition. We recruited 403 workers from Amazon Mechanical Turk (MTurk) to participate in an "Online Museum" study (186 females,  $M_{\text{age}} = 37$ ). Specifically, they viewed 50 focal paintings in a random sequence and could "like" each painting by clicking on a heart-shaped button. When participants liked a painting, another button showed up saying either "People who like this painting also like" (user-based framing) or "Similar painting to this" (item-based framing), depending on the condition participants were assigned into. Effectiveness of recommendation was operationalized as the probability that people clicked through the recommendation. To measure consumption knowledge, we asked participants to report how often they visited art museums in real life (1 = never, 2 = seldom, 3 = sometimes, 4 = often, 5 = very often). Linear regression revealed a significant interaction between framing and museum-visit frequency ( $b = -6.70$ ,  $p < .001$ ). Consistent with our prediction, user-based framing significantly increased the recommendation click-through compared to the item-based framing for people who never ( $p = .001$ ), seldom ( $p < .001$ ), or sometimes visited art museums ( $p = .015$ ). This effect diminished for people who often ( $p = .501$ ) or very often visited art museums ( $p = .642$ ).

While people conform to their ingroup, they diverge from outgroups' tastes (Berger & Heath, 2008) possessions, attitudes, or behaviors. Therefore, user-based framing should decrease recommendation click-through when there is an explicit cue signaling that other users are outgroup. We tested this prediction with a book-shopping scenario. We randomly assigned 360 MTurkers who were 25 years old or above (169 females;  $M_{\text{age}} = 38$ ) to one of three conditions, the user-based framing ("Customers who viewed this item also viewed"), the item-based framing ("Similar to this item"), and the user-based framing with an outgroup cue. The outgroup cue was the age group of other customers (18-24 years old). We replicated the advantage of user-based framing over item-based framing for attractive focal books ( $b = 0.72$ ,  $p = .045$ ). As predicted, the effect reversed when the outgroup cue was present ( $b = -0.98$ ,  $p = .001$ ).

Our findings imply that simply changing how companies describe their method of recommendation can have an impact on sales. The current research contribute to the theorizing of how consumers decode information about recommendations (Fitzsimons & Lehmann, 2004; Senecal & Nantel, 2004). Practically, managers can tailor framing of recommendations to different customers in order to boost the click-through of recommendations.

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# Surprise!

## The Positive Impact of Uncertainty on the Evaluation of Experiential Purchases

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### EXTENDED ABSTRACT

Most people, most of the time, would prefer to have more information rather than less. Information generally leads to better decisions and hence greater utility (Stigler 1961). When individuals believe they lack sufficient information, they experience uncertainty (Miliken 1987) and most people, most of the time, would prefer to avoid the experience of uncertainty and its attendant anxiety (Calvo and Castillo, 2001; Chandrashekar et al. 2007; Loewenstein 1994).

Nevertheless, research has shown that there are some circumstances under which uncertainty is viewed positively (Goldsmith and Amir, 2010; Lee and Qiu 2009; Paley et al. 2015; Shen, Fishbach, and Shee 2015; Wilson et al. 2005). We suggest that one such circumstance lies in the distinction between experiential and material purchases. Experiential purchases are intangible events that a person lives through; material purchases are tangible goods that are typically kept in one's possession (Van Boven and Gilovich 2003). We propose that experiential consumption is more routinely associated with uncertainty and surprise than material consumption, so that uncertainty is not only more tolerated when making experiential purchases, but is sometimes actually viewed positively.

### Uncertainty is better tolerated

Three characteristics of experiences make them more associated with uncertainty. First, experiences are intangible, and with intangibility comes uncertainty and decision difficulty (Laroche et al. 2005). Second, experiences tend to be evaluated on more attributes or dimensions (Gallo et al. 2016). With more information, there is more to be uncertain about. And the task of integrating this information to form a judgment becomes more difficult, further increasing uncertainty (Miliken 1987; Urbany, Dickson, and Wilkie 1989). Finally, consumers recognize that there is more variation from one instance of the "same" experience to the next than there is from one instance of the same material good to the next (Murray and Schlacter 1990; Zeithaml 1981).

### Uncertainty is sought after

Previous research has uncovered two conditions under which uncertainty is experienced positively: the uncertain prospects must be positive and imaginable, this is, have the ability to evoke mental imagery (Lee and Qiu 2009). Many experiential purchases fulfill both conditions. First, with some notable exceptions, the very fact that consumers are willing to part with their money to make a purchase (material or experiential) is evidence that they view the purchase positively. Second, research indicates that experiential purchases tend to trigger more imagery in the consumer's mind (Gallo, Escalas, and Sood 2018; Holbrook and Hirschman 1982).

We examine our thesis in seven experiments.

### Study 1

Fifty-two MTurk participants were asked how open they would be to receiving a surprise (a purchase that doesn't conform to their expectations) for each of 5 material and 5 experiential purchases. As predicted, participants preferred the risky version of the experiential purchase ( $M = .54$ ,  $SD = .30$ ) significantly more often than they did

the risky version of the material purchase ( $M = .20$ ,  $SD = .23$ ),  $t(1, 51) = -6.350$ ,  $p < .001$ .

### Study 2a

Ninety-six MTurk participants were asked to think either about a material or an experiential purchase. Next, they rated the similarity of 36 word pairs by dragging a slider. Each participant rated all pairwise comparisons of the words *intrigue*, *disappointment*, *delight*, *excitement*, *pleasant*, *dismay*, *annoyance*, *frustration* (half positive, half negative) with the word *surprise*. As expected, there was a significant interaction of words (positive vs. negative) and type of purchase (material vs. experiential) ( $F(1, 94) = 4.060$ ,  $p < .05$ ). Surprise was more closely associated to the positive words in an experiential purchase setting.

### Study 2b

Seventy-four MTurk participants were asked to imagine making either seven experiential purchases or seven material purchases. Participants were asked to imagine they had pre-selected four options (within a category) that met their choice criteria on a specific site. "The site has a new shopping expert feature that will choose among your pre-selected options and send you the one it predicts you will like best. However, the choice will remain a surprise to you until you receive it." As expected, participants asked to consider various uncertain experiential purchases reported having more positive attitudes about the purchases than participants asked to consider various uncertain material purchases ( $M_{\text{experiential}} = 4.92$ ,  $SD = 1.31$  vs  $M_{\text{material}} = 4.44$ ,  $SD = 1.52$ ;  $t(516) = -3.84$   $p < .001$ ).

### Study 3a

Fifty-eight MTurk participants were presented with 16 purchases, half material and half experiential. Participants were asked to rate their openness to uncertainty about each purchase on a scale from 1 to 9. Participants reported being more open to uncertainty when considering experiential purchases ( $M_{\text{experiential purchases}} = 5.88$ ,  $SD = 1.60$  vs.  $M_{\text{material purchases}} = 6.92$ ,  $SD = 1.47$ ),  $t(57) = 4.34$ ,  $p < .001$ ).

### Study 3b

Ninety-four MTurk participants were presented with 14 purchases (from Gallo, Escalas, and Sood 2018), and rated, from 1 to 100, their openness to unforeseen aspects of each purchase. Participants reported being more open to unforeseen features of the experiential purchases ( $M_{\text{experiential purchases}} = 36.34$ ,  $SD = 19.29$  vs.  $M_{\text{material purchases}} = 28.82$ ,  $SD = 19.13$ ,  $t(93) = 4.13$ ,  $p < .001$ ).

### Study 3c

Ninety-six MTurk participants were presented, in random order, with the 14 purchases used in study 3b and asked to rate how critical they would be with consumers complaining that "this is not what I ordered", given that the purchased deviated somewhat from what was initially bought. Participants reported being more critical towards consumers' complaints about unforeseen aspects of experiential purchases ( $M_{\text{experiential purchases}} = 4.32$ ,  $SD = 1.04$  vs.  $M_{\text{material purchases}} = 3.88$ ,  $SD = 1.03$ ),  $t(95) = 3.60$ ,  $p = .001$ .

**Study 3d**

Sixty-one MTurk participants asked to indicate, by moving a slider along a 10-point scale (0 represented minimum tolerance to surprise), how far each of ten different purchases (half material, half experiential) could deviate from expectations before they would be unhappy or disappointed. Participants found surprise to be significantly more tolerable for experiential purchases ( $M = 4.87$ ,  $SD = 1.73$  vs.  $M = 3.91$ ,  $SD = 2.09$ ),  $t(1, 60) = -4.308$ ,  $p < .001$ .

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# The Effect of Identity Conflict on Price Sensitivity

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## EXTENDED ABSTRACT

Social identity has been identified as an important driver of consumer decision making (Reed et al. 2012). Although existing literature has extensively examined the effect of *single* identity on consumer decisions, it is largely unclear how *multiple* identities that are simultaneously salient might affect consumer behavior (Reed et al. 2012). This is surprising given people do hold multiple identities (Ramarajan 2014) and it has long been recognized by prominent scholars (James 1890). Thus, the current research intends to examine how multiple identities influence price sensitivity.

Price sensitivity refers to the extent to which consumers respond to price changes (Wakefield and Inman 2003). Although previous research has focused on examining how companies can frame price increase differently to mitigate consumers' price sensitivity (Campbell 2007; Chen et al. 2012), more recent research starts to focus on the influences of consumer characteristics to manage efforts in price increases (Gao, Zhang, and Mittal 2017). From consumers' perspective, price can be viewed as gain of quality and sacrifice of monetary resources (Dodds, Monroe, and Grewal 1991). Building on this, Gao et al. (2017) find that when facing price increases where quality is unchanged, consumers will focus on the sacrifice dimension of price and conditions facilitate the activated sacrifice mindset -- consumers' readiness and willingness to give up valuable resources -- would reduce price sensitivity, as higher level of willingness to sacrifice makes price increases more acceptable.

Behavioral mindset theory suggests that a mindset is more likely to exert its effect on subsequent decisions if consumers process information automatically or when their cognitive resources are limited, such as experiencing ego depletion (Wyer 2011). Thus, we propose that ego depletion facilitates the work of sacrifice mindset when price is increased, resulting in lower price sensitivity. Furthermore, multiple-identities literature suggests identity conflict (vs. congruency) due to inconsistency between two identities depletes cognitive resources (Hirsh and Kang 2016), which is likely to facilitate the activated sacrifice mindset.

In this research, we specifically focus on two identities, gender and local-global identity, not only because they are important antecedents of price sensitivity, but also because they are potentially related. In doing so, we answer the call for better understanding of how multiple identities, especially those developed in the era of globalization, jointly impact decision making (Reed et al. 2012). According to Baumeister and Sommer (1997), one key difference between females and males is what type of social groups they seek to associate. Whereas females seek social connection in close personal relationships based on mutual dyadic intimacy, males seek social connection in broader sphere where people do not necessarily have personal connection (Melnyk et al. 2009). Regarding local-global identity, Arnett (2002) defines local identity as consumers' mental associations of their respect for one's local traditions and identifying with people from local community, whereas global identity as mental representations in which consumers are interested in global cultures and identifying with people around the world. This conceptualization suggests that consumers with an accessible local identity tend to identify with their local community, a relatively small group and within it people tend to have more personal connections. In contrast,

consumers with an accessible global identity tend to identify with the whole world, a much larger group and within it people tend to form much fewer personal connections.

Based on this, we propose that female and local identities are consistent for consumers' sacrifice decisions, as both emphasize identifying with smaller groups such as family and local community, where close and intimate relationships are present. Similarly, male and global identities are consistent as both emphasize identifying with large groups such as the whole world, where loose relationships are present. Accordingly, we expect when gender and local-global identity are in conflict (vs. congruent), consumers are likely in a sacrifice mindset and thus are less price sensitive.

Six studies were conducted to test our theorizing. Specifically, study 1A was a 2 (identity: local vs. global)  $\times$  2 (gender: male vs. female) between-subjects design field experiment, in which we manipulated local-global identity (Gao et al. 2017) and measured gender. The results indicated that consumers experiencing identity conflict (females with global identity or males with local identity) showed lower price sensitivity than those experiencing identity congruency (females with local identity or males with global identity). Studies 1B and 1C replicated the findings with lab design and with survey from organizational purchasers.

Study 2 was designed to test the mediating role of sacrifice mindset by measuring this construct directly. Results of this study replicated the identity conflict (vs. congruency) effect on price sensitivity of study 1. More importantly, a mediation analysis based on bootstrapping supported sacrifice mindset as a mediator.

Following the moderation-of-process design, studies 3 and 4 seek to further test the mediating role of sacrifice mindset by identifying theoretically relevant boundary conditions. Specifically, for sacrifice mindset to work, consumers need to have enough monetary resources and/or have an altruistic spirit (Gao et al. 2017). Based on this, study 3 found that the identity conflict (vs. congruency) effect is attenuated among consumers with low (vs. high) social class, as they tend to have less monetary resource to sacrifice. Study 4 found that the identity conflict (vs. congruency) effect is attenuated among consumers who are self-focused, as they are too selfish to make sacrifice.

This research makes several contributions to the related literatures. First, we go beyond the traditional identity research which focuses on the effect of a single identity, by examining how multiple identities that are simultaneously accessible affect consumer decision making. Second, we advance the local-global identity literature by showing that although it is a relatively new identity developed in the last several decades, it is deeply related to, not isolated from, our more traditional identities such as gender. Third, we contribute to the price sensitivity literature by showing a key antecedent determining consumers' responses to price increases: identity conflict versus congruency. Fourth, through examining the mediating role of a sacrifice mindset, we also intend to emphasize the importance of the sacrifice aspect of price in determining price sensitivity.

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# Effects of Affective Language on Perceived Helpfulness of Online Reviews

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## EXTENDED ABSTRACT

### Introduction

Online communities that give their members the opportunity to rate and review products and services, like Yelp, Trip Advisor, Epinions, are highly valuable in helping consumers navigate through the unlimited volume of information they have access to. More positive ratings and reviews of a product or a service mean that more consumers are happy with that product or service, which through the influence of the reviews translates into increased commercial performance (Archak, Ghose, & Ipeirotis, 2011; Ludwig et al., 2013; Sonnier, McAlister, & Rutz, 2011). Online reviews are also useful to inform commercial marketing research and competitive intelligence (Lee & BradLow, 2011; Netzer, Feldman, Goldenberg, & Fresko, 2012).

The reviews that have the greatest influence on consumer behavior are probably those that consumers themselves consider most helpful. What then makes a review helpful? Past studies have examined various features of the review texts (O'Mahony & Smyth, 2010), features of review authors (Liu & Park, 2015), and features of the reviewed objects (Bakhshi, Kanuparth, & Shamma, 2015; Ghenai & Lizotte, 2015). In this research we investigate the effect of elements of affective language – positive and negative – of online reviews on their perceived helpfulness. On the one hand, we know that people naturally focus on positive, rather than negative things (Augustine, Mehl, & Larsen, 2011; Boucher & Osgood, 1969; Dodds et al., 2015). On the other hand, some studies suggest that negative words carry more information than positive ones (Garcia, Garas, & Schweitzer, 2012). Given these conflicting findings, whether and how use of positive words and use of negative words influence perceived helpfulness of evaluative textual units is an open question.

### Data and Analyses

**Data collection.** We developed several web-crawling and web-scraping computer programs to collect data from the websites of two online communities: epinions.com (product reviews) and yelp.com (service reviews). Furthermore, we used a publically available tripadvisor dataset (<http://www.cs.cmu.edu/~jiweil/html/hotel-review.html>), which we cleaned to include only reviews written in the English language. Our data consists of 1,701,559 consumer reviews in total.

**Perceived review helpfulness** is determined by votes of community members that indicate how helpful they perceive an online review to be. In epinions.com, each review was flagged as being 'very helpful', 'helpful', 'somewhat helpful', or none of these (an ordered categorical variable with 4 categories). In yelp.com and tripadvisor.com, the number of community members who found each review helpful could be seen (a count variable).

**Elements of affective language** are the uses of positive and negative words in a review. Like other contributions in the field (Ludwig et al., 2013), we use Linguistic Inquiry and Word Count (LIWC) (Pennebaker, 2007; Pennebaker, Francis, & Booth, 2001), an established structured top-down word count approach for psychological language analysis. LIWC has reliable and valid dictionaries of positive (e.g. love, happy, nice) and negative words (hate, annoyed, sad).

**Analyses.** In each of the three settings, we run regression models to estimate the effects of frequencies of positive and negative

words, controlling for star rating and total word count of the review, on perceived review helpfulness. For data from epinions.com, we estimate an ordinal logistic regression model. For data from yelp.com and tripadvisor.com, we estimate negative binomial regressions.

### Results and Conclusions

Overall we find that lower frequency of positive affect words and higher frequency of negative affect words lead to online reviews being perceived as more helpful (all  $p < .001$ ). Note that the directions of the effects of star ratings on perceived review helpfulness is different between epinions.com (positive), on the one hand, and yelp.com and tripadvisor.com, on the other hand (negative) due to how review helpfulness is technically operationalized in these communities and, respectively, distributed as a dependent variable.

Lastly, the effect holds under all models we estimate, in all the three settings. Furthermore, when we estimate the models within star rating data subsets, the same effect holds under all models in the five star and four star subsets for all the three settings (all  $p < .001$ ). Hence, lower frequency of positive words and higher frequency of negative words leads to higher perceived helpfulness of online reviews, and of online reviews giving maximally and moderately positive ratings, in particular.

### Discussion

Positivity bias – consumers' propensity to rate products and services overly positively, most often with the highest positive grade possible – seriously devalues the helpfulness of online ratings. Even though negative words are almost always vastly outnumbered by positive words (Augustine et al., 2011; Boucher & Osgood, 1969; Dodds et al., 2015), single negative words may provide more information than single positive words (Garcia et al., 2012).

Moreover, if a consumer is reading a product or a service review, that means that she/ he is already interested in the product or service in question. Very often consumers are considering and comparing only a few products or services in their consideration set (Roberts & Nedungadi, 1995). Negative information is especially useful in such situations and particularly when the consideration set consists of very highly rated products or services.

Our findings suggest that elements of affective language provide valuable evaluative information to consumers that could be particularly useful to abstract subtle nuances between reviews with equally positive ratings.

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# Understanding Consumer Sensory Preferences: An Ethnographic Investigation of Sensory Flamboyance and Subtlety in India

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## EXTENDED ABSTRACT

### Theory and Introduction

*“While driving back to the apartment, I looked into the rearview mirror. Mr. Ashok was wearing a t-shirt. It was like no t-shirt I would ever choose to buy at a store. The larger part of it was empty and white and there was a small design in the center. I would have bought something very colorful, with lots of words and designs on it.”*

*-Balram Halwai, domestic helper and driver, observing the clothing preferences of his employer in the Man Booker Prize-winning novel “The White Tiger” by Aravind Adiga*

Marketers use a variety of sensory appeals to communicate about their brands to consumers (Krishna 2012), but these may not be equally efficacious across consumers. We investigate whether basic preferences for sensory flamboyance versus subtlety are structured sociologically and by early childhood experiences, rather than by individual dispositions (Peck and Childers 2008). The opening quote depicts an Indian driver, in a low status occupation, from a lower caste and economic background, who favors “louder,” more visually prominent product designs, such as flashier, gaudier clothing, compared to his employer who is higher in social status, caste and cultural capital (Holt 1998; Bourdieu 1984). The relationship between status, power and conspicuous consumption of branded products has been studied (Veblen 1899; Belk, Bahn and Meyer 2001; Rucker and Galinsky 2008; Sivanthan and Pettit 2010; Han, Dreze and Nunes 2010), but what structures basic preferences for high versus low sensory intensity in consumption, including the use of bright colors, loud music, and strong tastes and fragrances?

Bourdieu’s (1984) framework suggests that status boundaries may be reproduced or potentially breached simply through the expressions of tastes. Varying levels of cultural capital (i.e. distinctive tastes, skills and knowledge) are manifested in unique styles of taste and consumption among members of different classes. This framework has been shown to provide insights into taste distinctions among high versus low cultural capital consumers in the United States (Holt 1998), and Turkey (Ustuner and Holt 2010). India’s deep rooted class and caste hierarchies suggest that consumption would reflect the assumed social hierarchies. Indeed, economic chasms create stark differences in habitus across classes, and the poor seem trapped in a virtual quagmire of disempowerment (Belk and Ghoshal 2017). Lower cultural capital is associated with lower economic as well as lower symbolic capital (power and status; Bhattacharyya and Belk 2017), a critical point of difference from previously studied contexts. Could sensory flamboyance (versus subtlety) in tastes be a critical currency of cultural capital in this context, and what might be the underlying reasons?

One potential explanation for affinity towards sensory flamboyance is compensatory consumption, which has been defined as consumption that is a reaction to and an attempt to make up for a general lack of self-esteem or self-actualization (Gronmo 1988; Woodruffe-Burton and Elliott 2005). Disempowerment is understood to be a critical aspect of the definition of poverty (MacPherson and Silburn 1998; Syrjala, maa-Leskinen and Laaksonen 2014). Because

they lack power, the poor have been found to develop power tactics and become empowered actors in the markets (Giddens 1991; Hamilton 2012) in order to reinforce their image of themselves as self-sufficient individuals (Hill and Stamey 1990; Syrjala, maa-Leskinen and Laaksonen 2014). In other research, Murali and Pons (2009) show that choosing bold options (that are more extreme, hedonic and unique) makes people feel more powerful. Batra and Ghoshal (2017) find that consumption of intense sensory experiences (such as bright colors and loud music) helps provide a mental escape from self threat and restores self-worth. Could sensory flamboyance be a form of compensatory consumption employed by those lacking economic and symbolic capital- i.e. an empowering strategy? Are there other potential explanations for the observed variations in sensory flamboyance in India?

### Context and Ethnographic Method

Despite the drastic social and economic changes that have occurred in India over the past two decades (Vikas, Varman and Belk 2015), the constituents and role of cultural capital in structuring consumption are yet to be examined. We interview 28 women from upper and lower socioeconomic classes to ascertain their cultural and symbolic capital resources, and consumption preferences across sensory domains such as clothing, food, music, touch and smells. Informants were classified into two broad groups -- low cultural capital (LCC) and high cultural capital (HCC) as jointly determined by the Indian socioeconomic classification and Holt’s (1998) classification system, using a procedure similar to Üstüner and Holt (2000), with adaptations for the Indian context. Along with observation and interviews, we utilized a projective technique that we dub “Dress-Up,” based on the Jennifer’s Wardrobe technique described by Fisher, Belk and Kozinets (2013). Informants were presented with a large paper cutout of a female figurine and prepared stimuli varying in their flamboyance (visuals of clothing, jewelry, purses, shoes, watches, and samples of clothing material and fragrances), and were asked to dress the figurine (described to be of a similar background as theirs) for different occasions, such as a family wedding, a distant relative or friend’s wedding, an office event, a birthday party, and a typical working day (figure 1). This helped ascertain norms regarding sensory flamboyance as per different occasions.

### Findings

#### *Home décor*

Flamboyant sensory visual elements were strikingly evident even before we entered the living spaces of our LCC informants. A myriad of homes had exteriors painted in colors such as bright pink and yellow (figure 2a), with interiors often in reds and yellows. We came across several decorative front doors, again adorned with eye-catching colors and motifs. Garlands of bright orange marigolds (also considered auspicious) were used to adorn front entrances as a *toran* (Sanskrit: sacred gateway) primarily meant to attract *Lakshmi*, the Goddess of Wealth, but also affording a colorful pleasant visual to welcome guests before they enter the home. Interior décor in the LCC homes consisted of simple items such as religious motifs and paintings, photographs of family, and artificial flowers, limited by available space. It was as though the LCCs preferred to envelope their world in a protective sensory shroud.

The visual aesthetic of HCC homes differed starkly, with interiors typically painted in neutral and light colors such as white or beige, with an occasional pop of color for a cherished object of décor. Doors were functional and plain. Treasured souvenirs from trips were usually given a pride of place in living rooms, but set apart from the surroundings with ample space, so as to let each item sing its story and speak of its origin. The HCC décor reflected a more natural aesthetic, with several instances of woodwork, hand-made goods and original artwork. The ambience was much more demure, with furniture and décor often blending into a seamless landscape, serving as a neutral backdrop to celebrate individual narratives of cherished objects.

#### *Clothing and accessories*

As evident through both LCC's personal wardrobes and through interaction with our prepared stimuli, clothing and accessories possessing elements of sheen, gloss, sequins, stones, glitter and light-reflecting mirror work were consistently preferred over the stimuli lacking these aesthetic elements. In the "Dress-up" and photo sorting activity using our prepared stimuli, LCCs almost consistently preferred big and bold gold-colored costume jewelry adorned with rhinestones and gemstones, over more subtle jewelry that lacked both size as well as flamboyant aesthetics (see also Fernandez, Veer and Lastovicka 2011; Vikas et al 2015). Real gold ownership was still a dream for many of our LCC informants, such as Vidya, who lamented that even her *mangalsutra* (necklace symbolic of marriage) was not made of gold, adding that gold would be a foremost investment should she come into extra money. We observe a parallel between the expectations from jewelry and the fascination for glitter in clothing. Isha (LCC) mentioned that for important daytime occasions such as weddings, she preferred traditional South Indian silk saris with borders crafted from golden thread embroidery because such saris were designed to naturally reflect sunlight and shimmer. She added, however, that for evening weddings, clothing with sequins, glitter and extensive mirror-work was desirable because it would reflect artificial lights more, allowing the person wearing it to make more of an impression upon others. Just as in home décor, there appeared to be a consistent need to create an aura of light around oneself at important occasions, presumably to draw attention to one's self and be noticed, making them feel bigger and more important -- again an empowering tactic. It is plausible that the penchant for glitter in clothing was also a result of a largely unfulfilled craving for the coveted and elusive yellow metal.

For LCC informants, consumption choices were largely shaped by family expectations and desire for conformity with their in-group, reflecting their collectivistic nature and adherence to rules (Holt 1998). However, a desire for conformity was also supplemented by a desire to shine or excel among comparison peers. Dressing for weddings was particularly ritualistic, with socially-specified expectations with respect to attire.

Seema (LCC): For a close relative's wedding you need to be more careful about what you're wearing. Have to go all out with the [expensive] silk saris and gold jewelry; tradition is critical. For distant relatives or friends, it is a little less critical. I can think of wearing "work saris" [synthetic, light, less expensive saris] or costume jewelry. What I wear, how much I dress up shows them [the hosts] how much I care about them - whether I consider them close or not.

Voluminous, flared dresses were consistently preferred over straight-cut silhouettes, for both women and girls' clothing and bright, accessorized patterns were strongly favored over dull-col-

ored, plain designs. Just as Bruner and Goodman (1947) found that powerless people were drawn to larger monetary objects, bigger sizes of clothes appeared to be an empowering technique used by our LCCs. LCC informants' color, material, and design preferences were even more intense when we asked them about clothing preferences for children. With big hopes and high aspirations for their children, most LCC informants preferred to dress them in clothing that they described as looking "grand" or "rich," including brightly colored, flared, printed dresses for girls. There seemed to be an overarching desire to dress their children in a manner that immediately announces their presence to others. As Lakshmi explained, she would prefer to dress her daughter in a voluminous outfit that increases her perceived stature and size making her look more impressive- as if the greater occupation of space with a frilly, full dress communicated a stronger presence.

In stark contrast, our HCCs preferred clothing and accessories strictly devoid of the same flamboyant elements that drew the interest of our LCC informants. For HCCs, comfort and fit were the most important criteria in selecting clothing, as was reflected in their clothing and accessory wardrobes. Both in their own wardrobes as well as in our photo selection activities, straight-cut designs were predominantly preferred for both women and children. HCCs frequently described their clothing preferences as being "sober" and "simple," with a conscious effort to not attract attention due to over-styled aesthetics. They preferred a minimalist aesthetic that allowed their presence to be demonstrated through their personalities rather than their clothing, similar to their home decor. Their clothes should be "nice" but not speak for them. For HCC consumers, dressing was seen as being integrally associated with portraying their upbringing, education, and higher cultural capital.

Padma (HCC): I didn't like these [selected stimuli] because of the glittery, shiny design. This looks rough, something that will irritate and poke when you wear it. It is not pleasant and does not give a decent look. It looks very low class. They ["low class" consumers] think it's grand but actually it's not grand looking -- in fact it has a cheap look.

In a notable deviation from LCC consumers studied in other parts of the world (Holt 1998; Üstüner and Holt 2000), our LCCs, while cognizant about HCC sensory preferences, did not reveal any desire to emulate them, contrary to what Simmel's (1954) Trickle Down theory would suggest. For example, an emic term used almost "respectfully" by LCCs to describe colors like white, beige, cream, olive green was "English colors." However, these colors were strictly not preferred for either their own clothing or home décor, and were considered dull and stodgy.

#### *Other sensory*

Preference for sensory flamboyance was evident across other sensory domains as well. All LCCs had mobile phones loaded with music and loud ringtones and listened to TV at high volumes as measured by our decibel app. HCCs, however, opined that listening to TV at a high volume denoted a lack of civic sense and sensitivity to other's needs, and Latha labeled such people as "cheap." They neither preferred loud music nor strong fragrances, in contrast with the LCC group. Tea and coffee served to us at some of the LCC households was high in sugar content, while their cooking made extensive use of spices. It is plausible that high levels of condiments in food and beverages was a way of magnifying the impact of gustatory experiences for the LCCs, in a way enlivening their senses and perhaps compensating for an impoverished environment. They seem to privilege the life of the body over the life of the mind, and this



is evident across all sensorial aspects. While the visual, olfactory and aural may be perceived by others, food consumption is largely private. Sensory flamboyance in taste could hence be a signal to the self, possibly helping them embrace life more boldly, feel more alive or simply experience mastery over something in their space.

## Discussion

We find that sensory intensity -- whether flamboyant or subtle -- is used by our informants to reinforce membership in their respective communities, socially insulate these communities from perceived outsiders or intruders, and to differentiate them from others perceived to be lower in status. For LCCs, sensory flamboyance appears to be a way to compensate for their economically impoverished environments, and may even be an attempt to experience life more boldly. It appears to be a compensating strategy to deal with the disempowerment they are faced with on a daily basis.

Our work answers calls from consumer culture theory researchers regarding contextual theory development (Arnould and Thompson, 2005; Askegaard and Linnet, 2011), and studying emerging forms of cultural capital in India (Chaudhuri and Majumdar 2006). It also reopens the neglected domain of sensory tastes and bodily pleasure and constraint (e.g., Falk 1994; Gronow 1997; Serres 1985/2008). Following the approach suggested by Belk, Rodner and Sobh (2018), we present multiple theories of the observed phenomena, including psychologically driven theoretical explanations, arguably enabling richer interpretations of complex phenomena. Our findings should be helpful in understanding the consumption dynamics of individuals in emerging economies, where not only are consumers' discretionary incomes increasing, but so are the demarcations between social classes (Ablett et al 2007), with implications for product and marketing communications design.

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# Gossip: How the Relationship with the Source Shapes the Retransmission of Personal Content

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## EXTENDED ABSTRACT

Consumers love gossiping about celebrities. It is a big part of our social interaction and is all over the media, both mainstream and social. The influence of celebrities in consumer's lives is undeniable (Thomson 2006). Much of what is being tweeted is the content of celebrities' lives; in addition, news feeds and tweets are filled of frivolous stories about famous persons (Zhao et al. 2011).

Previous research on gossip has shown that people love to talk about other people; after self-disclosure, talking about absent third parties is the most common topic of conversation (Emler 1990). Further, a considerable amount of content shared in people's lives is not self-generated, but passed on. In this research, we focus on content that originates with one individual and is shared by a different individual, and investigate what makes people prone to retransmit personal content about someone else.

We propose the retransmission of personal content (colloquially considered gossiping) can be explained by the sharer's relationship with the source of the content. We demonstrate that, when facing the choice of whether or not to retransmit personal information, the individual is pulled in opposing directions by two concerns, the perceived guilt of sharing something presumably private versus the perceived arousal of the content. How guilty and aroused one feels depends on the relationship that an individual has with the source of the content. On the one hand, sharing personal information about someone is generally seen as immoral, violating privacy norms. On the other hand, what makes personal information more arousing is its private nature. We demonstrate that personal information about famous persons (i.e., celebrities) is more likely to be shared because consumers experience lower guilt and higher arousal. By studying an overlooked type of content heavily shared by consumers and by focusing on human brands, we provide contribution to both gossip and WOM literatures.

One overarching goal of this research is to provide a coherent explanation for why celebrity gossip is shared so much more frequently than many other types of personal content. The celebrity gossip industry (anchored by sites like TMZ) constitutes a significant commercial market generating \$3 billion in combined revenue in the U.S. in 2011, according to The New York Times. We investigate the two opposing forces discussed earlier as the mechanisms affecting when personal information is more or less likely to be retransmitted and demonstrate that personal information about famous people (i.e., celebrities) is more likely to be shared because consumers experience lower guilt and higher arousal.

Drawing on Emerson's (1962) Power/Dependence Theory, we identify four different types of relationship with the source of the content that vary across two dimensions: mutual dependence and balance. According to Emerson "social relations commonly entail ties of mutual dependence between the parties." There is high degree of mutual dependence in a relationship when both parties strongly depend on each other. There is balance in a relationship when both parties depend on each other in the same way. A relationship can be very balanced, when both parts depend equally on each other (or conversely, neither depends on the other), or very unbalanced, when one party depends on the other more.

Combining mutual dependence and balance, we distinguish four archetypical relationships between the sharer and the source of personal information: (1) High Mutual Dependence and Balance (HDB) (e.g., close friends); (2) Low Mutual Dependence and Balance (LDB) (e.g., acquaintances); (3) Medium Mutual Dependence and Unbalanced with more power towards the other person side (MDU1) (e.g., celebrities); and (4) Medium Mutual Dependence and Unbalance with more power towards the respondent (MDU2) (e.g., someone who works for me). We predict that different sources have different effects on the propensity to share personal content. Specifically, we expect famous people (MDU1) to be the category for which the propensity to share personal information is the highest.

We predict the propensity to share personal content about someone else to depend on the opposing forces of how guilty sharing is perceived and how arousing is the information. Guilt arises when someone behaves in a way that causes a violation of the moral order for which people take responsibility (Duhachek, Agrawal and Han 2012). Whenever individuals receive personal intimate information from another subject, when they consider sharing this information, they evaluate the morality of the action and assess how guilty they would feel by doing it. Thus, we propose that personal information about an individual whom one has a balanced relationship (e.g. close friend) increases the perceived guilt attached to sharing personal information, as opposed to a relationship that is perceived as very unbalanced (e.g. celebrity).

Arousal is a subjective experience of energy mobilization leading to excitement (Mehrabian and Russell 1974). Berger (2011) showed that physiological arousal could explain information transmission because of the motivation elicited by this excitatory state. We predict that personal information about other individuals can be considered as something arousing and this increases when a relationship is characterized by higher mutual dependence.

Overall, we expect relationships characterized by medium mutual dependence and low balance (e.g., favorite celebrities) to be the category for which the propensity to share personal information is the highest. This is because the content is generally perceived as more arousing and sharing is characterized by less anticipated guilt.

We tested our predictions in three studies. Study 1 (1a and 1b, 100 and 513 MTurkers) provides empirical validation of our independent variable, the typology of relationships, and validates two one-way power measures drawn from Power/Dependence Theory (Emerson 1962).

Study 2 (362 MTurkers) tests for significant differences in the Propensity to Share personal information (PTS) contingent on the relationship with the source of the content. We varied the relationships according to mutual dependence and balance. We asked participants to think about one specific person and imagine they could share a gossip about them online. Results show significantly greater PTS for MDU1 relationships compared to all the other tested relationships (all *p-values* < .05), confirming our main prediction that personal information is shared in a different way depending on the relationship with the source of the content.

Study 3 (403 MTurkers) tests the difference in PTS offline including perceived arousal and guilt. The study followed the same procedure used in study 2; in addition, participants imagined that

they decided to share the content and indicate how arousing they perceived the information and how guilty they feel sharing. Results show a significantly higher PTS for MDU1 sources compared to all the other tested relationships (all *p-values* < .003). We conducted a mediation analysis investigating the simultaneous role of arousal and guilt in the relationship between the source and PTS, and found evidence of the presence of a significant indirect effect.

Across these three studies, we demonstrate that the relationships characterized by higher mutual dependence and low balance (e.g. favorite celebrities) is the category for which the PTS is the highest. While we recognize the existence of other potential causes, we advance one possible explanation through perceived arousal and anticipated guilt. Our goal was to demonstrate that only by combining these two dimensions is it possible to explain why some personal information is more or less likely to be shared, and this applies both online and offline. More importantly, we illustrate why it is the case that celebrity gossip is so widely shared by consumers. Our findings contribute to the literature on WOM retransmission by investigating personal information, a type of content frequently shared by consumers with scant coverage in the literature. We also contribute to the gossip literature by providing an explanation for why certain types of information like celebrity gossip is so frequently shared by individuals.

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# Shopping For Freedom: Moroccan Women's Experience In Supermarkets

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## EXTENDED ABSTRACT

Contemporary conceptualizations of consumer freedom rely on a Western view of the autonomous self (e.g. Arnould 2007). The idealized free agent has the capacity of choice and is the ultimate source of her will (e.g. Mick and Humphreys 2008). Deriving from this, studies on consumer freedom have largely investigated the various strategies of consumers to construct their freedoms along with their autonomy and independence (e.g. Peñaloza and Barnhart 2011).

On the other hand, recent works in non-Western contexts suggest that interdependence and conformity, rather than independence and autonomy, should be understood as manifestations of individual freedom. In this approach, freedom refers to the voluntary choice to conform to a dominant discourse and related norms (Abu Lughod 2013; Markus and Schwartz 2010).

Our research contributes to this ongoing debate. We propose an emergent conceptualization of consumer freedom at the meso level. We explore how consumers construct their freedom within the specificities of their socio-cultural contexts.

Freedom holds two conceptualizations: the negative and the positive (Berlin 1969). In its positive form, *freedom to* is about the presence of something (i.e. self mastery, autonomy). The positive form of freedom largely dominated in modern culture (Firat and Dholakia 1998). In its negative form, *freedom from* is about the absence of something (i.e. external constraints). External constraints refer to actions, influences, and/or intrusions of others in one's decision and lead to forms of interference (Berlin 1969), domination (Pettit 2011) or oppression (Arendt 1951; Sen 1999).

Our research questions include: What are the conditions to consumer freedom? What roles do consumers and the market play in the construction of consumer freedom?

We locate our research among Moroccan women in Casablanca and explore their shopping experiences in supermarkets. The Moroccan woman is constrained in her movements and thoughts by a dominant discourse that is of patriarchal kind (e.g. Mernissi 2010). The dominant power of the Moroccan male is supported by a rigid set of norms, which regulates women's behaviors (e.g. Sadiqi 2003). The market is one of the strongest male institutions in Morocco (e.g. Geertz 1978). Nevertheless, it seems to provide several conditions to facilitate women's freedoms (Kapchan 1996).

We rely on a three years ethnography to access and portray the experiences of grocery shopping among Moroccan women. The first researcher conducted the bulk of ethnographic work. We deploy various types of data including participant observation, in depth interviews (Mc Cracken 1988), and photographs (Dion 2007). The resulting data set comprises 61 interviews with 7 men and 54 women, 127 photographs and 122 pages of handwritten fieldnotes. Analysis followed recommendations for ethnographic research (Arnould and Wallendorf 1994).

Our findings show that the patriarchal dominant discourse is somehow suspended in the supermarket. A such, the supermarket offers a sense of anonymity, self-service and security, which permit women to construct forms of freedom from interference from the male (Berlin 1969), domination from the male dominant power (Pettit 2011) and oppression from the patriarchal dominant discourse (Sen 1999). Our findings also uncover the role of various consumers, supermarket employees, relatives and friends in women's construc-

tion of freedom. We shed light on the importance of freedom witnesses, who support and observe women's freedom, and of freedom facilitators, who bend the supermarket rules and serve women.

Our research suggests three theoretical contributions. First, our data analysis provides contextual elements to the ongoing discussion about the role of constraints in the construction of freedom. Our results are in line with Sartre (1943) who stated that constraints permit freedom to emerge. We also show that informants do not seek to overtly fight the dominant discourse. They voluntarily conform to social norms in their daily lives and in traditional spaces (e.g. the traditional market). Thus, in line with Fromm (1943), we state that absolute freedom is no ideal and that consumers need constraints.

Our study also nuances previous work on voluntary conformity as manifestation of freedom (e.g. Abu Lughod 2013). Our findings show that the Arab woman conforms to the dominant discourse in her daily life. However, when she finds a space where the norms are somehow suspended, she engages in consumption behaviors that manifest her will to free from the dominant discourse and related norms that infringe her behaviors in her daily life.

Finally, our findings conflict with the ideal of an autonomous, independent agent, as a master of her own life (e.g. Mick and Humphreys 2008). We demonstrate that consumer freedom is not an individual matter and shed light on the social dimensions of consumer freedom. In particular, we show that Moroccan women rely on various supportive and observant witnesses, and on freedom facilitators to construct their individual freedoms.

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# The Subjective Value of Popularity: A Neural Account of Socially Informed Functional Value and Social Value

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## EXTENDED ABSTRACT

Popular products are often thought of as being popular for a particular reason. Consumers may come up with different reasons to assess a popular product's subjective value. This value may express functionality (Steinhart, Kamins, Mazursky, & Noy, 2014), or expectations on social approval (Berger & Heath, 2007). Research on social influence often distinguishes between two different routes through which popularity aids in value assessment by noting either informational (i.e. functional) incentives, or normative (i.e. social) incentives (Cialdini, Reno, & Kallgren, 1990; Deutsch & Gerard, 1955). For evaluations on functionality, a product may be evaluated in terms of workmanship and overall quality, and for social evaluations in terms of expectations of approval of social peers (Sweeney & Soutar, 2001). We argue that the neural computation of the subjective value of popular products, is dependent upon whether consumers focus on a product's functional value, or a product's social value. The primary objective of this study is to explicate the neural processes through which popularity exerts influence on behaviour along these routes. In doing so, we draw upon insights that show how consumers use single pieces dependent upon their focus (Hare, Malmaud, & Rangel, 2011).

Consumers' choices, including those informed by popularity, are often driven by activity in the brain's reward system (Bartra, McGuire, & Kable, 2013; Falk & Scholz, 2018). We propose that this activity is mediated by activity in other regions, dependent upon consumers' focus. Consumers with a quality focus, are likely to display brain activity in regions known to process aspects of quality and specific product properties (i.e. functional value), such as ventral and lateral regions of the temporal cortex (Chao, Haxby, & Martin, 1999). Consumers with a social focus, are likely to show activity in regions known to revolve around thinking about (the opinions) of others (i.e. social value), such as the temporoparietal junction and the anterior cingulate cortex (Baek, Scholz, O'Donnell, & Falk, 2017; Berns, Capra, Moore, & Noussair, 2010)). We propose that the final subjective value that consumers derive from popularity is mediated by activity in regions that revolve around functional value when consumers focus on quality, whereas the effect is mediated by activity in regions revolving around social value, when consumers focus on social aspects.

The study presents the results of an fMRI experiment ( $N = 30$ ), using a 3 (focus: normal / quality / social) X 2 (popularity: low / high) within-subjects design, in which participants evaluated 180 different food products in a MRI scanner. Brain activity (i.e. parameters) was extracted via region of interest (ROI) masks that were built using coordinates from literature (e.g. Bartra et al., 2013). Parameters were extracted from the quality, and social focus conditions, while controlling for normal focus, from the low and high popularity conditions (e.g. 'quality focus & popularity high' vs 'normal focus & popularity high').

The results demonstrate that in the quality focus condition, popularity influenced purchase intention ( $\beta X_{Pop} = .703, p < .001$ ). In contrast to our expectations, this effect was partially and negatively mediated by activity in the functional value regions ( $\beta ME_{Func\_val} = -.515, p < .05$ ), negatively by activity in the reward value regions

( $\beta ME_{Rew\_val} = -.798, p < .01$ ), yet positively by activity in the social value regions ( $\beta ME_{Soc\_val} = -.798, p < .01$ ). Activity in the functional, and social value regions did not interact with activity in the reward value regions ( $ps > .10$ ). In the social focus condition, popularity again affected purchase intention ( $\beta X_{Pop} = .764, p < .001$ ). In line with our expectations, we find that this effect is partially positively mediated by social value ( $\beta ME_{Soc\_val} = .368, p < .05$ ), with a positive interaction between activity in the social value ROIs and the reward value ROIs ( $\beta ME_{Soc\_val} ME_{Rew\_val} = .875, p < .001$ ). A surprising result is the negative effect of activity in the reward value ROIs ( $\beta ME_{Rew\_val} = -.479, p < .05$ ).

In addition to the fMRI experiment, the study presents the results of a behavioural task, using a similar paradigm. In this task, participants expressed their purchase intention, and evaluated products on functional value ('product has a good quality') and social value ('product will make a good impression on others'). These results show that popularity in itself is often equated with a higher functional value, expressed through inferences about quality. These inferences mediate the effect of popularity on purchase intention, but are negatively affected in conditions where consumers focus on a product's social value. In the social focus condition, participants do make positive inferences about social value that mediate the relationship between popularity and purchase intention.

The results of the study are partially in line with our expectations. As expected participants that held a social focus, used popularity to estimate a social value for products. The increased activity in the social value regions positively interacted with activity in reward regions and increased participants' purchase intention. These results hold for the neural data as well as for the behavioural data. In contrast to our expectations, participants with a quality focus did not show positive activity in the functional value regions. The results show an opposite effect, such that with a quality focus, activity in the functional value regions negatively affected purchase intention.

The present study adds to scientific literature by demonstrating different routes through which popularity may influence choice. On a behavioural level, we show that different inferences explain the effect dependent upon consumers' focus. On a neural level, we demonstrate that popularity evokes different types of value and offer initial evidence for the existence of two neural routes of social influence. The study demonstrates that a single piece of information may be processed through different routes, depending on the current focus, either on quality or social aspects. These results have important implications for practitioners. Popularity is often used on different sales platforms. Our results indicate that the value associated with the popular product may differ. Given the strong influence of popularity on behaviour, marketers are advised to carefully consider the focus of consumers when evaluating popular products.

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# Deviating from the Majority When Resources Are Scarce: The Effect of Resource Scarcity on Preference for Minority-endorsed Products

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## EXTENDED ABSTRACT

Resource scarcity has been a very pervasive phenomenon and plays an important role in consumer behavior. To date, plenty of research has examined the consequences of resource scarcity (Mehta and Zhu 2016; Roux, Goldsmith, and Bonezzi 2015). However, little has been done about how resource scarcity influences consumers' purchase behavior. One unanswered question that arises is, how does resource scarcity influence consumer preference for minority-endorsed products? Research by Baumeister and Leary (1995) has posited that under conditions of scarcity, forming a group or conforming to the majority will bring debatable advantages, reflected in resource sharing and resource deprivation within groups. In addition, though prior research has investigated the interaction effect of resource scarcity and childhood environments on conformity, resource scarcity was operationalized as economic uncertainty and monetary expenditures (Stamos, Bruyneel, and Dewitte 2016), diverging from the classic operationalization in most literature (e.g. Mehta and Zhu 2016; Roux et al. 2015), which we adopted in this paper. To our knowledge, no research has directly addressed whether and why resource scarcity may influence consumer preference for minority-endorsed products. The current research aims to address these issues.

Prior research on scarcity suggests that people in poverty are more discreet and do more trade-offs when consuming resources (Mullainathan and Shafir 2013), and become competition-oriented and unwilling to share resources with others in the face of scarcity (Roux et al. 2015). Furthermore, Rodeheffer, Hill and Lord (2012) found that during times of scarcity, individuals tend to narrow their definition of belongingness and include only people whose group membership is unambiguous. Building on these findings, we theorize that resource scarcity increases individuals' sensitivity to losses and their concern about resource deprivation. As a result, conforming to the majority may be more threatening than beneficial to individuals with scarce resources (Baumeister and Leary 1995). Since choosing minority-endorsed options blocks majority influence (Imhoff and Erb 2009), we propose that reminding consumers of resource scarcity may enhance their concern about resource deprivation, which subsequently strengthens minority preference.

Furthermore, perceived economic mobility (PEM) represents individuals' belief in the changeability of current economic status contingent on their own efforts (Yoon and Kim 2016; Yoon and Kim 2017). When PEM is high, consumers will be more optimistic about their future economic state and resource availability, which may eliminate or mitigate their resource deprivation concern heightened by the scarcity of material resources. On the contrary, when PEM is low, consumers may perceive low changeability of their current economic state, intensifying their resource deprivation concern induced by resource scarcity. We tested our assumptions in four studies.

In study 1 (N=95), we employed a one-factor (resource scarcity vs. no reminders of scarcity) between-subjects design. Participants were first instructed to finish an episodic recall task (Roux et al. 2015). In the scarcity condition, participants were asked to describe three or four episodes when they felt they didn't have enough of something, while participants in the control condition were asked to write down what they did during the past week. Afterwards, participants were presented with a product evaluation task and instructed

to indicate their preference for two mugs of different colors. Survey information regarding other consumers' choices of the two mugs was created to form a majority-endorsed option and a minority-endorsed option. Next, participants were asked to indicate their choice. Results suggested that participants in the scarcity condition had significantly higher tendency to choose the minority-endorsed mug ( $M_{scarcity}=6.44$  vs.  $M_{control}=5.21$ ,  $p<.04$ ).

Study 2 (N=80) extended the findings of study 1 by investigating the mediating role of resource deprivation concern. Resource scarcity was manipulated as study 1. Afterwards, all participants moved to the measurement of resource deprivation concern. Finally, minority preference was measured by using a survey on preference for brands with different market share across five product categories. Consistent with our prediction, results showed that participants reminded of resource scarcity were more inclined to choose brands with low market share ( $M_{scarcity}=7.16$  vs.  $M_{control}=6.02$ ,  $p<.05$ ). Furthermore, results of mediation analysis supported the mediating effect of resource deprivation concern (5000 samples, 95% CI: [-0.83, -0.01]).

In study 3 (N=85), we sought to replicate the results of the above two studies in a different product domain. The same episodic recall task as study 1 was used to manipulate resource scarcity. Afterwards, participants read a purchase decision scenario, where they struggled with the color of laptops but learned from the salesperson about previous consumers' choices. Resource deprivation concern was then measured as study 2. In addition, we measured competitive orientation as an alternative explanation. Results indicated that resource scarcity has a positive effect on the choice of minority-endorsed laptop color (scarcity: 59.5% vs. control: 27.9%,  $B=1.34$ ,  $p<.005$ ). Results of mediation analyses again supported the mediating role of resource deprivation concern (CI: [-0.99, -0.03]), while the mediating effect of competitive orientation was not significant (CI: [-0.13, 0.10]).

Study 4 (N=112) was conducted to test the moderating effect of PEM by particularly focusing on the scarcity of material resources. Participants were randomly assigned to a 2 (resource scarcity vs. no reminders of scarcity) \* 2 (PEM: high vs. low) between-subjects design. Participants were first instructed to complete a "Listing Task" regarding five different material resources, which was adapted from previous research to manipulate resource scarcity (Roux et al. 2015). Next, a reading task adopted from Yoon and Kim (2016) was used to manipulate PEM. Finally, participants were asked to complete the same brand preference task as study 2. Results further revealed that under high economic mobility, the mediating effect of resource deprivation concern was eliminated (CI: [-0.23, 0.23]), but under low economic mobility, the mediating effect of resource deprivation concern held (CI: [0.12, 0.73]).

In conclusion, our findings contribute to the literature by showing that resource scarcity has a positive effect on consumer preference for minority-endorsed products, which is mediated by resource deprivation concern. The current research also broadens the scope of research on resource scarcity by investigating perceived economic mobility as an important boundary condition.

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# When High-End Designers Partner with Low-Cost Retailers: Bridging the Access Gap

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## EXTENDED ABSTRACT

When high-end designers work with low-cost retailers to create co-branded collections (e.g., Karl Lagerfeld for H&M), such alliances are referred to as designer-for-retailer collaborations. Though extant research suggests that successful brand alliances' rely on high brand fit (Simonin and Ruth 1998), practice shows that designer-for-retailer collaborations generate positive consumer response. The current work explains the success of designer-for-retailer collaborations by introducing the construct *access gap* (i.e., the magnitude of the difference in consumers' ability to access products from the collaborating parties). Specifically, low-cost retailer's customers are typically unable to access the high-end designer's products due to budgetary constraints. Designer-for-retailer collaborations bridge this access gap by pairing mass distribution and affordable prices with designer products. Across four studies, we show that *access gap*, rather than brand fit, explains consumers' increased willingness to purchase (WTPR) designer-for-retailer products through anticipated conferral of status benefits (ACS). We explicate the roles of designer creative control and retailer's pricing strategies.

### Study 1: Brand Fit vs. Access Gap

In study 1, we manipulate the degree of brand fit between the designer and low-cost retailer. Participants ( $N=79$  students, 45% female, median age 19) imagined themselves in Target when seeing a designer-for-Target collection. The items are typically affordable to [everyday people (ED)/the rich and famous (RF)]. Participants indicated expected price (EP) and their WTPR (1-to-9 scale). Access gap was measured by asking participants to compare Target and the designer on relative prices, affordability, exclusivity, accessibility, level of luxury, and income level of typical customers (1="extremely similar" to 9="extremely different";  $\alpha=.88$ ). Brand fit was measured using five standard fit items ( $\alpha=.91$ ).

EP was significantly higher ( $M_{ED}=\$32.32, M_{RF}=\$55.22; p<.01$ ) and WTPR was directionally higher ( $M_{ED}=5.21, M_{RF}=5.64; p>.10$ ) for the designer targeting the RF versus ED. Brand fit for the RF designer was worse than ED ( $M_{ED}=5.31, M_{RF}=3.93; p<.01$ ) and had a significantly wider access gap from Target ( $M_{ED}=5.36, M_{RF}=6.98; p<.01$ ). We tested the effects of access gap and brand fit on WTPR as two competing mediators, controlling for EP. Access gap was significant ( $b=.38, p<.05$ ), whereas brand fit was not ( $b=.31, p>.05$ ). Bootstrapping (PROCESS model 4, Hayes 2017) revealed a significant indirect effect of designer type through access gap on WTPR ( $b_{\text{Indirect-AccessGap}}=.61; 95\%CI: \{.12, 1.33\}$ ). Access gap, but not brand fit, drove WTPR.

### Study 2: Access Gap Benefits

What benefits are conferred to consumers through designer-for-retailer collaborations? We examine ACS (Eastman, Goldsmith, and Flynn 1999; Escalas and Bettman 2003, 2005) controlling for anticipated quality (AQ). We again use two designer conditions (ED vs RF) like study 1. Participants ( $N=201$  students, 47% female, median age 19) reported the EP of a sweater from the designer-for-retailer collection and their WTPR. We included five items to measure AQ: craftsmanship, fabric quality, level of detail, design quality, and creativity ( $\alpha=.95$ ); access gap was measured (see Study 1,  $\alpha=.93$ ); three items assessed ACS from wearing the sweater ( $\alpha=.95$ ).

RF led consumers to a higher EP than ED ( $M_{RF}=\$49.99; M_{ED}=\$31.13; p<.01$ ). Despite this, however, those in the RF (compared to ED) condition also reported a significantly higher WTPR ( $M_{RF}=5.62, M_{ED}=4.85, p=.01$ ). Importantly, the access gap was larger for RF than ED ( $M_{RF}=7.11, M_{ED}=5.78, p=.01$ ). Finally, RF conferred more status benefits ( $M_{RF}=4.67, M_{ED}=3.88, p<.01$ ).

Serial mediation, from designer type to WTPR through both access gap and ACS, while controlling for anticipated quality and differences in EP was significant. We expected designer type on WTPR to be mediated through two different causal paths: 1) the indirect path from designer type  $\rightarrow$  access gap  $\rightarrow$  AQ  $\rightarrow$  WTPR, and, of focal interest, 2) the indirect path from designer type  $\rightarrow$  access gap  $\rightarrow$  ACS  $\rightarrow$  WTPR. Using PROCESS (Version 3.0; Hayes 2017), we tested both indirect effects. The indirect effect through access gap and ACS was significantly different from zero ( $\gamma=.11, 95\%CI: \{.01, .25\}$ ) and fully mediated the effect of designer type on WTPR ( $p=.57$ ). ACS drives WTPR.

### Study 3: Alliance Type

Study 3 addresses the role of creative control (Valesia, Nunes, and Ordanini 2016) in designer-for-retailer collaborations relative to licensing agreements. If the designer lacks creative control (McCracken 1989), ACS may be diminished. We compare different partners (designer vs athlete) in different co-branding alliances (collaboration (designer has creative control) vs licensing agreement (retailer has creative control) in a 2x2. Participants ( $N=103$  students, 59% female, median age 20) provided EP, WTPR, AQ (3 items,  $\alpha=.90$ ), and ACS from the item (9 items,  $\alpha=.93$ ).

As expected, controlling for EP, the interaction between alliance type and partner type on WTPR was significant ( $F(1,98)=5.13, p<.05$ ). WTPR was higher for the athlete under licensing than collaboration ( $M_{AthLic}=5.55, M_{AthCollab}=4.51; p<.10$ ). For the designer, the pattern was reversed ( $M_{DesLic}=4.86, M_{DesCollab}=5.86; p=.12$ ). A test of moderated mediation with partner as the IV, alliance type as moderator, AQ and ACS as parallel mediators on WTPR was significant ( $Index_{\text{ModMed}}=.62, 95\%CI: \{.01, 1.67\}$ ; Hayes 2017). *Athlete licensed* collections (vs. designer) had higher WTPR through increased ACS, whereas *designer collaboration* collections showed higher WTPR through increased ACS. Thus, collaborations appear most successful when the collaboration partner is a designer that has creative control.

### Study 4: Real Choice

Study 4 replicates the alliance findings of study 3 (i.e., Licensing, Collaboration, PL) in real choice using scarves (with custom-made labels sewn into the scarf). The second manipulated factor was price [ $\$14.99/\$49.99$ ] to examine pricing for designer-for-retailer product. After examination, participants ( $N=194$  female students, median age 19) indicated whether they would like to be entered into an auction for the scarf. If yes, they indicated their maximum bid.

Overall, 36% of participants bid. When the scarf was priced at  $\$49.99$ , the collaboration had the highest bid ( $M_{\text{Collab}}=\$31.66$ ) compared to the other scarf labels ( $M_{\text{TargetPL}}=\$20.55, M_{\text{Lic}}=\$22.04; p<.05$ ). However, when the scarf was priced at  $\$14.99$ , the collaboration and licensed scarves produced similar bids ( $M_{\text{Collab}}=\$17.59, M_{\text{Lic}}=\$18.17; p=.88$ ). Thus, we confirm the benefits of designer-for-retailer collaborations over licensing arrangements in a consequential setting,

and add a boundary condition. Designer-for-retailer items should be priced sufficiently higher than the retailer's other products.

### Discussion

The success of designer-for-retailer collaborations hinges on the presence of an access gap. When designers have creative control and when prices are sufficiently high (but not out of reach for low-cost retail customers), status benefits are anticipated, subsequently increasing WTPR. This study starts to explain the success of co-branding alliances despite a poor fit between the partners.

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# The Impostor Syndrome from Luxury Consumption

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## EXTENDED ABSTRACT

Luxury brands symbolize cultural ideals and signal desirable qualities such as power, influence, and success, which embody individuals' aspirations and vision of their ideal selves (Belk 1998). Projecting an ideal self by wearing luxury can yield a number of benefits such as economic rewards, special treatment, respect, and recognition from others (Lee, Ko and Megehee 2015). However, projecting an ideal self also highlights a discrepancy between consumers' ideal and true selves, which may create psychological tension and dissonance (Erickson 1995; Clance and Imes 1978). Specifically, when individuals experience a mismatch between their external (i.e. projected) and internal (i.e. true) selves, they may feel inauthentic or like an impostor. Although self-authenticity is an important driver of individual behavior, which enhances physical and psychological well-being (Erickson 1995; Sheldon et al. 1997), prior marketing studies only examined consumers' pursuit of *authentic products and brands* and overlooked their pursuit of an *authentic self* (Grayson and Martinec 2004; Napoli et al. 2014). The only study linking consumption behavior to self-authenticity reported that individuals may feel inauthentic from consuming *counterfeit* products (Gino, Norton and Ariely 2010), leaving the question open of how self-authenticity may be enhanced or undermined from consuming *authentic* products.

Addressing this gap, we propose that although consuming luxury brands may garner external benefits (such as respect and recognition from others), it may also make consumers feel like an impostor because of the gap that it creates between consumers' projected selves and true selves. We call this phenomenon the "impostor syndrome from luxury consumption" and predict that it will not emerge when consuming non-luxury brands that do not project consumers' ideal selves. Furthermore, the impostor syndrome from luxury consumption should be more pronounced in individuals with low psychological entitlement, who perceive a large gap between their (deflated) view of their true self and the projected self, than in individuals with high entitlement, who perceive a small gap between their (inflated) view of their true self and the projected self. Finally, we explore the moderating effects of the detectability and malleability of the gap between consumers' true and projected selves. Six studies test our predictions.

Study 1 tested whether luxury consumption can boost individuals' external benefits, but also make them feel inauthentic. To ensure that the phenomenon was relevant for a typical target market of luxury brands, we surveyed female opera patrons during an intermission of a flagship show at the Metropolitan Opera in New York City. Participants imagined that they were shopping for a dress to wear to the opera and they were considering two options – a luxury dress and a non-luxury dress. They were asked to choose which dress would yield greater external benefits in terms of garnering recognition from others and which dress would make them feel more authentic. Whereas participants thought that the luxury dress would be more likely to garner them external recognition than the non-luxury dress, they also thought that it would make them feel inauthentic.

Studies 2 and 3 tested the effect of psychological entitlement on the extent of the "impostor syndrome from luxury consumption", and the process underlying this effect.

In Study 2, participants recalled a situation in which they wore a luxury or non-luxury product, and they rated how authentic they felt wearing the product. To test the role of psychological entitlement in determining the extent of consumers' impostor syndrome, we administered the psychological entitlement scale (Campbell et al. 2004). To examine the psychological process behind this effect, we measured self-brand connection, which captures how connected consumers think the brand (and hence the self projected by the brand) is to their true self and identity (Escalas and Bettman 2003). As expected, luxury consumption made consumers feel less authentic, and this effect emerged among unentitled individuals, not among entitled individuals. Individuals' self-brand connection (i.e. how closely or distantly individuals thought the brand projected their true self or identity) mediated this effect.

Study 3 replicated these findings using a manipulation, instead of an inherent measure, of psychological entitlement. The study also revealed that self-inauthenticity produced by luxury consumption has negative consequences for consumers' luxury experience (i.e. feeling inauthentic translates to lower levels of confidence, empowerment, success, sophistication, fitting in, comfort, and happiness while wearing luxury).

Studies 4-5 tested the boundary conditions of the phenomenon.

Study 4 explored whether manipulating the detectability of the gap between one's true self and projected self moderates the link between psychological entitlement and the "impostor syndrome from luxury consumption." Female participants read that they were going to a wedding and that they were wearing a Versace dress. To manipulate the detectability of the gap between one's true and projected selves, participants read that the wedding was attended by familiar others or by strangers. The results showed that the "impostor syndrome from luxury consumption" emerged and psychological entitlement significantly predicted it when participants imagined being in the company of strangers (to whom the gap between participants' true and projected selves was undetectable), but not when they imagined being in the company of familiar others (to whom the gap was detectable).

Study 5 tested the moderating role of the malleability of the gap by manipulating individuals' perceptions of the cultural capital (i.e. ability to appreciate cultural, artistic, and luxury goods) as fixed or malleable. Framing the cultural capital as malleable should lead people to perceive the gap between their true and ideal selves to be surmountable (vs. insurmountable when the cultural capital is framed as fixed). As a result, we found that the "impostor syndrome from luxury consumption" emerged and psychological entitlement predicted it when the cultural capital (and the gap between individuals' true and ideal selves) was perceived to be fixed, but not when the cultural capital was perceived to be malleable.

Study 6 showed that feeling authentic is important to consumers and that it drives consumers' choices of luxury (vs. non-luxury) products across many contexts.

Our work is the first to demonstrate the implications of luxury consumption for consumers' feelings of self-authenticity. The findings add useful insights to marketing theory and practice.

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# Changes in Social Values in the United States – 1976-2017: Is a New Age of Tribalism Emerging?

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## EXTENDED ABSTRACT

Social values, which represent society's goals, ideals, and conceptions of preferred states (Kahle 1996), are dynamic and always changing. Thus, a continuous understanding of changes in values over time can provide insight into individuals and society.

The current research builds upon three previous papers (Kahle and Timmer 1983; Kahle, Poulos, and Sukdial 1988; Gurel-Atay et al. 2010), expanding the view of changes in American social values across 40 years. Subtle trends in the previous 30 years now show a dramatic shift in social values in the last ten years which cuts across gender, age cohort, education, and ethnicity.

### Method

Four sequential cross-sectional national surveys were administered to representative samples of the US Census to compare findings across the 40-year period (1976, 1986, 2007, and 2017).

Social values were measured using the list of values (LOV, Kahle and Timmer 1983). The most important values from the LOV were analyzed across age groups, gender, ethnicity, and education groups. "Fun and enjoyment in life" and "excitement" were collapsed into a single value for analysis because few people selected "excitement" as their first choice in the surveys.

### Findings

#### *Self-respect*

The precipitous drop in 2017 in the ranking of self-respect as the most favored value in America since 1976 across all demographic groups represents the most substantial change in the American culture. The decline is made more dramatic with a corresponding increase in the ranking for a sense of belonging. The data suggest a shock in the American landscape that sharply shifted the priorities of inwardly focused self-respect to one of a sense of belonging or identification with others.

#### *Sense of Belonging*

The most dramatic change in values over the past decade has been the increase in people who endorse a sense of belonging. It went from the least popular value in 1986 and 2007 to the most popular value in 2017. This dramatic growth occurred in all demographic groups. Historically, US women who endorse this value were lower in education and income. They appeared to "belong" to their families, often not working for pay outside the home. The rise in the sense of belonging to the dominant value for most demographic groups seems today to belie the narrow stereotype of endorsers from previous decades.

#### *Being Well-Respected*

With the terminal rates at around 2-4% for rank in 2017, being well-respected has become the least important value for Americans. It appears that Americans today care less about the respect and opinions of others than the acceptance of others as being a member of the group. The general decline in all demographic groups combined with similar changes in ranking for self-respect suggests respect has been greatly de-prioritized in American culture.

#### *A Sense of Accomplishment*

The importance of this value increased from 1976 to 1986; however, its importance has been decreasing since then for all demographic groups. The biggest decline comes from the youngest age group: In 2007, 18.7% of this age group selected a sense of accomplishment as their most important value while in 2017, only 7.5% of the same group stated this value as their priority.

#### *Self-Fulfillment*

The importance of self-fulfillment has been increasing gradually over the years for almost all demographic groups. However, there is a more pessimistic view of self-fulfillment for those aged 50 and older whose rankings trended in the opposite direction. Indeed, for these two older age groups, the importance of all three internal excess values (i.e., self-respect, self-fulfillment, and sense of accomplishment) has been decreasing, suggesting that they depend on other people more to fulfill their values.

#### *Fun-Enjoyment-Excitement*

There has been an upward trend for this value over the last 40 years for all demographic groups. Interestingly, men ranked this value higher than women in 1976, 1986, and 2007; however, the difference between males and females became statistically insignificant in 2017. This suggests that fun-enjoyment-excitement is becoming equally important for both genders.

#### *Warm Relationships with Others*

This value seemed to peak in importance in 2007 for most demographic groups, but the overall trend appears to be waning over time. However, for the youngest age group and 50-59 years old age group, the trend was the opposite (i.e., declining in 2007 and increasing in 2017). This finding suggests that these two age groups are now more likely to look for support from families and friends.

#### *Security*

The importance of security declined over 30 years from 1976 to 2007 and has stayed steady since then in most demographic groups. This finding suggests that people's feeling of security has not changed in the last decade even in the presence of more terror attacks, the financial crisis of 2008, and the emphasis put on security during presidential elections.

### Discussion

The findings appear to support the notion that recently American society has fundamentally shifted as reflected in the expression of social values. Consumers have shifted away from the controllable and individual-focused excess value of self-respect, which has been the defining characteristic in American culture, to a sense of belonging, which is a more social and less controllable, externally-focused deficit value. Interestingly, while another internally focused, excess value (a sense of accomplishment) also declined in importance, two other excess values, one internally-focused (self-fulfillment) and one externally-focused (fun-enjoyment-excitement), have become more important for consumers.

These results suggest that advertisers and marketers will need to rethink their posture on messaging to a new generation of consum-

ers to align better with the global expression of social values. For advertisers, emphasizing group benefits may be more important, and emphasizing individual benefits may be less important. Consumers want to fit with their groups, and advertisers should show how products facilitate that desire. Advertisers may also want to utilize the combination of values that have been turning into more important values (i.e., a sense of belonging, fun-enjoyment-excitement, and self-fulfilling). For instance, sports-related products may be advertised with a focus on fun-enjoyment-excitement (e.g., having fun doing and watching sports) and a sense of belonging (e.g., being a part of a team). For marketers, segmentation may be more important than ever. Different subgroups have different desires, and as the subgroup identity grows, clarity of differentiation in lifestyle choices is ever more important. Marketers need to understand and address these differences.

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# Attention to Missing Information: The Effect of Novel Disclosure Methods

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## EXTENDED ABSTRACT

People and organizations frequently withhold information that, if made public, might impact their cause. Rational people—should—view withheld information as a sign that another party may have ‘something to hide.’ When people interpret language, they often draw elaborate, adverse conclusions from the withholding of information. Behavioral and experimental economic studies, however, frequently indicate that people are not that sensitive to withheld information, as if they are giving the ‘benefit of the doubt’ regarding missing information. It is worth noting that these results are usually the result of participants reviewing abstract tabular representations of information. It is possible that people might treat the withholding of information very differently in a conversational interaction. In three experiments, we show that people *are* substantially more sensitive to, and suspicious of, withheld information in a conversational context. Bringing together behavioral economics and experimental pragmatics, this work suggests that naturalist conversational interactions, whether auditory or written, when compared to abstract presentations of information, may best engage important aspects of human reasoning.

Decision makers often must make choices based on information selected by other parties with different interests. Buying a car with only partial access to its history, letting your teen go to a party based only on the information she provides, and hiring job applicants using the information that they choose to disclose are a few examples of a situation that is pervasive. Standard economic theory predicts that people will recognize when information is being withheld and respond to that awareness rationally. When rational economic agents interact in markets, economic theory predicts a phenomenon known as ‘unraveling’ whereby all information is disclosed, and people infer any (exceptional) failures to do so as indicating that the withheld information is as adverse as it could be (Grossman & Hart, 1980; Milgrom, 1981).

Although a small number of studies have provided some support for unraveling theory (Forsythe, Isaac, & Palfrey, 1989; Ippolito, 1992), most empirical research on the topic has challenged the theory’s assumptions and predictions (Dranove & Jin, 2010; Ben-Shahar & Schneider, 2011). Furthermore, interventions designed to enhance people’s attention to, and appropriate treatment of, missing information have generally had limited impact (Jin, Luca, & Martin, 2016; Bederson et al. 2016; Gurney & Loewenstein, 2017; Sah & Read, 2017). Responding to the limited success of these prior interventions, we propose and test a novel approach to disclosure, involving a switch from tabular to conversational presentation of information that rests on insight from the language sciences (e.g., Noveck, 2004; Grice, 1975; Levinson, 2000; Sperber & Wilson, 1986). In contrast to the unfamiliar and rather abstract tabular format, the conversational presentation of information is both more naturalistic and potentially engages the powerful reasoning mechanisms deployed in language understanding. In a series of experiments dealing with both restaurant choice and ATM overdrafts, we show that conversational disclosure can significantly enhance responsiveness and attention to missing information.

In study 1, participants interacted with a visual stimulus that was made to look like a Yelp screenshot *or* a recorded stimulus that was designed to contain the same information as the screenshot.

Participants first reviewed their assigned stimulus and then, using a slider anchored at 0 (definitely not) and 100 (Enthusiastic!), indicated what they thought about going to the restaurant with friends. Participants next progressed to a new page without the stimulus and answered a battery of questions about the restaurant. Two questions were particularly relevant: one checked participants’ recall of the SIG (or its presence) and the other requested an open-ended response about their reasoning behind their response to the stimulus.

The effect of audio disclosure relative to visual disclosure was dramatic; an ordinary least squares analysis revealed that, relative to the audio highest SIG (grade of ‘A’) condition ( $\beta = 84.36$ ,  $p < 0.001$ ), the audio missing information condition ( $\beta = -31.47$ ,  $p < 0.001$ ) produced significantly more skepticism than the standard (Yelp screenshot) missing information. Treatment condition also predicted the correct recall of the target information: audio participants were significantly more likely to correctly recall the value or absence of information.

For study 2, we tightened the experimental manipulations to reduce the variance in information across operationalizations of the disclosed content as much as possible. Despite these efforts, an audio disclosure, because of intonations and other voice cues that can only be conspicuously absent, inherently has more information than a visual disclosure (Scherer, 2003; Clark & Tree, 2002; Schroeder & Epley, 2015). Additionally, we tested script and unfolding chat treatments. Concisely, study 2 supported our hypothesis that the conversational disclosure would prove more effective and it added the insight that unfolding chats and scripts are similarly effective.

Study 3 extended our findings to a new domain, consumer banking, by testing willingness to uptake a personal checking account overdraft option. When information was missing in an email, participants were significantly more likely to sign up for the overdraft option if they reviewed and email than if they reviewed a phone conversation script.

Our results show that people can be sensitive to omitted information, with normatively appropriate skepticism, when that information is embedded in a conversational context, whether auditory or written. This fits with the observation from the language sciences that the interpretation of conversational input is exquisitely tuned *not* just to what is said, but to what might have been said, but was not (e.g., Grice, 1975). It also aligns with normative ‘unravelling’ predictions from economic theory (Grossman & Hart, 1980; Milgrom 1981). These results are significant in at least three ways: they suggest that theoretical conclusions from earlier studies suggesting insensitivity to omitted information may be premature; they suggest that conversational presentations of information may be important in communications between companies and consumers, regarding improving consumer welfare; and they suggest a concrete setting for future theoretical and empirical interaction between economics and the language sciences.

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# Inequality and Market (In)efficiency

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## EXTENDED ABSTRACT

Despite generally high rates of inequality, individuals have a tendency to underestimate the level of wealth inequality in their nation (Norton and Ariely, 2011). These inaccurate perceptions consequently inform individuals' opinions for redistribution policies. Recent research demonstrates that perceived inequality is a better predictor of policy preferences than actual inequality (Engelhardt and Wagener, 2014). There is therefore growing support for greater transparency of inequality. In two studies we demonstrate the effects of inequality transparency on the behavior of individuals with relatively high wealth, revealing potential unintended consequences of increased inequality transparency.

Study 1 demonstrates the market-level effects of inequality transparency. Participants (N= 1001) first completed a series of counting tasks to earn points. Participants thought their points were awarded based on performance, but in actuality, participants were randomly assigned to one of five conditions [22, 49, 72, 105, or 304 points], which represent the true income distribution of the United States. They were then told they could use the points to bid against four other participants for the chance to win YouTube videos. If they did not win any videos they would have to complete five more minutes of counting tasks. Any points they did not bid were converted into a monetary bonus. Half of the participants received information depicting how their score compared to the other participants in their auction group, while the other half were given no information other than their own earnings (Transparency vs No Transparency).

Overall, we find that wealthier participants win more videos [ $F(4, 909) = 8.80, p = 0.00$ ], even though they spend a smaller proportion of their budget [ $F(4, 815) = 3.93, p = 0.004$ ]. We also find that as earnings increase, liking becomes a weaker predictor of winning a video. The correlation between bidding and liking is significantly lower for participants in the highest earning quintile than for those in the lowest earning quintile (22 points) [ $r = .292$  vs.  $r = .432; z = 2.96, p = 0.02$ ]. In a binary logistic regression, even when controlling for liking of a video, participants earning more points were more likely to win any given video [ $B = 0.206, SE = .029, p < 0.001$ ]. As a result, participants in the highest earning quintile won their least favorite video at the same rate that participants in the lowest earning quintile won their favorite video (15.1 % vs. 15.3 %;  $X^2(2, N = 361) = 0.00, p = 0.98$ ).

There was no main effect of transparency on number of wins, but there was a significant interaction: participants in the highest quintile won more videos when inequality was transparent while all other participants won marginally fewer videos [ $F(4, 901) = 2.527, p = 0.039$ ]. This wealth-transparency advantage was the result of more efficient bidding, which we measured as the distance between the winning bid and the next highest bid (wasted points). While there was no effect on total number of points spent, there was a marginally significant interaction on wasted points: high income earners wasted fewer points in the transparent condition [ $F(4, 909) = 2.12, p = 0.078$ ]. There was also an interaction effect of transparency on the propensity to enter the market at all. In the no-transparency condition, only 55% of highest income earners bid non-zero amounts compared to 74% in the transparent condition [ $X^2(1, 89) = 6.788, p = 0.01$ ]. In all other quintiles the rate of participants bidding non-zero amounts was marginally smaller in the transparent conditions. This suggests that the wealthy benefitted from inequality transparency, not because they

increased the total number of points they spent, but because they were able to bid more strategically on more videos.

In study 2 we were interested in the effect of inequality transparency on subsequent consumption rates. We replicated the procedure from Study 1, with one critical change- participants (N=563) were told they could watch the videos for as long as they would like. Given past research on scarcity priming, we predicted that participants in the lowest quintile who were made aware of their disadvantage would watch their winnings for longer. Conversely, we predicted that participants in the highest quintile would watch comparatively less of their winnings when made aware of their relative wealth.

Our findings support our hypothesis- even controlling for total number of videos won, total number of video-minutes won, rank of video, and percentage of earnings spent, participants in the highest quintile watched a smaller proportion of their winnings when they were aware of their advantage ( $M_{transparent} = 0.11$  vs.  $M_{notransp} = 0.13$ ) while participants in the lowest quintile watched a larger proportion in the transparent condition [ $(M_{transparent} = 0.19$  vs.  $M_{notransp} = 0.15; F(1, 218) = 10.88, p = 0.01$ ]. This interaction is also significant when including all five point brackets in the analysis.

While previous literature has begun to develop an understanding of how income inequality awareness can alter opinions, emotions, and behavior for individuals with relatively less wealth, there has been less research devoted to how transparency and awareness shape the behavior of relatively wealthier individuals (Sharma & Alter, 2012; Cannon, Goldsmith & Roux, 2016). Understanding behavior across the income distribution, however, is critical to our understanding of the full impact of different policies.

In two studies we demonstrate potential unintended consequences of inequality transparency, primarily due to increased advantages for wealthier individuals. First we demonstrate that inequality transparency provides a disproportionate advantage to participants in the highest earning quintile, as it enables them to bid more efficiently and subsequently win more videos. Secondly, we provide preliminary evidence that by simply being aware of their wealth advantage, wealthy individuals consume less of their winnings.

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# If No One Saw It on Instagram, Was It Any Good?

## Examining Received Attention as a Social Benefit of Experiential Consumption

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### EXTENDED ABSTRACT

Consumers frequently share experiences online for self-presentation purposes (Schau and Gilly 2003). Social benefits of such sharing are realized when others provide explicit feedback (likes and comments), which can affirm the sender's behavior (Toma and Hancock 2013). Therefore, consumers' experiential evaluations should only be influenced by online sharing if others provide explicit feedback affirming their choices (positive social influence or proof; Cialdini 1993). The present research leverages the attention economy to challenge this assumption by demonstrating that pure attention received from such experiential sharing (i.e., number of views) influences experiential perceptions, even when attention is unpolluted by valence or affirmation. By viewing attention as a social resource, we demonstrate that consumers are more satisfied with experiences that attract more attention.

The attention economy (Davenport and Beck 2001) proposes that human attention is a scarce and valuable resource sought by consumers (Derber 2000). When one receives attention, it signals the strength of one's social standing because others have deemed one's signal worthy despite competing available signals (Falkinger 2007; Kessous 2015). As such, receiving high levels of attention should increase one's perceived social self-esteem (Heatherton and Polivy 1991). When attention is attracted due to a consumption experience, attention-driven SSE should be viewed as a social benefit of consumption, thus increasing experiential satisfaction relative to those receiving low attention, and to one's initial (pre-sharing) satisfaction levels. Further, if attention is a social benefit of consumption, it should affect satisfaction similarly to other product benefits. Therefore, we propose that attention will have a stronger influence on satisfaction among consumers who have a stronger desire for peer attention (i.e., high public self-consciousness; Scheier and Carver 1980). Further, as a consumption benefit, the effect of attention on satisfaction should depend on consumer expectations (Oliver 1980). We therefore expect that negative disconfirmation (receiving less attention than expected) should have a stronger effect on satisfaction than positive disconfirmation (Anderson and Sullivan 1993). Lastly, an alternative explanation for our hypothesized effects is that, when explicit feedback is unavailable, consumers use received attention as a proxy for behavioral affirmation. To rule out this explanation, we test our proposed attention effects in the context of a negative experience. Because sharing negative experiences can decrease self-esteem (Moore 2014), attention attracted to a negative experience should only increase satisfaction if it is viewed as a social benefit of consumption.

To test our theory, we leveraged scenarios featuring Snapchat and Instagram's "Story" functions. Both platforms are popular for experiential sharing and limit feedback to the number of views received, making them ideal for testing our effects (unvalenced attention). S1 leveraged an undergraduate sample (n=88) and a haircut experience to demonstrate that, while satisfaction was equivalent prior to sharing the experience, satisfaction increased (difference of pre/post-attention satisfaction) after participants received higher levels of attention ( $M_{HighAttn}=40$ ), and decreased for those receiving low attention ( $M_{LowAttn}=49$ ;  $p<.001$ ). This suggests that experiences attracting more attention are viewed as more satisfying.

S2 featured an undergraduate sample (n=81) and a concert scenario to confirm the moderating role of consumers' attention preferences (PSC;  $F_{Interaction}(1,73)=9.87$ ,  $p<.01$ ) and the mediation of this interaction on satisfaction by social self-esteem (95%CI=[.02,.47]). After attending a concert and posting experiential content, high-PSC participants (+1sd) who received high attention reported higher SSE ( $M_{HighAttn}=3.92$ ,  $M_{LowAttn}=3.37$ ;  $p=.03$ ) and satisfaction ( $M_{HighAttn}=6.47$ ,  $M_{LowAttn}=5.61$ ;  $p<.01$ ). For low-PSC participants (-1sd), receiving high attention did not influence SSE ( $M_{HighAttn}=4.28$ ,  $M_{LowAttn}=4.71$ ; NS) and led to marginally lower satisfaction ( $M_{HighAttn}=6.18$ ,  $M_{LowAttn}=6.85$ ;  $p=.06$ ). This suggests that received attention is viewed as a social benefit of consumption and is subject to consumer preferences.

In S3, we manipulated Mturk participants' (n=429) attention expectations (high/low) and used the scenario and received attention manipulations from S2. We also added a control condition in which received attention was not mentioned. This analysis confirmed the moderating role of attention expectations, and again that of PSC (3-way interaction;  $p=.05$ ). The interaction was driven by high-PSC participants who expected high attention but received low attention ( $M_{LowAttn}=5.11$ ). This dissatisfaction was shown relative to high received attention ( $M_{HighAttn}=6.33$ ;  $p<.001$ ) and the control condition ( $M_{Control}=6.34$ ;  $p<.001$ ). Received attention did not influence satisfaction for high-PSC participants expecting low attention, or for low-PSC consumers regardless of expectations (all simple effect contrast  $F_s<1.00$ ). Overall, S3 findings suggest that, like other product benefits, the attention-related social benefits of shared experiences are subject to consumer expectations and preferences.

S4 featured Mturk workers (n=155) who read a scenario about a negative sporting event experience (it rained, their team lost, etc.) where either they or a friend posted photos (participant was not featured in the photos). SSE and satisfaction were measured before and after the manipulation (difference scores calculated). The expected interaction was observed on both satisfaction ( $p<.001$ ) and SSE ( $p<.01$ ). When the participant posted the photo, high-attention participants reported more positive changes in SSE ( $M_{HighAttn}=.14$ ,  $M_{LowAttn}=-.34$ ;  $p<.001$ ) and satisfaction ( $M_{HighAttn}=.67$ ,  $M_{LowAttn}=-.01$ ;  $p<.001$ ). However, when the friend posted the photo, receiving high attention did not influence SSE ( $M_{HighAttn}=-.04$ ,  $M_{LowAttn}=.05$ ; NS) and negatively affected satisfaction ( $M_{HighAttn}=-.07$ ,  $M_{LowAttn}=.33$ ;  $p=.03$ ). Further, SSE mediated the effect of attention on satisfaction (95%CI=[.01,.49]). These findings suggest that attention as a social resource, not inferred behavior affirmation, leads to increased satisfaction.

Space limitations prohibit the detailed discussion of a fifth study replicating the effect from S4. However, S5 demonstrates that high attention attracted by photos featuring the focal participant only influenced satisfaction when the photo was shared by the participant (i.e., no differences in the FriendPost condition, despite the participant being featured in the photo). Thus, S5 suggests that attention must be directed at the focal consumer (i.e., their profile) and come from their social network in order to influence satisfaction.

Overall, our findings suggest that attention received from one's experiences is a social benefit of consumption that increases experiential satisfaction. However, these effects are dependent on consumers' attention expectations and their attention preferences. Our findings contribute to literatures on the attention economy and expe-

riental consumption by suggesting that experiential satisfaction is in part subject to received attention. Further, they suggest that consumers' attention-seeking motives may influence experiential choice.

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# Alternative “Facts”: The Effects of Narrative Processing on the Acceptance of Factual Information

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## EXTENDED ABSTRACT

Recent research in persuasion has distinguished between “narrative” processing, evoked by stories, and “analytical” processing, evoked by facts (Escalas 2007). In practice, consumers often encounter information in a blended format; for example, a pharmaceutical advertisement may feature a testimonial describing an experience with a drug, followed by a list of facts about the drug’s efficacy and side effects. The current research addresses the question: Does the processing of a narrative influence how facts presented separate from a narrative are recalled and endorsed?

Past work has examined narrative processing (i.e., transportation; Escalas 2007; van Laer et al. 2014) as a passive influence of persuasion-related outcomes. In the current work, we demonstrate that narrative processing also takes an active form and can be used to integrate messages of distinct formats (rather than narrative formats, alone). The current work contributes to narrative persuasion research by introducing situation model construction to explain message comprehension (understanding), its subsequent effect on beliefs, and expand current understanding of how narratives lead to persuasion. We demonstrate that information is more likely to be viewed as true if it helps the reader understand a previously-encountered narrative and show that this effect persists even when information is labeled as false. The current work illustrates a cognitive bias: if external facts help to understand a prior (narrative) message, then these facts are more likely to be perceived as true.

## Conceptual Development

The dominant process to understand the effect of narratives on persuasion-related outcomes in the consumer literature has been narrative transportation (van Laer et al. 2014). Narrative transportation theory, however, does not address how the information encountered after a story can be influenced by narrative processing of the story.

Research in discourse psychology suggests readers create a situation model during story processing: a network of relations that reflect the reader’s representation of the causal information presented within a narrative (Zwaan and Radvansky 1998). Readers who encounter information in a separate context (outside the narrative “world”), but causally-related to the situation model, may integrate it into their situation model to enhance story comprehension.

When presented with external facts following a narrative, we expect the reader to integrate this information into her mental representation of the narrative, given that the facts are relevant to some aspects of the cause-effect story sequence. We propose that facts integrated into a situation model create a sense of coherence which enhances the fact’s perceived truth (Schwartz and Newman 2017), even though narrative understanding does not provide evidentiary value to the information’s truth. In other words, the external fact may augment narrative comprehension and may then have a stronger sense of “truthiness.”

We expect an external fact to be endorsed when it helps to explain a less-well understood narrative (i.e. ambiguous causality in a story) compared to a narrative with a coherent (less ambiguous) cause-effect sequence:

*Hypothesis 1 External facts that are encountered following a narrative are more likely to be endorsed (a) and*

*recalled (b) when they are causally-connected to the storyline.*

We expect facts that are causally related to and presented after the narrative will facilitate comprehension of the context of the cause-effect sequence of the situation model, which influences belief endorsement and recall.

*Hypothesis 2 Narrative comprehension mediates the relationship between external facts that cohere with and are encountered following a narrative on belief endorsement and recall.*

Past work suggests that information which plays an explanatory role in understanding a situation is particularly difficult to falsify (Johnson and Seifert 1994). Ecker and colleagues (2010) suggest readers prefer an incorrect but complete situation model over an incomplete but correct situation model. Based on this work, we expect facts which have been integrated into a situation model will continue to be endorsed even when the facts are learned to be false.

*Hypothesis 3 Facts which have been integrated into a situation model, but have been falsified, will be endorsed more than the same information not integrated into the situation model.*

We test these hypotheses with four studies. Study 1 demonstrates that facts which provide a causal explanation presented after a narrative (but not a nonnarrative message) are more likely to be viewed as true (and those that are inconsistent are more likely to be rejected) than when the facts are presented before the narrative. Controlling for narrative transportation did not remove the effects of interest, suggesting that a separate process explains the effects. Study 2 shows that when a fact presented after the story was directly related to the narrative plotline (and thus, the reader’s situation model), participants were more likely to view it as true than when the fact was peripheral related to the storyline. This study is consistent with the proposal that causal-relatedness of a fact enhances integration into the reader’s situation model, which enhances belief or the sense of “truthiness” of information. Study 3 shows that information integrated into a situation model continues to be viewed by readers as true, despite later learning it is false: when an external fact helped create a coherent situation model (ambiguous story condition) it was more likely to be viewed as true versus when the situation model was already coherent (unambiguous condition). Finally, study 4 shows that exposure to facts that provide a causal explanation for the story are more likely to be endorsed because they are integrated into the reader’s situation model (comprehension). Moreover, we show the observed effects are attenuated for individuals *higher* in Need for Cognition: those who are higher in NFC are less susceptible to the “truthiness” effect of accepting information as true because the information provides a sense of coherence.

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# “Once? No. Twenty times? Sure!” Uncertainty and precommitment in Social Dilemmas

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## EXTENDED ABSTRACT

In many real-world social dilemmas, interdependent actors must decide whether to invest in preventive measures against uncertain losses. For example, when consumers decide whether to get the flu shot each year, the likelihood of getting sick depends not only on the actions of the individual consumer, but also on the actions of those around her. If everyone invests in protective measures, there is herd immunity (and some people can free-ride without getting the flu shot).

Uncertainty about losses lowers cooperation between individuals quite substantially. For example, while cooperation rates in a loss-framed, repeated prisoner's dilemma (PD) may hover around 60-75%, uncertainty lowers the cooperation rate to around 25-40% (Gong, Baron, & Kunreuther, 2009; Kunreuther, Silvasi, Bradlow, & Small, 2009). Thus, cooperation rates under uncertainty are up to 3 times lower. Because individuals are less likely to cooperate under uncertainty, and because so many real-world situations of interest resemble interdependent-security (IDS) situations (with uncertain, negative prospects), behavioral research should explore ways to increase cooperation under uncertainty. One possibility comes from Slovic, Fischhoff, and Lichtenstein (1978) work on single vs aggregate probabilities: consumers were not concerned with the likelihood of being killed in a single ride when presented with the probability of around 0.0000025 of being killed and about 0.00001 of becoming injured, whereas they were more likely to use their seatbelt when the aggregated probabilities for a lifetime were presented (about 0.01 and 0.33 for death and injury, respectively).

In the present research, we explore whether consumers in social dilemmas may make different choices when making decisions one at a time versus when precommitting twenty decisions in advance. Precommitment may serve as a form of choice-bracketing (Read, Loewenstein, & Rabin, 1999), where repeated decisions can be mentally represented as either a series of one-off, individual choices (ie, narrow bracketing) or as a single, combined set of choices (broad bracketing).

We hypothesize that individuals in IDS situations focus mostly on probability and less on the social dilemma nature of the situation and the actions of their counterpart. We further hypothesize that when participants are forced to precommit their actions for multiple rounds, it leads them to reflect on a longer time horizon, thereby increasing their subjective perception of the likelihood of at least one loss during this period. This may lead them to increase their investment rates. In other words, precommitment may buffer against the negative effects of uncertainty on cooperation. When precommitting for 20 rounds, the perceived likelihood of at least one loss during this time period increases and the same player may now invest in protection.

Cooperation rates in a social dilemma are much lower when outcomes are probabilistic. However, have participants precommit their choices in the probabilistic dilemma significantly reduces this gap, as seen in Studies 1 and 2. Several lines of evidence suggest that players in stochastic prisoner's dilemmas are not very responsive to their counterpart: players are less likely to mention their counterpart in stochastic games, their choices are less well correlated with their predictions of their counterparts' choices, and their choices are less

well correlated with their counterparts' previous choices. It seems, then, that players in a stochastic social dilemma are subjectively playing a *probability* game more than a social dilemma. Building on previous literature in probability and the framing of multiple prospects, precommitment appears to be a successful, though modest, intervention for raising investment rates in stochastic social dilemmas. Presumably, those participants who play one round at a time see a 4% chance of loss as very low and decide not to invest in protection. In contrast, those participants who must precommit their choices over a much longer time horizon may think, “A loss will probably happen to me, so I should invest in protection.”

Likewise, in Study 3, when there was no counterpart to interact with or consider, forcing participants to precommit their choices dramatically increased investment rates. It is worth restating that both the repeated and precommitted participants knew they would play 4 blocks of 20 rounds each -- the only difference was whether participants were forced to precommit their choices or not. Rationally, there should be no difference between the two conditions. Further supporting the hypothesis that precommitment influences subjective probability, we observed that those in the precommitment condition were much less likely to mention a low probability of loss. In other words, it is likely that those who precommitted *felt* that the probability of loss was considerably higher than 4%.

As seen in Study 4, precommitment initially has no effect on investment/cooperation in a deterministic prisoner's dilemma, but with repeated plays it rapidly decreases investment. One possibility is learning effects. Initially, participants do not fully understand the game, but soon realize that they can take advantage of the other player (or be taken advantage of) without repercussions. These results may help explain why precommitment is more effective in solo games (Study 3) than in stochastic social dilemmas (Studies 1 and 2): on the one hand, precommitment under uncertainty raises subjective probabilities, thereby increasing investment. However, in a stochastic social dilemma, this is tempered by the knowledge that one's counterpart may defect without repercussions. On balance, participants are more sensitive to probabilities than to their counterparts. Therefore, precommitment in the stochastic dilemmas has a positive, though modest, effect.

Precommitment is an intervention designed to increase the relevant time horizon and raise investment rates under uncertainty. For example, a home-owner might make different choices if buying fire-insurance monthly or annually. The chance of a fire happening next month is likely to be viewed as small so the homeowner may not invest in protection voluntarily. However, when considering an annual policy, the chance of fire is subjectively larger, and the same homeowner might want to purchase insurance, or purchase a more expensive policy. If fire insurance were tied to a mortgage the homeowner might be even more interested in buying insurance since the time horizon will normally be 15 to 20 years.

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# Explaining the Attraction Effect: An Ambiguity-Attention-Applicability Framework

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## EXTENDED ABSTRACT

The attraction effect describes a phenomenon where the addition of a third option (i.e., a decoy) to a set containing two alternatives (target and competitor) enhances the choice of the alternative to which it is most similar. For example, suppose a target and competitor offer a tradeoff between two attributes, such that the target has a better price but the competitor has better quality. Adding a decoy that is similar but inferior to the target increases the share of the target (Huber, Payne, and Puto 1982). The attraction effect has been of both practical and theoretical interest to marketing researchers for several decades.

While the attraction effect has been robustly demonstrated with numerical stimuli, recent work has shown that it is difficult to find with perceptual stimuli (Frederick, Lee, and Baskin 2014; Yang and Lynn 2014). Failures to observe this effect with such stimuli point to gaps in understanding this effect (Simonson 2014).

The contributions of the present research are twofold. One, we develop a cohesive framework specifying the necessary conditions for the attraction effect to occur, regardless of whether the stimuli are numerical or perceptual. The attraction effect requires *ambiguity* in choice, *attention* to the target-decoy comparison, and *applicability* of the decoy as a standard for evaluating the target. We refer to these three factors as the A3 framework. Two, by drawing on insights from this framework, we demonstrate the attraction effect with perceptual stimuli similar to those that failed to produce this effect in prior research. In doing so, we systematically test the ambiguity, attention, and applicability factors as distinct and necessary conditions for the attraction effect.

Ambiguity exists when information is conflicting or inadequate (e.g., Cabantous 2006; Ellsberg 1961; Norton 1975; Smithson 1999). In the context of the attraction effect, ambiguity is produced by the superiority of the target on one attribute and the competitor on the other. To make a choice, consumers must resolve this ambiguity. The A3 framework suggests that the attraction effect occurs when individuals' *attention* is drawn to a specific means of disambiguating choice: a comparison between the target with the decoy, which is an *applicable* standard by virtue of its similarity to the target (Mussweiler 2003).

The paper reviews evidence that implicates these factors in producing the attraction effect. The A3 framework offers a perspective on why the attraction effect has been difficult to find with perceptual stimuli: individuals may not detect the applicability of the decoy as a standard for the target because the vividness of perceptual stimuli focuses their attention elsewhere. This is not an issue for numerical stimuli, which are relatively simple and therefore comparable. This insight suggests that to produce the attraction effect with perceptual stimuli, attention must be directed to the target and applicable decoy. Five experiments test the A3 framework, primarily using perceptual stimuli.

*Experiment 1* assessed whether drawing attention to the target-decoy comparison would allow the attraction effect to emerge with perceptual stimuli that are similar to those that failed to produce the effect in prior research (Frederick et al. 2014). The choice alternatives consisted of gambles for which probability of winning was depicted perceptually in a pie chart and the amount won presented numerically. Participants (N=118) chose from one of two choice sets. The choice set in the control condition consisted of the competitor and

target gambles. The choice set in "target-decoy attention" condition additionally contained the decoy, and the target and decoy pie charts were shaded in the same color to draw attention to this comparison. The attraction effect emerged: choice of the target in the target-decoy attention ( $M=45.76\%$ ) was significantly higher than in the control condition ( $M=20.34\%$ ;  $p=.004$ ).

*Experiment 2* provided evidence that the attention and applicability factors are distinct. Using a similar manipulation to that in experiment 1, focus of attention was varied either to the applicable target-decoy comparison or to the nonapplicable competitor-decoy comparison. In the latter case, no attraction effect was expected to occur. Participants (N=211) were assigned to the control, target-decoy attention or competitor-decoy attention condition. The target-decoy and competitor-decoy attention conditions contained the same choice set; the only difference was the use of color to vary the focus of attention (see figure). It was found that the attraction effect occurred in the target-decoy attention condition ( $M=68.57\%$  vs. control  $M=50\%$ ;  $p<.03$ ), but not in the competitor-decoy attention condition ( $M=49.30\%$  vs. control;  $\chi^2=0.01$ ,  $p=.93$ ).

*Experiment 3* examined the ambiguity factor and demonstrated that the presence of all three A's is required for the attraction effect to occur. The ambiguity factor was assessed through individual differences in intolerance for ambiguity. The logic was that the attraction effect should only emerge among those intolerant of ambiguity, who are averse to disambiguating choice between the competitor and target directly. Moreover, for the attraction effect to occur, the *attention* of these individuals must be directed to a particular means to resolve ambiguity, i.e., a comparison of the target and *applicable* decoy. This experiment (N=204) retained the three conditions from experiment 2 and the intolerance for ambiguity scale was administered (Budner 1962). First, the results of experiment 2 were replicated. Second, an interaction between the target-decoy attention condition and intolerance for ambiguity emerged; spotlight analysis revealed that the attraction effect occurred for intolerant individuals ( $p=.017$ ) but not for tolerant individuals ( $p=.859$ ).

Two additional experiments tested the applicability factor further. While the decoy might be presumed to be applicable due to its similarity to the target, it might be perceived as *inapplicable* if consumers viewed it as an inappropriate standard because the decoy was inferior to the target. In this case, the attraction effect would not be found even if attention was paid to the target-decoy comparison. Data from these experiments support these predictions using perceptual and numerical stimuli.

In sum, this work makes both theoretical and phenomenological contributions to the literature. It develops and tests a conceptual framework that specifies the necessary conditions for the attraction effect, and demonstrates the attraction effect can occur with perceptual stimuli when these conditions are in place.

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# How Do Consumers React to Anthropomorphized Brand Alliance? Applying Interpersonal Expectations to Business-to-business Relationships

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## EXTENDED ABSTRACT

Brand alliance refers to the cooperative marketing activities between two or more brands aimed at achieving a common objective, including co-branding, co-marketing, joint branding, and jointing promotions (Rao and Ruckert 1994; Simonin and Ruth 1998). Recent years have witnessed an explosive growth of brand alliances in the industrial world. However, not all brand alliances last forever. In reality, more than 50% of brand alliances are terminated within four years (Greve et al. 2010). Despite the high possibility of its early termination, to our knowledge no research in the consumer behavior literature has looked at the termination of a brand alliance, particularly its impact on consumer attitude and behavior. Previous research on branding and business-to-business relationships looked at the formation and termination of brand alliance mostly through a strategic perspective (e.g., Cui 2013; Greve et al. 2010; Lunnan and Haugland 2008), with the underlying assumption that the relationship between the allied brands should be contingent on the fair economic exchange between them (e.g., Das and Teng 2000; Gulati 1998). The present research takes the consumers' perspective to look at this issue. Specifically, bridging research on anthropomorphism, branding, and interpersonal relationships, we investigate how brand anthropomorphism influences consumer reaction to the termination of a brand alliance.

Anthropomorphism refers to individuals' tendency to imbue humanlike features or characteristics to nonhuman entities—such as gadgets, animals, supernatural beings, or abstract concepts (Aggarwal and McGill 2007; Epley, Waytz, and Cacioppo 2007). Existing research has robustly shown that anthropomorphism elicits human-related knowledge structure and prompts consumers to apply these knowledge (including lay beliefs) to judge and comprehend nonhuman entities (e.g., Aggarwal and McGill 2012; Hur, Koo, and Hofmann 2015; Higgins 1997). Applying these findings to business-to-business relationship, we predicted that, when brands in alliance are seen as human beings, consumers are likely to use their knowledge and beliefs about person-to-person relationship to understand the relationship between the anthropomorphized brands.

Past research on interpersonal relationship has suggested two types of interpersonal relationships: exchange and communal (Aggarwal 2004; Clark and Mills 1979, 1993). People in exchange relationships care the benefits they receive for what they give, while people in communal relationships help or give benefits to others out of a genuine concern for others' well-being (Clark and Mills 1979). Between these two types of relationships, communal relationships probably represent a more *unique* human touch. The tendency to form communal relationships is biologically based since it is evolutionally important for human survival (Clark and Mills 1993); that is probably why most people cherish communal relationships (Mills and Clark 1982).

We propose that, when brands in alliance are anthropomorphized, consumers are more likely to treat the anthropomorphized brands as social entities (as opposed to pure economic entities), and expect these allied brands to behave according to norms that govern interpersonal social relationships. Given that most social relationships involve certain levels of communal relationship strength (e.g., Clark and Jordan 2002; Clark and Mills 1993), we further predict that

consumers will expect stronger communal relationships between anthropomorphized (vs. non-anthropomorphized) brands, which in turn influence consumers' responses to the brand alliance termination.

Specifically, the greater the communal relationship strength, the more the relationship partners should exhibit tolerance, trust, and genuine care for each other (Krackhardt 1992; Uzzi 1996). Accordingly, when the anthropomorphized brands split up, consumers should feel more negative because the split/separation violates people's expectation for communal relationships (Darke, Ashworth and Main 2010). Taken together, we hypothesize that consumers will react more negatively to the termination of a brand alliance when the allied brands are anthropomorphized (vs. when they are not), and this occurs because consumers expect a more communal relationship between the allied brands. Formally, we put forward the following hypotheses:

*Hypothesis 1* Consumers will react more negatively toward the termination of brand alliance when the allied brands are anthropomorphized (vs. not).

*Hypothesis 2* The effect of brand anthropomorphism on consumer reaction to brand alliance termination will be mediated by the perceived violation of communal relationship norms/expectations.

We further predict that the effect of anthropomorphism on consumer reaction to brand alliance termination is likely to be attenuated under certain conditions. Given that communal relationship strength increases according to the closeness of the relationship (Clark and Jordan 2002; Clark and Mills 1993) and the length of the relationship can positively influence the closeness between relationship partners (Clark and Mills 1993; Kelley 1983; Mills et al. 2004; Storbacka, Strandvik, and Grönroos 1994), we hypothesize that consumers will hold a weaker expectation about the communal relationship when anthropomorphized brands have a short alliance history. Consequently, the negative reactions toward the termination of such a short brand alliance will be reduced. Formally, we hypothesize as follows:

*Hypothesis 3* The effect of anthropomorphism on consumer reaction toward brand alliance termination will be less evident when the brands allied for a short (vs. long) period.

In addition, past literature has shown that active cognitive deliberation increases the influence of social norms (Fazio 1990). Similarly, Melnyk et al. (2011) found that cognitive load limited the formulation of both descriptive (i.e., what most people do) and injunctive (i.e., what ought to be done) norms. Given that the activation and application of relationship norms in anthropomorphized brand alliances require cognitive resources (e.g., Gao, Li, and Wyer 2016; Shiv and Huber 2000), we predict that the proposed effect will be weakened when consumers are under high cognitive load. Formally, we hypothesize as follows:

*Hypothesis 4* The effect of anthropomorphism on consumer reaction toward brand alliance termination will be less evident when consumers are under high (vs. low) cognitive load.

### Study 1

Study 1 provides initial support for our basic hypothesis. US participants (N=90) first read and comprehended a news article about two companies, K.P. and V.N. (real names hidden). The article reported the formation of the K.P.-V.N. alliance. After reading the news report, participants indicated how the reported news made them feel along a 9-point scale ranging from 1 (*very bad*) to 9 (*very good*). To enhance the believability of the design, we gave participants a filler task (listing the names of ten states in the USA) before reading a second news report. Next, all participants read another news article reporting the termination of the K.P.-V.N. alliance. Participants indicated how the reported brand split made them feel along a 9-point scale ranging from 1 (*very bad*) to 9 (*very good*). Finally, they responded to a 15-item individual differences in anthropomorphism questionnaire (IDAQ; Waytz et al. 2010), which captures people's tendency to humanize nonhuman agents. Regression analysis revealed a significant alliance  $\times$  IDAQ interaction. Consistent with our expectation, participants who had a generally higher tendency to anthropomorphize showed more negative reactions to the termination of the brand alliance,  $p = .024$ . On the other hand, however, the effect of anthropomorphism on participants' feeling toward the formation of a brand alliance was positive,  $p = .011$ .

### Study 2

Study 2 replicated the finding of study 1 using manipulated anthropomorphism and provided evidence for our proposed mechanism. Undergraduate students (N=174) were randomly assigned to either the anthropomorphism or the non-anthropomorphism condition. They first completed a reading task in which they read a news article about the termination of the alliance between Sanofi and Merck. We manipulated brand anthropomorphism through the instructions for the reading task (adapted from Aggarwal and McGill 2012). Specifically, participants in the anthropomorphism condition were instructed to think about brands in the news report as two persons while those in the non-anthropomorphism condition were instructed to think about the two brands as two economic entities. After reading the news report, participants reported their emotional reaction to the termination of the brand alliance by indicating the extent to which the reported termination made them feel bad, sad, and disappointed ( $\alpha = .87$ ). Next, Participants' expected strength of the communal relationship between allied brands was measured with four items ("I think the two brands should care about each other/... treat each other well/...have consideration for each other/...understand each other";  $\alpha = .89$ ; Aggarwal 2004; Frei and Shaver 2002; Kaslow and Robison 1999). As expected, participants in the anthropomorphism condition reported more negative emotional reactions to the termination of the brand alliance than those in the non-anthropomorphism condition,  $p = .01$ . The former group also indicated a higher expectancy of communal relationship between the two allied brands than the latter one,  $p < .001$ . Mediation analyses showed that communal relationship expectation mediated the effect of brand anthropomorphism on consumers' negative reaction.

### Study 3

Study 3 tested the moderating role of alliance history by employing a 2 (brand anthropomorphism: yes vs. no)  $\times$  2 (alliance history: short vs. long) between-subjects design. After the same

instruction-based anthropomorphism manipulation as in study 2, US participants (N=196) read an alliance termination news article about two transportation companies. In the long (vs. short) history condition, the length of the alliance was described as 20 years (vs. 1 year). After reading the news, participants reported their reactions to the brand alliance termination on the same three-item scale ( $\alpha = .95$ ) used in study 2. We predicted that anthropomorphism should lead consumers to have more negative reactions to the alliance termination when the alliance history is long. As expected, a 2 (brand anthropomorphism)  $\times$  2 (alliance length) ANOVA on consumers' reaction toward the brand alliance termination revealed a main effect of anthropomorphism ( $p < .001$ ) along with a significant 2-way interaction,  $p = .038$ . Specifically, participants in the long history condition reported more negative reactions toward the brand alliance termination when the brands were anthropomorphized (vs. not),  $p < .001$ , whereas participants in the short history condition showed a much weaker effect, although still significant,  $p = .025$ . Thus, we replicated the proposed main effect and showed that such effect increased when the length of the brand alliance increased.

### Study 4

Study 4 tested the moderating role of cognitive load. Undergraduate students (N=231) were randomly assigned to conditions of a 2 (anthropomorphism: yes vs. no)  $\times$  2 (cognitive load: high vs. low) between-subjects design. They first took part in a purported memory task in which they were asked to memorize different stimuli (e.g., Jiang et al. 2016; Jiang and Hong 2014). In the high (vs. low) load condition, participants were asked to remember an 11-digit (vs. 2-digit) number throughout the research session. After the memory task, participants completed the same brand anthropomorphism manipulation and news article comprehension task that we used in study 2. The same anthropomorphism manipulation check and consumer reaction measures ( $\alpha = .91$ ) were collected. Then participants reported the number they were asked to memorize. As predicted, a 2 (brand anthropomorphism)  $\times$  2 (cognitive load) ANOVA on consumers' negative reactions toward the termination of the brand alliance revealed only a significant two-way interaction,  $p = .030$ . Specifically, participants in the low load condition replicated our earlier findings by showing more negative reactions toward the Sanofi-Merck termination when the brands were anthropomorphized (vs. not),  $p = .018$ . However, such effect was eliminated for participants in the high cognitive load condition,  $p = .49$ .

### Study 5

This study demonstrates the downstream consequences of the anthropomorphism-induced negative reactions. We predicted that the enhanced negative affective reaction to the brand alliance termination induced by anthropomorphism is consequential in that it would lead consumers to engage in pro-social behaviors. Past research shows that engaging in pro-social behavior is effective in regulating negative emotions (e.g., Basil, Ridgway, and Basil 2008; Manucia, Baumann, and Cialdini 1984). Therefore, in study 5, we examined the impact of brand anthropomorphism on consumers' willingness to engage in brand helping behavior following their exposure to a brand alliance termination. US participants (N=257) were randomly assigned to either the anthropomorphism or the non-anthropomorphism condition. After the same instruction-based anthropomorphism manipulation as in previous studies, participants read a news article about the termination of a brand alliance between an animal charity brand RedRover and an animal food brand MyFoodie. Participants then reported their emotional reactions to the brand alliance termination on the same three-item scale ( $\alpha = .94$ ) as in previous

studies. Next, all participants proceeded to a reverse typing task with the cover story of helping the animal charity brand RedRover. They were told that for each correct reversely typed string, a donation of 10 grams of pet food would be made to RedRover, and they could stop typing any time they wanted. Replicating the findings from previous studies, participants in the anthropomorphism condition showed more negative emotional reactions toward the brand split than those in the non-anthropomorphism condition,  $p = .026$ . Moreover, the former group typed more words (i.e., put in greater efforts to help the brand) than did the latter one,  $p = .042$ . Mediation analysis showed that the negative emotional reactions mediated the effect of brand anthropomorphism on helping behavior.

### General discussion

Brand alliance has grown explosively in the modern business world. However, we know little about how consumers respond to the termination of brand alliances. Bridging the literature on brand alliance, anthropomorphism, and interpersonal relationships, this research finds that anthropomorphism leads to more negative consumer responses to brand split (study 1). This effect occurs because anthropomorphism leads people to perceive the target brands as social entities and brand alliance as a communal-based social relationship. As a result, behaviors that violate expected communal norm (e.g., termination of the alliance) will elicit negative emotions (study 2). Moreover, such effect is attenuated when the allied brands have stayed together for only a short (vs. long) period of time so the communal relationship norm is not fully justified (study 3), and when consumers have limited (vs. abundant) cognitive resources to activate communal relationship norms and apply them to brand judgment (study 4). Finally, the negative affective responses resulting from the brand split increase consumers' engagement to help the split brands through donations (study 5).

This research makes several important contributions. First, this research extends the current literature on brand alliance by documenting the novel effect of anthropomorphism on consumer reaction to brand alliance. The current literature on brand alliance, especially in the marketing area, has primarily focused on consumer responses to the formation of brand alliance (e.g., Janiszewski and van Osselaer 2000; Monga and Lau-Gesk 2007). We bring to light the impact of anthropomorphism on consumer responses to brand alliance termination. Second, this research adds to consumer research on anthropomorphism. Whereas extant research has primarily focused on how anthropomorphism affects single brand evaluation (Aggarwal and McGill 2007, 2012; Kim and McGill 2011; Puzakova et al. 2013), we are the first to look at the impact of brand anthropomorphism in a brand-to-brand relationship context. By doing so, this research enriches our understanding of the nature of anthropomorphism and the impact it has on consumer behavior. Third, this research also contributes to the literature on interpersonal relationships. Past research has shown how consumer-brand relationships can follow the rules that govern person-to-person relationships (e.g., Aggarwal 2004; Aggarwal and Larrick 2012). This research is the first to show that communal relationship perceptions can also apply to brand-to-brand relationships, when brands are anthropomorphized.

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# Consumer Response to Innovations: The Differential Effects of Focused and Defocused Attention on Perceived Novelty, Usefulness and Symbolism

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## EXTENDED ABSTRACT

Focused and defocused attention has been shown to foster novel product ideas (Ansburg and Hill 2003; Friedman, Fishbach, Förster and Werth, 2003; Nijstad, De Dreu, Rietzschel and Baas 2010) but how these impact other product dimensions than novelty is unclear. Focused attention refers to limiting the mental stimuli so that the ideator's cognitive effort becomes centered towards a specific problem while defocused attention means widening the mental scope toward abstract considerations (Ansburg and Hill 2003). The purpose of this study is to investigate the role of focused and defocused attention on novelty, usefulness and symbolism as well as investigate market potential of these products.

### Study 1

In the *ideation phase* 73 industrial design master were asked to generate a solution for the watering of house plants when the owner of the house is out of town. Participants were asked to generate as many ideas as they could (Liikanen and Perttula, 2006). Participants were randomly assigned to the focused or defocused condition using the outline by Baird et al. (2012). Participants generated 127 ideas in total; 69 in the focused condition, and 58 in the defocused condition.

In the *market response phase*, 689 consumers (45.8% male, 54.2% female) assessed the generated ideas and rated them in terms of novelty, usefulness, desirability, and willingness to pay. Each consumer was asked to assess between five to ten ideas. A one-way ANCOVA with *novelty* as the dependent variable, type of focus (focus vs. defocus) as the independent variable, and level of detail as a covariate was conducted. There was a significant effect of type of focus on novelty, such that ideas that were generated in the defocused condition,  $M = 4.02$  ( $SD = .61$ ), were considered to be significantly more novel than those generated in a focused condition,  $M = 3.82$  ( $SD = .64$ ),  $F(1,124) = 3.99$ ,  $p = .048$ . An OLS regression analysis was conducted with novelty as the independent variables and product desirability as the dependent variable. The results showed that novelty was a significant predictor of product desirability,  $B = .258$ ,  $t = 5.56$ ,  $p < .001$ . An OLS regression with willingness to pay as the dependent variable and product desirability as the independent variable showed that product desirability, in turn, is a significant predictor of willingness to pay,  $B = .237$ ,  $t = 2.73$ ,  $p = .007$ . We used PROCESS (Model 4) for examining the mediating impact of novelty on the link between defocus and product desirability. The results showed that novelty mediates the impact of type of focus on product desirability, as the indirect effect of type of focus via novelty is significant, CI 95% [.0009; .3367].

### Study 2

In the *ideation phase* 222 students (Master level) were randomly assigned to one of two groups: They were either asked to design a lamp for an entrance hall for a museum, or to design a lawn chair that could seat several people. Each participant worked individually, with 124 participants generating an idea for the lamp, and 104 for the chair. We executed the focus and defocus manipulation with the use of constraints (Moreau and Dahl 2005).

In the *market response phase*, 499 consumers (35.3% male, 64.7% female) rated the ideas. Each rater saw five ideas. An ANCOVA with *novelty* as the dependent variable, type of focus (focused vs.

defocused) as the independent variable, and concept presentation as a covariate showed a significant effect of focus and defocus on novelty,  $F(1, 490) = 4.76$ ,  $p = .030$ , such that the ideas generated in the defocused condition,  $M = 4.77$  ( $SD = 1.61$ ) were rated as significantly more novel than the ideas generated in the focused condition,  $M = 4.48$  ( $SD = 1.61$ ). An ANCOVA with *usefulness* as the dependent variable, type of focus (focused vs. defocused) as the independent variable, and concept presentation as a covariate showed a significant effect of focus and defocus on novelty,  $F(1, 490) = 5.07$ ,  $p = .025$ , such that the ideas generated in the *focused* condition,  $M = 4.71$  ( $SD = 1.53$ ) were rated as significantly more useful than the ideas generated in the *defocused* condition,  $M = 4.47$  ( $SD = 1.56$ ).

Using the scale for *symbolic innovation* as the dependent variable, type of focus (focused vs. defocused) as the independent variable, and concept presentation as a covariate showed a significant effect of focus and defocus on novelty,  $F(1, 490) = 19.73$ ,  $p < .001$ , such that the ideas generated in the *defocused* condition,  $M = 4.17$  ( $SD = 1.66$ ) were rated as significantly more symbolic than the ideas generated in the *focused* condition,  $M = 3.44$  ( $SD = 1.58$ ).

An OLS regression analysis with novelty, usefulness, and symbolic innovation as independent variables and product desirability as the dependent variable showed that all three independent variables were significant predictors of product desirability,  $B = .166$ ,  $t = 4.61$ ,  $p < .001$  for novelty;  $B = .552$ ,  $t = 16.64$ ,  $p < .001$  for usefulness; and  $B = .209$ ,  $t = 5.58$ ,  $p < .001$  for symbolic innovation. An OLS regression with willingness to pay as the dependent variable and product desirability as the independent variable showed that product desirability, in turn, is a significant predictor of willingness to pay,  $B = .338$ ,  $t = 7.97$ ,  $p < .001$ .

We used PROCESS (Model 4) for examining the mediating impact of novelty, usefulness, and symbolic innovation. Novelty mediates the impact of type of focus on product desirability, as the indirect effect of type of focus via novelty is significant, CI 95% [-.3170; -.0045]; usefulness also serves a significant mediator for type of focus CI 95% [.0243; .2547], as does symbolic innovation CI 95% [-.5287; -.1613].

These findings contribute to the innovation literature by demonstrating that focused and defocused attention differently affect product dimensions, more specifically, a defocused attention helps generate product ideas that consumers rate as novel and symbolic whereas focused attention is linked to product ideas that are useful. Secondly, novelty, usefulness and symbolism mediate the relationship between focused and defocused attention and market reactions.

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# The “Healthy=Lighter” Heuristic

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## EXTENDED ABSTRACT

Prior research suggests that consumers rely mostly on heuristic-based decision making when it comes to food related decisions (Wansink and Chandon 2014). For instance, a “health=expensive” intuition states that consumers associate healthy food with higher prices (Haws et al., 2017). An “unhealthy=tasty” intuition suggests that consumers hold a lay belief that unhealthy food tastes better (Raghunatan et al., 2006). Finally, a “healthy=less filling” intuition states that consumers consider healthy food as less filling/satisfying (Suher et al., 2016). This article adds to this stream of literature by adding a new intuition: consumers infer that healthier food weighs less than unhealthy food. We term it the “healthy=lighter” heuristic.

Consistent with other heuristics, we argue that the healthy-lighter heuristic derives from both internal (i.e., example generation: items such as (burgers/chips) salads/fruits that are (heavier) lighter in calorie content are more likely to come to mind when thinking about (un)healthy food) and external sources (i.e., market communications: food containing less fat often have “light” labels, e.g., Coke light). Although in both sources, heavy/light refers to calorie content of food, rather than the weight. Thus, two important mechanisms underlie this heuristic. First, the calorie estimation links food healthiness and heaviness/lightness perception. Second, people generalize the metaphorical meaning of heavy and light to their literal meaning on weight. Building on the bidirectional influence of metaphors, we argue that people will also use literal meaning of weight to infer the healthiness of food. Taken together, we predict that people will expect healthier food to weigh less than normal or unhealthy food. In the meantime, people will also consider food that weighs less to be healthier.

In study 1, we showed 251 MTurk panelists two cakes with the same list of ingredients: one traditional chocolate cake containing regular ingredients (e.g., whole milk) and one healthier chocolate cake containing healthy ingredients (e.g., non-fat milk). Participants were randomly assigned to one of the following two conditions: participants saw either the weight of the traditional (healthier) chocolate cake (600 grams) and had to guess the weight of the healthier (traditional) chocolate cake. Results denote that in both conditions, consumer inferred the healthier cake to weigh less than the traditional cake.

Study 2 employed a 2 (healthiness: increasing vs. decreasing)  $\times$  4 (percentage: 25% vs. 50% vs. 75% vs. 100%) mixed-factorial design, where the healthiness was manipulated between-subjects and the percentage was manipulated within-subjects. We showed 102 MTurk panelists a recipe of making four servings of vanilla pudding (240 grams and 1440 calories). Among the list of ingredients, in the increasing healthiness (decreasing healthiness) condition, the original recipe uses 2 cups of whole milk (skim milk). We asked participants to guess the calories and weight of the vanilla pudding, if we replaced  $\frac{1}{2}$  cup (25%), 1 cup (50%),  $1\frac{1}{2}$  cup (75%), and 2 cups (100%) of the whole (skim) milk with skim (whole) milk. As expected, in the decreasing (increasing) healthiness condition, increasing the percentage of whole (skim) milk increased (decreases) the estimated weight. Moreover, a mediation test showed that calorie estimates mediate the effect of food healthiness on weight estimates.

In the following studies, we will turn to the other side of the heuristic and test whether people also use weight information to infer the healthiness of the food.

In study 3, 154 MTurk panelists read that Susan was following a recipe to make 300 grams of rice pudding. They were randomly

assigned to one of the following two conditions: in the light (heavy) condition, participants read that Susan ended up with 250 (350) grams of rice pudding. After, participants chose between five pairs of ingredients the ones that Susan most likely used. Each pair contained one normal ingredient and one healthy ingredient (e.g., regular vs. organic butter). Results denote that the rice pudding in the light (vs. heavy) condition contained more (vs. less) healthy ingredients which supports that people inferred products lighter in weight as healthier.

In study 4, 50 business students sampled M&M’s from two identical cups. They were told that M&M’s recently introduced a healthy version and we asked whether they could tell the difference in taste and identify which cup contains the healthy M&M’s. In reality, both cups contained identical M&M’s but one cup was heavier (250 vs. 175 grams) because of a piece of metal that was added at the bottom, not visible to participants. Participants held both cups in their hands while a research assistant explained the procedure of the study. After receiving the instructions, participants put the cups on a table, started sampling and indicated their guesses, purchase intention, and WTP for a pack of M&M’s (300 grams) from each cup respectively. The majority of the participants indicated the lighter cup contained the healthier M&M’s. In addition, participants were more inclined to purchase and were willing to pay more for a pack of M&M’s in the lighter cup.

Study 5 employed a 2 (order: order 1 vs. order 2)  $\times$  4 (healthiness comparisons between two food items) mixed-factorial design. 153 MTurk panelists had to do four rounds of healthiness comparisons between two food items varying in weights by indicating whether the lighter food item was healthier, both items were equally healthy, or the heavier food item was healthier. The order variable counterbalanced the weights of the items in the pair. We also varied the level of weight difference between two food items in each pair, from 0.5 ounce to 1.5 ounce. After the healthiness comparison task, we provided the calories count of the lighter food item in the pair, and participants had to guess the calories of the heavier food item. Finally, participants had to indicate the density level of all eight food items. Our results suggest that calorie estimates mediate the weight-healthiness path. In addition, the weight difference moderates this inference: increasing the weight difference between two food items increases the likelihood that the food lighter in weight to be considered as healthier. Finally, the density difference did not mediate the heuristic, ruling it out as an alternative underlying mechanism.

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# Resolving Humorous Incongruity in Advertising Facilitates Impressions of Firm Competence

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## EXTENDED ABSTRACT

Humor is a common executional tactic in advertising (Eisend 2009). Given that humor affects impression formation in inter-individual settings (Greengross, Martin, and Miller 2012), we propose that humor influences the impressions that consumers form of a company that uses humor in advertising. Although both warmth and competence impressions can result from observing humor, we focus on the competence impressions, which take priority in consumers' choice of products and service providers (Kirmani, Hamilton, Thompson, and Lantzy 2017). The first goal of this research is, therefore, to identify a humor execution that particularly enhances competence impressions of advertisers. The second goal is to explain why this effect occurs.

Research has identified three humor processes that can elicit laughter, namely incongruity-resolution, tension-relief, and humorous disparagement (Speck 1991). Incongruity-resolution represents a humor process in which perceivers first experience something surprising, peculiar, or unusual and later are able to resolve it. This process is characteristic of humor forms such as puns, punchlines, or comic irony. Since the resolution of incongruity requires cognitive skills (Martin 2010), we predict that incongruous humor, if successfully resolved, triggers competence impressions of advertisers. Tension-relief, on the other hand, mainly induces laughter as a way to release nervous energy. This humor process leads perceivers to experience empathetic emotions, which can be transferred to improve any subsequently evaluations of advertisers, but not specifically competence evaluations. Lastly, humorous disparagement mostly harms, rather than improves competence impressions, since it may indicate the deprecators' unjust ridicule and ignorance of social boundaries (i.e. other-disparagement) or draws attention to the deprecators' real weaknesses (i.e. self-disparagement) (Greengross and Miller 2008).

Study 1 (N = 3487) explored the effects of all three humor executions. We distributed 300 real ads to eight groups of Mturk raters; each group rated a subset of ads on a different variable. Specifically, a group evaluated either the extent to which ads used one of the three humor executions or rated ads on one of the impression dimensions (warmth/ competence). The results indicated that both incongruity-resolution and tension-relief had positive effects on competence impressions, while both self- and other-disparagement had negative effects. Incongruity-resolution did not alter warmth impressions, while tension-relief enhanced both warmth and competence impressions. This suggests that tension-relief improved the overall impression of advertisers via a rather generic affect transfer account. Contrarily, humorous incongruity, once successfully resolved, specifically and most strongly enhanced competence impressions. Our subsequent studies, hence, focused on incongruity-resolution.

Study 2 (N = 100) replicated the effect of incongruity-resolution on competence impressions. Since Study 1 was a correlational study, an alternative explanation for its findings may be that competent advertisers tend to use incongruous humor (rather than incongruence-based humor triggering competence impressions). To rule out this explanation, we asked Mturk participants to evaluate incongruous/congruous ads of the same advertisers; their impressions of the advertisers were then compared across ad conditions and participants.

The results confirmed a positive causal relationship between humorous incongruity and competence impressions.

Study 3 (N = 300) examined whether the effect of incongruity-resolution persisted when the advertisers were not perceived as the humor source (i.e. when an external agency produced the ads). Furthermore, since incongruous ads are often creative, Study 3 examined whether creativity was the driver of the effect. The study had a 2 (ad: incongruous vs. congruous)  $\times$  2 (ad agency: major vs. minor) between-subject design. The ad-agency manipulation was intended to alter the belief about whether the advertisers or the agencies were the source of humor. Specifically, we predicted that when consumers perceived a bigger (compared to smaller) external agency as being responsible for the ad, they would be less likely to see the advertisers as the main contributors to the ads, and thus less likely to form competence impressions about the advertisers. The results confirmed our prediction: Incongruity-based humor, when successfully resolved, enhanced competence impressions of the advertisers, but only in the minor-agency condition. Furthermore, when controlling for the effect of perceived ad creativity, the positive effect of incongruity-resolution remained, suggesting that creativity was not the only driver of the effect.

Study 4 (N = 301) tested a competence projection process as a potential driver of the effect of incongruity-resolution. Extant research supports the idea that appreciation of humor, especially incongruity-based humor, signals similarity between the perceivers and the source of humor (Flamson and Barrett 2008). On one hand, similarity is an antecedent of projection, the act of introspecting one's own qualities and ascribing them to others (Ames 2004). On the other hand, resolution of incongruity may signal to the perceivers their mastery of competent skills such as flexible thinking and problem solving (Martin 2010). We thus proposed that perceivers, while resolving and appreciating incongruity-based humor, may project their perceived self-competence to the advertisers. To test this process, each participant in Study 4 evaluated one ad (incongruous or congruous) on the measures of incongruity, ad familiarity, advertiser competence, self-perception of competence, and perceived self-advertiser similarity. We then ran a serial mediation model where incongruity-and-resolution was the independent variable, advertiser competence is the dependent variable, while self-perception of competence and perceived self-advertiser similarity were the two mediators. The results confirmed significant serial mediation, and thus supported the proposed process. Particularly, those who successfully decoded incongruous humor first perceived themselves as more competent and then more similar to the advertisers (on competence domains); this dual perception (which might have caused competence projection) then led to increased competence impressions of the advertisers.

It is well established that humor influences our impressions of people in social settings. However, the fact that this mechanism also applies to companies using humor in their marketing has not been demonstrated until now. Our research addresses this gap by documenting that incongruity-resolution is the only major humor execution that specifically enhances competence impressions of advertisers. This effect seems to work via competence projection, a novel process that distinguishes incongruity-resolution from other types of humor. Practically, our findings provide implications to optimize the



use of humor in impression management, which is essential in guiding consumers' choices and interactions with companies.

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# Consumers' Attribution of Mind to Possessions as an Impediment to Sharing

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## EXTENDED ABSTRACT

Research has established that people perceive minds in a variety of objects and along two dimensions: agency referring to the capacity to plan and act, and experience referring to the capacity to sense and feel (Waytz, Gray, Epley, and Wegner 2010). In the current research, we propose that ascribing mind to a possession reduces people's intention to share the possession with other users. This negative effect of mind attribution on sharing is driven by a concern about the possession being mentally harmed during contacts with others. While a mindful versus mindless possession may be similarly susceptible to physical damage, only a mindful possession is susceptible to mental harms, for example, the possession adapts to certain immoral characteristics of other users. We posit that such a concern about mental harms impedes sharing of the possession. We conducted four studies to test our predictions.

Study 1 examined whether ascribing mind to an iPad discouraged sharing of the iPad with close versus distant others. 108 students from a European business school participated in the study. Each was given an iPad and was instructed to ask Siri one of the two sets of questions pertaining to a mind-attribution or a control condition. Participants in the mind-attribution condition asked Siri questions that generated unexpected answers, while those in the control condition asked Siri questions that generated predictable answers. Unpredictability (regarding Siri's answers) was the manipulation of mind (see Waytz et al. 2010 for explanation). All participants then imagined owning the iPad and indicated their willingness to share the iPad with a close friend or a distant co-worker. Results revealed that mind attribution significantly reduced willingness to share iPad with a co-worker, but it did not alter intention to share the iPad with a friend. The closeness between owners and borrowers is thus a boundary condition for the effect of mind attribution on sharing.

Study 2 examined the effect of mind attribution on sharing in a collaborative-consumption setting. 111 car owners recruited from Amazon Mechanical Turk (AMT) participated in the study. Participants in the mind-attribution condition described their cars in human terms, while those in the control condition simply described the features of their cars. All participants then read about a fictitious car-sharing website and indicated their willingness to rent out their cars on the website for money. Familiarity with car-sharing services was measured to account for a potential floor effect (i.e. participants unfamiliar with car-sharing services would be unwilling to use the services regardless of the mind-attribution conditions). Results confirmed that mind attribution significantly reduced willingness to rent out cars among participants highly familiar with car-sharing services but not among those unfamiliar with such services.

Study 3A and Study 3B examined the effect of mind attribution on sharing with regards to goldfish, a living, rather than non-living, possession. Both studies tested a moderator related to borrowers' morality in order to demonstrate that a concern about mental harms (i.e. moral contamination) discourages people from sharing their mindful possessions. We operationalized mental harms in terms of moral contamination for two reasons. First, current research has documented people's strong belief about the transfer of moral essences from individuals to objects during contact. For example, a sweater worn by Hitler was found more evil (Nemeroff and Rozin 1994), or a chair

touched by a theft became a source of guilt (Eskine, Novreske and Richards 2013). Due to this rampant belief about moral contagion, a concern about possessions being morally contaminated during contact with others would be salient. Second, morality is perceived as a fundamental components of identity that people agonize over changing (Riis, Simmons and Goodwin 2008). Therefore, a concern about moral contamination is expected to be a strong driver of people's (sharing) behaviors.

100 AMT workers participated in Study 3A. Participants in the mind-attribution condition read about goldfish having high mental capacity, while those in the control condition read about goldfish having limited brain power. Next, all participants read about a fictitious pet-sharing website and indicated their willingness to share their goldfish with strangers via the website. Participants then completed the Interpersonal Trust Scale (Rotter 1967); higher scores on this scale imply that participants believe others, including potential borrowers of their goldfish, to possess higher levels of goodwill and morality. Meanwhile, low scores on the scale implied that the participants believed others to be typically immoral. If a concern about moral contamination drives the effect of mind attribution on sharing, mind attribution should discourage sharing to a larger extent among low-trusters than among high-trusters. Indeed, results indicated that mind attribution had a significant and negative effect on sharing intention among low-trusters but not among high-trusters, confirming our prediction.

221 AMT workers participated in Study 3B of a 2 (mind-attribution vs. control condition)  $\times$  2 (moral vs. immoral borrower) between-participants design. The participants first completed a manipulation of mind attribution and read about a pet-sharing website, similar to that of Study 3A. Instead of measuring the participants' individual trait as a proxy for their belief about borrowers' morality as in Study 3A, we directly manipulated the morality of borrowers in Study 3B. In the moral-borrower condition, the borrower was described as being kind but inexperienced with goldfish, while in the immoral-borrower condition, he was described as being manipulative but taking very good care of goldfish. After learning about the borrower, participants in both conditions indicated their expected payment for sharing goldfish with the assigned borrower. Results confirmed that mind attribution significantly increased expected payment for sharing goldfish when the borrower was described as being immoral but not when he was described as being moral. The results further supported our proposed mechanism.

Across four studies, we demonstrate that ascribing mind to living and non-living possessions reduces people's intention to share the possessions with relative strangers. The effect seems to be driven by people's concern about mindful possessions being mentally harmed during contacts with others. Given the rise of the sharing economy and its benefits, our research uncovering impediments to sharing behaviors will contribute to support the success of the model.

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# Consumers' Implicit Mindsets and Responses to Cause-related Marketing Campaigns

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## EXTENDED ABSTRACT

Cause-related marketing (CRM) efforts (e.g., contributing a portion of sales to charities) enhance purchase intentions (Henderson & Arora, 2010), while donation amount that CRM garners (Elfenbein & McManus, 2010) or in-kind/monetary contributions of the company (Hildebrand et al., 2017) play significant roles. Although CRM has been steadily gaining in popularity, research linking consumers' characteristics to CRM is limited. Current research shows that consumers' implicit mindsets—whether they believe that characteristics can change (growth mindsets) or not (fixed mindsets)—may influence their responses to CRM efforts. Moreover, the interactive effect of benefits offered (for the consumer or for those in need) and firm-cause fit moderates the results.

CRM messages may appeal to consumers through the self or others. With every pair of shoes purchased, TOMS donates one pair of shoes, an other-benefit appeal focusing on helping others (White & Pelozo, 2009). Conversely, in a self-benefit appeal by Wendy's, consumers receive a free milkshake for their support. Current research explores the ramifications of implementing these appeals in CRM campaigns. Extant literature identifies two mindsets that consumers may endorse: fixed and growth (Dweck & Leggett, 1988). Those with a fixed mindset perceive things as fixed/unchangeable entities, while growth mindsets perceive things in more dynamic/flexible ways (Plaks et al., 2005). Butler (2000) argues that beliefs in immutability make fixed mindsets more receptive to outcome-related information. Conversely, growth mindsets are more sensitive to information about intermediary processes (Molden et al., 2006). Jain and colleagues (2009) show that while viewing an ad, fixed mindsets generate more outcome-related thoughts, but growth mindsets' thoughts are mostly related to ad-tactics, proving their focus on the process. Mathur et al. (2016) suggest that growth (vs. fixed) mindsets more strongly value fairness of procedures used to achieve positive outcomes. Conversely, fixed mindsets focus on outcomes.

In our CRM context, outcome favorability captures the extent to which CRM campaigns bring positive outcomes. CRM procedures are fair when they comply with ethical standards and do not involve self-interests (Leventhal et al., 1980). Because growth mindsets are concerned with procedural fairness, they should respond more favorably to other- (vs. self-) benefit appeals which focus on helping others (vs. benefiting consumers), a fair (vs. unfair) procedure to achieve positive outcomes. Conversely, as we show next, fixed mindsets should be indifferent between benefit frames because they focus on outcomes.

In Study 1, we manipulated implicit mindsets by presenting 171 MTurk-participants with proverbs that supported either fixed or growth mindsets (Poon & Koehler, 2006). Then, participants viewed the other-benefit (self-benefit) ad of a fictitious company that would donate to UNICEF with a slogan "Buy Brand X shoes and help children enjoy life" ("Buy Brand X shoes and get a UNICEF membership, which is a big plus on your resume"; Park & Lee, 2015). They marked their purchase likelihood, attitudes toward Brand X, and how much they trusted the brand.

Manipulations worked as intended. Growth mindsets were more likely to purchase in the other-benefit (vs. self-benefit) condition, while fixed mindsets were indifferent. Similar results were found for trust and brand attitudes. However, these results do not explain which particular causes firms should support to enhance CRM effec-

tiveness. A high degree of firm-cause fit involves supporting a cause that matches company's image (Gray 2000). To check participants' firm-cause fit perceptions, we ran a follow-up study with 102 MTurk-participants by using the manipulations and stimuli as before and measured how UNICEF fit with Brand X. Firm-cause perceptions did not differ according to predictor variables, and all means were above the midpoint of the scale, indicating a higher-fit between UNICEF and Brand X. However, firms also collaborate with organizations that do not match their businesses perfectly, which we examine next.

If the firm-cause fit is strong, consumers view the company as capable of assisting the charity because it can leverage its expertise and resources (Alcañiz et al., 2010). However, low-fit leads consumers to believe that the company has firm-serving motivations (Weiner 1985) and makes them doubt the company's aspirations. Growth mindsets, because of their concern with procedural fairness, should perceive lower-fit scenarios as unfair regardless of benefit framing. Moreover, under lower-fit, fixed mindsets should perceive the firm as less capable of bringing positive outcomes when it uses self-benefit (vs. other-benefit) appeals as they will perceive that the outcome is less attainable.

In Study 2, we manipulated implicit mindsets as before and presented 286-MTurk participants with other-benefit (vs. self-benefit) messages of a notebook company donating to the National Education Association (Conservation Fund) in higher-fit (lower-fit) conditions (Robinson et al., 2012). We measured purchase likelihood, brand attitudes, and trust as before. Participants also indicated whether procedures used by Brand X were fair and outcomes of this campaign would benefit those in need (Wu et al., 2016).

Manipulations worked as intended. As before, growth mindsets were more likely to purchase when viewing other-benefit (vs. self-benefit) appeals in higher-fit conditions; however, fixed mindsets were indifferent. Conversely, in lower-fit conditions, fixed mindsets expressed lower purchase intentions in self-benefit (vs. other-benefit) conditions; however, growth mindsets were indifferent. Similar results were found for trust and brand attitudes. Moreover, according to bootstrap analysis (Hayes, 2013; Model 12), while procedural fairness mediated growth mindsets' purchase likelihood, attitudes, and trust in higher-fit conditions, no such mediation occurred for fixed mindsets. While positive outcome perceptions mediated growth mindsets' responses in higher-fit conditions, they mediated fixed mindsets' responses in lower-fit conditions.

This research provides theoretical and practical insights. We introduce implicit mindsets to the CRM context, an under-explored research topic, and examine the interplay between benefit framing and firm-cause fit while identifying the psychological mechanisms driving the effects. We show that companies can benefit from using other-benefit (vs. self-benefit) appeals in CRM campaigns. Moreover, we identify a condition to bolster the effectiveness of CRM efforts supporting a lower firm-cause fit: other-benefit appeals paired with lower-fit can be more effective for fixed mindsets.

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# Attenuating Endowment Effect with Venmo: Online Payment Systems Make it a Pleasure to Pay

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## EXTENDED ABSTRACT

People typically demand more to relinquish a good they own than they would be willing to pay to acquire the good. This phenomenon is known as the endowment effect (Kahneman, Knetsch, and Thaler, 1990). The economic impact of the endowment effect is consequential. The discrepancy between sellers' willingness to accept (WTA) and buyers' willingness to pay (WTP) leads to irregularities in valuation between buyers and sellers, increases people's reluctance to trade and causes market inefficiencies. Thus, the endowment effect has generated great interest among scholars from a variety of fields, including marketing, economics, psychology, and public policies (Morewedge and Giblin, 2015).

Recent years have witnessed a huge increase in consumer-to-consumer business where individuals act as sellers and buyers in the marketplace to exchange goods or services. In addition to traditional off-line marketplaces, online transactions are also becoming more popular. eBay is one of the most famous examples. Coinciding with the development of the online market is an increase in the use of online payment systems such as Venmo, Zelle, and Paypal, etc. Online payment systems enable people to manage their bank account through their online bank applications. With a single click on the app, consumers can transfer money to and receive money from others, split checks, and more. While traditional payment methods such as cash still occupy a large share of consumer payments (25.6%), the share of electronic payment methods reached 10.5% in 2014 (Greene, Schuh, and Stavins, 2016). The use of electronic payment methods is still on the rise. In the current work, we examine how the shift to the cash-less market affects marketing efficiency. Specifically, we look at how using online payment systems influence the endowment effect.

Research has investigated an array of different explanations for the endowment effect. One of the most common explanations is loss aversion, where the pain of losing the product looms larger than the gain of acquiring the same product (Kahneman and Tversky, 1979). Other processes, including the building of self-product association (Kim and Johnson, 2010; Morewedge et al., 2009), biased information processing (Carmon & Ariely, 2000; Saqib et al., 2010), and concerns about transaction disutility (Weaver and Frederick, 2012), also contribute to the endowment effect. Morewedge and Giblin (2015) summarized various causes of the endowment effect under the umbrella of biased attribute sampling bias. The attributes refer to value-relevant qualities and properties such as the positive or negative features of goods, transaction utility, the cost of new or used alternatives, opportunity costs, and non-transferrable associations (Morewedge and Giblin 2015). Morewedge and Giblin argue that sellers perceive the goods to have more value because attributes suggesting that one should keep the product are more salient to them. In contrast, buyers perceive the goods to have less value because attributes suggesting one should not acquire the good are more accessible.

Most of the literature on the endowment effect focuses on people's evaluation of the endowed product, such that it appears sellers value a product more than buyers. In contrast, money, as a medium of exchange, does not seem to be subject to the endowment effect (Novemsky and Kahneman, 2005; Svirsky, 2014). For example, Svirsky finds an endowment effect for chocolate coins, but no endowment effect for money or for chocolate coins that are described as to-

kens. In other words, the endowment effect is never considered to be driven by buyers' reluctance to exchange their money for goods. Yet, a large body of work on the psychology of money shows that people do feel a sense of loss when parting from their money (Prelec and Loewenstein, 1998; Raghurir and Srivastava, 2008; Soman, 2003). Building on this stream of literature, we take a novel perspective to invest the endowment effect and suggest that consumers' aversion to parting with their money may have more to do with the endowment effect than previously thought. By decreasing the salience of the act of parting from money (e.g. when buyers make a payment through online payment systems), we are able to attenuate the endowment effect by increasing buyers' WTP.

When making a purchase, consumers normally experience an immediate pain of parting from their money. Such psychological discomfort is known as the pain of payment (Prelec and Loewenstein, 1998). The pain of losing money is supported by neuro studies (Knutson et al., 2007; Knutson and Greer, 2008) where excessive prices activate the insula, the brain region that is known for responding to pain and has been shown to be active during the loss of one's possessions (Feng, Zhao, and Donnay, 2013). Typically, the more vivid and transparent a transaction is, the more painful it is to make a payment (Prelec and Loewenstein, 1998; Raghurir and Srivastava, 2008; Soman, 2003). For example, paying with cash, which involves handing over a physical manifestation of money, feels more painful than using less transparent methods such as credit cards (Raghurir and Srivastava, 2008). Based on this logic, making a payment through online payment systems should feel less painful than paying with cash.

We propose that the use of online payment systems should decrease the endowment effect because low salience of payment encourages buyers to be willing to pay a higher price for the product. Evidence consistent with our proposition comes from past work on the downstream consequences of the pain of payment. For example, paying with less painful payment methods, such as a credit card rather than cash, can lead to an acceleration in spending. This leads to consumers buying more products than they would have when paying with cash (Hirschman, 1979; Prelec and Simester, 2001; Raghurir and Srivastava, 2008; Soman, 2001). Such acceleration in spending is also accompanied by a reduced sensitivity to price, where consumers are willing to accept a higher price in order to acquire a product (Monger and Feinberg, 1997). Thus, we predict that the endowment effect will be attenuated when payments are made online because online payments increase the buyer's willingness to pay.

Our research contributes to the marketing field in two ways. Theoretically, we add to the literature on the endowment effect by showing that it is not only driven by seller's high evaluation of products, but also by buyer's reluctance to spend their money. More importantly, our research provides a simple and practical way of solving the market inefficiency problems caused by the endowment effect: by encouraging the use of online payment systems, there would be less discrepancy between buyers' willingness to pay and sellers' willingness to sell. In the following section, we present four studies and a single-paper meta-analysis to support our hypothesis.

The first study tests whether making a transaction using online payment apps attenuates the endowment effect. One hundred and eighty-six participants from the mTurk online panel (43% female,

Mage=29) who had experiences using online payment apps successfully participated in the study. We employed a 2(payment method: cash vs. online apps)\*2(role: seller vs. buyer) between subject design. All participants saw a picture of a coffee mug. Participants in the seller condition were told that they were endowed with the hypothetical coffee mug and were told that they may sell the mug at the price that is acceptable to them. Participants in the buyer condition were asked to examine the mug and were told that they would have an opportunity to buy the mug at the price they were willing to pay. Within the seller and buyer conditions, half of the participants were told to use cash to make the exchange. The other half of the participants were told that all money transactions would be made online using electronic mobile payment applications like Venmo or Zelle. Across all conditions, participants were told that all payments would occur immediately and that there would be no transaction fees. All buyers indicated their maximal willingness to pay and sellers indicated their minimal willingness to accept in an open-ended question (e.g. I am willing to buy/sell the mug for as much as \$ \_\_, but no more/less). We log-transferred the participants' WTP/WTA data (here and in the following studies) to serve as our dependent variable. As expected, in the cash conditions, the classical endowment effect was replicated. The sellers requested a payment that was almost twice as much as the price that buyers were willing to pay (Mcash\_sell=9.99, Mcash\_buy=5.33,  $F(1, 266)=4.69$ ,  $p<.05$ ). In contrast, the WTA-WTP discrepancy was eliminated when transactions were conducted online (Monline\_sell=9.76, Monline\_buy=7.24,  $F(1, 266)=1.15$ , n.s.).

Study 2 replicates the results of study 1 with identical procedures. Two hundred and two Mturk workers successfully participated in the study (56% female, Mage=19.5). The study again used the 2(payment method: cash vs. online apps)\*2(role: seller vs. buyer) between subject design. Participants were randomly assigned to one of the four conditions. To strengthen our payment method manipulation, we added pictures of cash and online payment apps in the cash and e-payment conditions respectively when participants were asked to indicate their WTP/WTA. Study 2 replicated the effects of study 1 with an interaction effect ( $F(1, 198)=4.64$ ,  $p<.05$ ). More specifically, while the data revealed a significant endowment effect in the cash condition (Mcash\_sell=8.29, Mcash\_buy=3.77,  $F(1, 198)=14.28$ ,  $p<.05$ ); there was no significant difference between WTA and WTP in the online payment condition (Monline\_sell=5.44, Monline\_buy=5.40,  $F(1, 198)=0.502$ , n.s.). We also show that buyers who made payments online offered significantly higher prices than buyers who made payments with cash ( $F(1, 198)=3.89$ ,  $p=.05$ ). In comparison, payment methods did not affect sellers' willingness to accept ( $F(1, 198)=1.17$ , n.s.). Thus, the attenuation of the endowment effect is mainly driven by the increase in willingness to pay among participants who pay using the online system.

In study 3, we test our effect among college students using identity relevant products. Previous literature on the endowment effect has shown that selling is perceived as an implicit self-threat (Chatterjee, Irmak and Rose, 2013). The selling of in-group (i.e. identity-relevant) products strengthens the endowment effect relative to the selling of out-group products (Dommer and Swaminathan, 2012). In study 3, we aim to show that our effect is robust in contexts where identity relevant products are sold and where the endowment effect is believed to be strong. One hundred and sixty-eight students participated in the study for course credit (51% female, Mage=21). Students were randomly assigned to either sell or buy a coffee mug with the school logo on it. They were told that they will either complete the transaction using cash or through online payment apps. All students indicated their WTP or WTA based on the condition they were in. Again, as expected, among students who were asked to make trans-

actions using cash, there was a significant difference between sellers' WTA and buyers' WTP (Mcash\_sell=10.37, Mcash\_buy=7.56,  $F(1, 164)=5.53$ ,  $p<.05$ ). However, the WTA-WTP discrepancy was attenuated among students who made transactions online (Monline\_sell=10.74, Monline\_buy=8.39,  $F(1, 164)=1.53$ , n.s.).

In study 4, we further take the endowment effect to a more realistic market setting in which participants trade products in a campus second-hand market. In other words, instead of selling endowed products, sellers in study 4 trade the product that they had owned and used before. One hundred and ninety students participated in the study (40% female, Mage=20). They read a scenario where they plan to trade a calculator. Students in the seller condition read that they have a fairly new Texas Instrumental BAII Plus financial calculator that they no longer need and plan to sell it in the campus second-hand market. Students in the buyer condition read that they plan to buy a calculator in the same market. As with the previous studies, payments were manipulated to be made either online or with cash. Unsurprisingly, we observe the expected interaction ( $F(1, 186)=5.301$ ,  $p<.05$ ). Specifically, the WTA-WTP discrepancy is significant in the cash condition (Mcash\_sell=30.75, Mcash\_buy=16.75,  $F(1, 186)=9.068$ ,  $p<.05$ ), but was eliminated in the online payment condition (Monline\_sell=23.71, Monline\_buy=20.34,  $F(1, 186)=.06$ , n.s.). In addition, we show that among all buyers, participants who paid online offered higher purchase prices than participants who paid with cash ( $F(1, 186)=2.92$ ,  $p<.1$ ). There was no difference between sellers who accepted cash and sellers who accepted online payments ( $F(1, 186)=2.39$ , n.s.).

Across all four studies, we show that using the online payment system attenuates the endowment effect. The effect is mainly driven by the increase in the buyers' willingness to pay when electronic payment methods are used. In a stronger test of our effects, we conduct a single-paper meta-analysis (SPM, Mcshane and Bockenholt, 2017) using an online platform (<https://blakemcshane.shinyapps.io/spmeta/>). The meta-analysis provides estimates that are more reliable than those based on single studies and generally have narrower uncertainty intervals. It thus provides more powerful tests for hypothesized null and non-null effects (Mcshane and Bockenholt, 2017). We conduct five planned contrasts to test our effect. Contrast 1 tests the moderation effect that payment methods have on the endowment effect. Contrast 2 tests the endowment effect in the cash condition. Contrast 3 tests the endowment effect in the electronic payment condition. Finally, contrasts 4 and 5 test the effect that payment methods have on buyers' WTP and sellers' WTA respectively. We use the log\_price as our dependent variable, as with all the studies. An SPM of our studies estimates the first effect at -0.14 morsels (95% CI: -0.252, -0.037), showing that the endowment effect is moderated by payment methods. Specifically, the endowment effect is significant with cash payments (contrast 2; effect: -0.20; 95% CI: -0.271, -0.128) but not with online payments (contrast 3; effect: -0.06; 95% CI: -0.134, 0.023). Further, the effect is qualified by an increase in WTP among buyers who pay online rather than with cash (contrast 4; effect: -0.08; 95% CI: -0.16, -0.008). But it is not qualified by the change in WTA among sellers (contrast 5; effect: 0.06; 95% CI: -0.014, 0.134).

In sum, we show in four studies that the use of different payment methods can moderate the endowment effect. More specifically, the endowment effect is attenuated when consumers make payments through online payment systems instead of using cash. We demonstrate that the elimination of the endowment effect is mainly driven by the increase in the willingness to pay among buyers who pay with online apps. These findings contribute to the literature by examining the role that the form of money can play in the endowment effect. a

factor that has been ignored or otherwise believed to have no impact. Further, while past literature has gained a significant amount of insight into the cause of the endowment effect, there is still a lack of efficient and easy-to-implement ways to attenuate the endowment effect in the real marketplace. As consumers become more familiar with and get used to online payment systems, we suggest a simple method of increasing market efficiency by encouraging the use of online payment systems.

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# Trust No One. Verify Everything: Bitcoin

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## EXTENDED ABSTRACT

*"We have proposed a system for electronic transactions without relying on trust." (Nakamoto 2008, 8)*

Alongside money, trust is inevitably an important part of society's existence. The system works because we *trust* it to work. And yet, so much our lives are lived in constant *dis-trust* such as fear of others at airports, the lack of trust that leads to police brutality, or the existence of borders that solidify fear. To state that consumer trust has been shaken in recent years would be an understatement. From the financial crisis of 2008, the Edward Snowden NSA leaks of 2013, the 2016 US elections, the Panama Papers, to the branding scandals of Volkswagen, Equifax, and Theranos, and most recently the data leaks at Facebook: *dis-trust* is the order of the day. We now even accept the oxymoron "fake news". Trust is increasingly negated by *dis-trust*.

While a healthy skepticism of large corporations has been a continuous narrative (Holt 2002, Klein 2010, Kozinets and Handelman 2004, Darke and Ritchie 2007), social media and technology have fundamentally changed the way we now trust others. Technology has fuelled the growth of collaborative consumption with the rise of sharing and pseudo-sharing online which are based on trusting previously unknown others (Belk 2010, 2014, Scaraboto 2015, Bardhi and Eckhardt 2012, John 2017) including living in strangers' Airbnb homes or riding in strangers' Uber cars (Botsman 2017). We know that brands often go to great lengths to inspire trust and legitimacy through their hard-earned reputations (Humphreys and Thompson 2014, Lowry et al. 2008, Giesler 2012). However, we know a lot less about how consumers trust an entity that makes no attempt at being trustworthy. What if the need for trust was eradicated from the picture altogether?

In this paper, we analyze the notions of trust and deeper *dis-trust* that have fueled the Bitcoin/Blockchain ecosystem. The peer-to-peer cryptocurrency, Bitcoin, came into being in 2008 as a white paper posted on an inconspicuous mailing list. Despite its "In God We Trust" slogan, the US Dollar demands trust in the US government to warrant its promises. But, Bitcoin demands trust in algorithms and the purity of code which are linked to the Cypherpunk Manifesto: "In Code We Trust". Bitcoin's existence involves major trust issues. By all standards, it should not exist the way it does today. In the early years, many dismissed it as a folly, yet after almost 10 years, it has surprised and baffled many. Bitcoin's creator still remains anonymous, although there have been various false prophets claiming to be Satoshi (Humayun and Belk 2018). Mainstream media largely ignored Bitcoin until 2011 and the lack of information about Bitcoin in the early days led to the creation of an independent media ecosystem. While it was eponymously declared 'a fraud' by JP Morgan's CEO Jamie Dimon in September 2017, in December 2017, Bitcoin's price came just shy of \$20,000, an unthinkable feat in 2009 when two computers were mining away creating the first Bitcoins on the blockchain. Since then Bitcoin has appeared on mainstream magazine covers and spun off thousands of cryptocurrencies and competing crypto-brands in which the trust issue becomes even more crucial.

This paper is based on a longitudinal ethnographic and netnographic study of Bitcoin since 2014. The narratives are drawn from thirty-three in-depth interviews and more than 200 informal interviews with individuals involved in the Bitcoin/Blockchain/Crypto

community. Participant observation was conducted in Toronto, Amsterdam, Berlin, Miami, New York, Prague, San Francisco, Cancun and Boston. The netnography is primarily focused on Twitter, Bitcoin subReddits, Bitcointalk, alongside archival data from newspapers and various blogs and news websites. The findings were analyzed using a hermeneutic process (Thompson, Pollio, and Locander 1994). Bitcoin's awareness and adoption have been spurred by breaches of trust in traditional institutions, particularly banks, governments and corporations, and by the increasing fragility of our connected lives online.

Our analysis adds a socio-cultural understanding of how trust is shaped online in decentralized ecosystems and how erosion of trust in traditional institutions lays the groundwork for such disruptive changes. Many people who enter the Bitcoin ecosystem trust others who trust Bitcoin. This creates a fragility and the potential for online manipulation. Some prominent actors in the community have verified Twitter or Facebook accounts, which are means of establishing a different kind of legitimacy as influencers. Our findings show how the Bitcoin brand was kept afloat in its early days when trust was more blind. Our results have implications for studies of reputation and legitimacy conferred online, particularly the powerful role that social media giants play in endorsing some voices over others, and the challenges of finding trust in decentralized systems where the entire point is to 'trust no one' and 'verify everything'.

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# Making the Wait Worthwhile: Experiments on the Effect of Queuing on Consumption

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## EXTENDED ABSTRACT

Customers spend a significant amount of time waiting in lines, however, the effect of waiting in a line on consumption decisions is not known. Existing literature indicates waiting results in psychological costs such as boredom, frustration, and anxiety and unpleasant negative emotions and cognitions (Maister 1984; Larson 1987; Taylor 1994; Carmon and Kahneman 1995; Hui and Tse 1996; Brady and Cronin 2001; Dabholkar and Bagozzi 2002). However, a long stream of behavioral literature suggest that consumption decisions may be positively influenced by sunk (temporal) costs incurred when waiting in lines due to mental accounting of investments (Thaler 1985).

In the queuing context, time invested waiting prior to making a consumption decision opens an account, and we anticipate consumers purchase more so as to be able to close the account with a more favorable balance. In order to explicitly attribute the effect of queuing on consumption decisions to the sunk-cost fallacy, we demonstrate that the effect is moderated by customers' individual susceptibility to the sunk-cost fallacy. That is, we propose that individuals with greater susceptibility to the sunk-cost fallacy exhibit a greater positive effect of queuing on purchase decisions. Finally, we examine the moderating impact of operational levers which influence the waiting experience, and in turn consumers' mental accounting. Because "the same quantity of time investment may have a different sunk cost impact in different settings, i.e., when the quality of the experience was different" (Soman 2001), we anticipate service improvements which increase satisfaction and reduce the perceived cost of waiting will moderate the relationship between waiting and consumption. In other words, service improvements decrease consumers perceived temporal investments (despite the same objective temporal investment), and as a consequence, consumers do not have to increase their consumption to close their mental account more favorably.

We test these hypotheses over four studies including two experiments, a field study, and transaction data. Study 1 provides external validity for the relationship between waiting time and increased consumption by showing purchase intent for consumers waiting in a real line increases with time spent waiting. Different consumers provided their purchase intent at different points in a line; purchase intent increased with the objective amount of time consumers had spent in line (as well as the perceived amount of time), and this effect existed even when controlling for quality perceptions.

Study 2 provides additional evidence for the effect of mental accounting on consumption in queues with a controlled experiment that randomly assigned participants to simulated waits in short or long lines, and measured of participants' sunk-cost susceptibility scores. As expected consumption was greater in the long line condition relative to the short line condition. Moreover, the effect of line length was greater for participants that were more susceptible the sunk cost fallacy, suggesting the effect of queuing on consumption is driven by mental accounting.

Study 3 provides further evidence for the mental accounting as a driver of the effect and sheds light on the effect of operational levers by manipulating the waiting experience. Participants were randomly assigned to one of four conditions involving a simulated wait and purchase decision: a short wait, a long wait, a long wait with a menu, or a long wait with a video. Following our hypothesis, the presence of a menu or video ameliorated the waiting experience and resulted in a

decreased consumption for these conditions relative to the 'base' long wait condition; this is because their presence improved the waiting experience, causing it to be perceived as less of an investment. In turn, this reduced consumers need to increase consumption amount in order to close out their mental account with a more favorable balance.

Finally, in Study 4 we analyze a data set containing transaction data over the course of one year from a fast-casual salad shop, to provide additional external evidence in a new context. Using a proxy for line length (transaction density) we find that line length led to increased consumption, even when controlling for day of the week and time of the day.

Over four studies, we provide novel insights into the implications and psychology of queues. We find that customers have the tendency to adjust consumption upwards after a long wait. This is an instance of the sunk-cost fallacy; when customers wait for a long time, they try to make the larger economic and temporal investments worthwhile by spending more, thereby amortizing the cost of waiting over a larger purchase. While past literature recognizes that temporal investments are different from monetary investments because people have a hard time accounting for time (Soman 2001; Okada and Hoch 2004), this work provides additional evidence that sunk temporal costs do affect consumption decisions. We also show that consistent with the mental accounting for sunk cost hypotheses, the relationship between waiting time and spending depends on the perception of that time as an investment. We show that by introducing distractions or reducing unoccupied waiting time, the positive relationship between waiting time and purchase quantity can be diminished.

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# To Apologize, or not to Apologize? That is a Question - How Should an Organization Respond to Executive Employees' Private Life Misconducts?

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## EXTENDED ABSTRACT

Crisis is a low-probability but high-impact phenomenon that hurts an organization's credibility and reputation (Pearson and Clair, 1998). Crisis can result from employees' misconducts in the workplace (e.g., employee making racist comments on customers; Coombs and Schmidt, 2000), and beyond (e.g., executive abusing child in private life; Johnson, Folks, and Wang, 2018). While research has looked into the effectiveness of response strategies in dealing with workplace employee misconducts, there has yet been any discussion upon appropriate responses to non-workplace misconducts, seemingly assuming the same strategies can be taken. This research aims to fill this gap.

Among the many response strategies to crisis, apology and apologia are frequently compared and discussed (Bradford and Garrett, 1995; Dutta and Pullig, 2011). By definition, apology refers to admissions of responsibility and showing regret about the unwanted event (Hargie, Stapleton, and Tourish, 2010), whereas apologia is about denial of responsibility and relevance to the event (Tsarenko and Tojib, 2015). When an employee's misconduct happens within the workplace, where the firm is expected to have control over employee behaviours, it is unlikely for the firm to shred or deny its responsibility in the event. As a result, apology can help attenuate the advert effects of misconduct (Coombs and Schmidt, 2000). When responding to employee misconducts happening beyond the workplace, however, whether to use apology or apologia depends on the extent to which the organization is perceived to be responsible for the event. Although an organization usually has no control over its employee's private life behaviour, there are reasons to believe that it could still get scrutinized for responsibilities, and this is particularly true for employee misconducts that violate an organization's core value.

Organizational membership works as an implicit endorsement of an organization's values (Effron, Lucas, and O'Connor, 2015). Employees are expected to uphold the same core values that their organizations promote. This is especially true for executives as they are usually seen as representatives of an organization (Zhu and Chang, 2013). As a result, if an executive violates the organization's core value (same domain misconduct), be it in the workplace or private life, the organization is not only perceived to be responsible but also be hypocritical as it promotes one value but acts oppositely by allowing its executive to violate it (Barden, Rucker, and Petty, 2005; Wagner, Lutz, and Weitz, 2009). When someone is accused of hypocrisy, denying responsibility can further increase this perception (Shkler, 1979) and hypocrisy could lower moral reputation (Laurent et al. 2014). Based on this theorizing, we expect that apologia (vs. apology) can hurt, instead of help with, organization reputation when dealing with same domain employee misconduct. On the other hand, if an executive's misconduct is unrelated to the organization's core value (different domain misconduct), the organization is not perceived to be responsible, or hypocritical as there is no contradiction of value claim and actions. As a result, apologia and apology can be similarly effective in retaining the organization's reputation. Two studies, with different employee misconducts and organizational values, are used to provide evidence for our expectations.

Study 1 showed that with same domain executive misconduct, apologia is less effective than apology in retaining organization reputation. Sixty-nine undergraduate students (35% female) participated in this one-factor between-subjects study. They read an article about the CEO of SCAA (Stop Cruelty Against Animal) kicking and choking a puppy in a hotel elevator (modified from a real-life case). Then, participants were either shown an apology or an apologia statement issued by the organization. Finally, participants rated organizational reputation (Coombs and Holladay, 2002,  $\alpha = .78$ ) and response appropriateness (Johnson et al., 2018,  $\alpha = .93$ ). As expected, apology (vs. apologia) resulted in significantly higher organizational reputation ( $F(1,67) = 5.29, p = .02$ ). In addition, apology was considered a more appropriate response with same domain employee misconduct ( $F(1,65) = 7.90, p < .01$ ).

Study 2 tested the moderating role of misconduct domain and the underlying mechanism of hypocrisy perceptions. One hundred and fifty undergraduate students (60% female) participated in this 2 (response strategy: apology vs. apologia) X 2 (misconduct domain: same vs. different) between-subjects study. For the same domain manipulation, participants read that the CEO of SCAA (Stop Cruelty Against Animal) kicking and choking a puppy in a hotel elevator (the same as study 1), whereas for different domain, the same misconduct was committed by the CEO of FFL (Foundation of Family Literacy), an organization promoting education and literacy. After reading apology or apologia statements, participants rated organizational reputation ( $\alpha = .72$ ), hypocrisy perception (Wagner et al., 2009,  $\alpha = .86$ ), and the organization's responsibility (Lee 2005,  $\alpha = .73$ ).

The results revealed a significant interaction between response strategy and misconduct domain on organization reputation ( $F(1,146) = 7.71, p < .01$ ) and hypocrisy perceptions ( $F(1,146) = 2.95, p < .10$ ). With the same domain misconduct, apologia (vs. apology) enhanced hypocrisy perceptions of the organization ( $F(1,146) = 6.571, p < .05$ ), and thus undermined organization reputation ( $p < .01$ ). With different domain misconduct, apologia and apology did not influence hypocrisy perception ( $p > .90$ ) or organization reputation ( $p = .57$ ). Hypocrisy perception mediated the interaction of response strategy and misconduct domain on organization reputation ( $B_{\text{indirect}} = .20, se = .13, CI = [.001, .555]$ ). With the same domain misconduct, apologia significantly reduced organization reputation by increasing hypocrisy perception ( $B_{\text{indirect}} = -.21, se = .10, CI = [-.473, -.050]$ ); whereas with different domain misconduct, hypocrisy perceptions did not mediate the relationship ( $B_{\text{indirect}} = -.01, se = .07, CI = [-.165, .158]$ ). Correspondingly, the organization was assumed to bear more responsibilities when employee misconduct violated the same (vs. different) value the organization promoted ( $F(1,144) = 3.71, p = .056$ ).

Taken together, this research established the fact that effectiveness of response strategies largely depends on the organization's own corporate values. Hypocrisy perception is the underlying mechanism that distinguishes strategy effectiveness. This research not only extends our understanding of crisis literature, but also enriches the hypocrisy literature by showing how other's action can make someone look hypocritical.



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# The Price of a Threat: How Social Identity Threat Influences Price Sensitivity

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## EXTENDED ABSTRACT

João is a reliable worker in a low-pay but quite stable job. Nonetheless, João is black, uneducated, and lives in a favela. No wonder he is highly sensitive to cues that threaten one or multiple dimensions of his social identity and that makes it clear that racial segregation is well and alive in the city. Cues that, whenever possible, he tries to avoid.

Given the financial constraints, standard economic theory and sheer intuition would predict consumers like João to be highly price sensitive. For many purchase decisions, that is indeed the case. Scholarly research has successively demonstrated that the poor are more price sensitive than their wealthier counterparts (Jones, Chern, and Mustiful 1990). However, as João's example highlights, most consumers on the far-left side of the income distribution are not only short on money. They are also uniquely sensitive to the marketplace cues that threaten one or several dimensions of their social identity. In this paper, we investigate how these two income-covarying forces—perceived social identity threats (SITs) and financial paucity—influence consumers' sensitivity to the monetary dimension of the target choice.

Our research advances the field by documenting when and why consumers from impoverished areas (i.e., hereafter, identity-vulnerable consumers) become, counterintuitively, less price/prize sensitive than their much wealthier counterparts (i.e., hereafter, identity-guarded consumers). We expand the so-called "ghetto tax" (Eckholm 2006) by showing that even when consumers can exert price sensitivity, they often choose not to do so in a systematic attempt to avoid the SITs of the purchase environment where the cheapest option or most valuable prize happens to be located. In doing so, our findings broaden the array of consequences of SITs (Seibt and Förster 2004; Steele, 1997) while contributing with a new effect to the burgeoning scarcity literature (e.g., Shah, Shafir, and Mullainathan 2015).

Across three experiments, we have shown that to avoid intergroup contact in commercial settings, identity-vulnerable (i.e., poor) consumers were willing to pay a higher price for both products and services and accepted lower-value rewards when compared to identity-guarded (i.e., wealthy) consumers. Whereas mediation analysis (study 1) showed that identity-vulnerable individuals were less price sensitive due to a higher anticipated prejudice, moderation data (study 3) demonstrated that this effect was contingent on the consumers' level of collective self-esteem. Subjects' choices of grocery coupons in a consequential scenario (study 2) provided external validity for these findings.

More precisely, study 1 employed a 2 (consumer identity: vulnerable vs. guarded; observed) x 2 (type of group contact at the commercial setting: intragroup vs. intergroup) between-subjects design. Residents from wealthy and impoverished areas of the city of Rio de Janeiro were asked to make a hypothetical choice between two options in which a trade-off between price and location/convenience was at stake. In one condition, the cheapest option was available in an intragroup commercial setting (i.e., a store that targets a social class similar to that of the participant) whereas on the other condition, it was available in an intergroup commercial setting (i.e., a store that targets a social class different from that of the participant).

Identity-vulnerable consumers were less sensitive to price when the cheaper option was available in an intergroup commercial setting than in an intragroup commercial setting. Identity-guarded consumers (i.e., from the high echelons on the socio-economic ladder), on the other hand, were equally sensitive to price, irrespective of the social class most associated with the commercial setting. Furthermore, we tapped into the SIT mechanism using a moderated mediation model. When faced with an intergroup (vs. intragroup) commercial setting, identity-vulnerable consumers anticipated more discrimination in the marketplace and were, therefore, willing to pay higher prices for the flip-flops to avoid the discriminatory cues (i.e., SITs). Conversely, identity-guarded consumers facing the same situation anticipated less discrimination when faced with an intergroup (vs. intragroup) commercial setting and were therefore not willing to pay more for the flip-flops.

Study 2 employed a 2 (consumer identity: vulnerable vs. guarded; observed) x 2 (type of group contact at the commercial setting: intragroup vs. intergroup) between-subjects design to assess whether vulnerable and guarded consumers prefer to obtain a lower vs. a higher-value grocery coupon to be redeemed at either an intra or an intergroup commercial setting. Group contact had no impact among identity-guarded consumers but strongly influenced identity-vulnerable consumers, such that poorer consumers were much less value sensitive in an intergroup than in an intragroup setting. Further, in line with the literature and intuition, poorer consumers were more value sensitive than their wealthier counterparts. But that happened only in an intragroup commercial setting. The effect reversed when the higher-value coupon was to be redeemed in an intergroup commercial setting.

Relying on a different setting (i.e., bank) and purchase option (i.e., financial services), study 3 employed a 2 (group contact: intragroup vs. intergroup; manipulated) x 2 (level of identity vulnerability: high vs. low; observed) between-subjects design and assessed consumers' ex-ante level of identity vulnerability to threatening environments (i.e., attachment to one's social group and public collective self-esteem). Level of identity vulnerability moderated the effect of group contact such that those with high identity vulnerability preferred to pay a higher fee for a financial service to avoid incurring group contact, but no such differences emerged among participants with low identity vulnerability.

With identity-vulnerable consumers from a developed country (i.e., residents of low-income areas of New York City), study 4 employed a 2 (consumption environment: physical vs. online) x 2 (prejudice salience: salient vs. neutral) between-subjects design. The awareness of the likelihood of prejudice toward low-income people (i.e., *prejudice salience*) reduced participants' price sensitivity when their purchase would occur in a physical store. However, no such differences emerged among participants assigned to purchase in an online store. As expected, the interaction between prejudice manipulation and purchase channel was significant, such that prejudice manipulation did not affect price sensitivity for participants on the online store. These findings are consistent with the proposition that SITs make identity-vulnerable more willing to pay higher prices to alleviate the sentiment of threat in these environments.

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# Meaningful Numbers: Consumer Response to Verbal Reaffirmation of Numerical Nutrition Information

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## EXTENDED ABSTRACT

Although the types of front-of-package (FOP) nutrition labels that best engage and influence consumers' product evaluations and decision-making processes are still poorly understood (Newman, Howlett, and Burton 2016), research seems to converge on the idea that some combination of numerical and easy-to-process information is most effective across a variety of situations (Newman et al. 2018; Sanjari, Jahn, and Boztug 2017). The GDA-Traffic Light (GDA-TL) is one label scheme that combines condensed numerical information about key nutrients (e.g., fat, sugar, and salt) with color indicating whether the amount of each key nutrient is below a defined value (FSA 2016). Due to this combination of numerical information and simple color coding, GDA-TLs are often regarded as the superior FOP nutrition labeling scheme (Borgmeier and Westenhoefer 2009; Grunert, Bolton, and Raats 2012; Siegrist, Leins-Hess, and Keller 2015; van Herpen, Hieke, and van Trijp 2014).

Despite the promising features of the GDA-TL label, it is not without its shortcomings. For example, this labeling scheme does not assist consumers in distinguishing between multiple products with the same color profile. Color profiles often do not differ within a category, limiting their usefulness in decision making. Moreover, the color cue is ambiguous when it does not directly reaffirm the numerical information. For instance, three products that contain 6g, 21g, and 23g sugar would be color coded as *amber*, *amber*, and *red*, respectively (FSA 2016). As this example shows, the numerical information would lead to a different inference (i.e., product 1 contains substantially less sugar than the other two) than the color profile (i.e., product 3 contains substantially more sugar than the other two). Against this background, it is not surprising that the GDA-TL does not always work better than a purely numerical label such as the GDA (Crosetto, Muller, and Ruffieux 2016; Koenigstorfer, Groepel-Klein, and Kamm 2014). From a consumer research perspective, this means that some combinations of numerical and easy-to-process information—especially if the cues do not perfectly align—are not always able to keep their promise of assisting consumers with nutrition information processing.

The main goal of this research is to examine the effectiveness of FOP labels that align numerical and easy-to-process cues. Specifically, we study consumer response to FOP labels where numerical nutrition information is unequivocally reaffirmed by a simpler cue. For example, numerical information can indicate that a product contains above-average calories in a given category by disclosing the calorie count of the product *vis-a-vis* the average amount of calories in the respective category (Jahn et al. 2018; Viswanathan 1994; Viswanathan and Hastak 2002). Because consumers have to first understand the connection between these numbers, there is some margin for error. An additional verbal cue stating, "this product has an above-average calorie amount" would then provide an easy-to-process reaffirmation of the numerical information. Because the verbal information is redundant of the numerical one, both cues are aligned.

Research in educational psychology has shown that students learn better with redundant rather than with nonredundant verbal explanations provided no other competing visual materials are presented simultaneously (Moreno and Mayer 2002). This means that

while the verbal information is redundant and hence might unnecessarily add complexity, it can be advantageous because it immediately provides meaning (Huber 1980). There is also evidence that consumers look for information that reaffirms advertisers' claims and then believe the claims even more (Hoch and Ha 1986). Thus, from an information processing perspective the verbal reaffirmation of the numerical information could assist consumers' decision making. Interestingly, consumer researchers have not yet addressed this important issue. Hence, we seek to shed light on how redundant, reinforcing information on FOP nutrition labels influences consumers' product evaluations and decision making.

To examine if and when easy-to-process cues that are paired with numerical ones improve consumer response, we focus on nutrition information that is essentially redundant. The redundancy of both cues helps avoid a problem in existing research where the effectiveness of cues is confounded with the issue of cue match. For example, it is difficult to test the strength of the GDA-TL if the numerical and the color cue do not perfectly align. By contrast, redundant information always aligns and thus allows for targeted assessment of cue pairing effectiveness. We use numerical information (calorie amount plus reference point) that is accurate yet cognitively demanding. By contrast, verbal information is less accurate (e.g., it does not inform about the magnitude of the deviation from the reference point) but easily understood. The combination of both cues has the potential to combine both advantages, ultimately resulting in improved consumer decision making. For reasons of simplicity, we consider only one key nutrient (calories), but the underlying mechanism is expected to generalize to more complex labeling schemes.

Across four studies, we demonstrate that numerical reference information can affect purchase behavior (Pilot Study) as well as perceived healthfulness and purchase intentions of hedonic but not healthful products (Study 1). The latter could be caused by a category-elicited health halo where consumers pay less attention to the nutrition information. As predicted, however, a verbal reaffirmation of numerical information was effective across categories (Study 2). Adding a reaffirming verbal cue assisted consumers in avoiding the category-elicited health halo and resulted in an accurate distinction between relatively healthful and unhealthy variations of ice cream and granola. Importantly, it was the reaffirmation and not the verbal cue alone that enabled consumers to identify within-category healthfulness differences of healthful products (Study 3). Beyond providing important theoretical contributions to consumer research, our findings reveal a potentially influential mechanism for decreasing category-evoked health halo effects and effectively increasing consumer understanding of nutrition information.

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# Feeling Bad by Wanting More or Wanting More by Feeling Bad: The Materialism - Well-Being Cycle

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## EXTENDED ABSTRACT

Across the world, holding strong materialistic values is associated with reduced subjective well-being. The common inference is that higher levels of consumer materialism uniformly lead to lower levels of subjective well-being (Karabati and Cemalcilar 2010; Kasser et al. 2014; Wang et al. 2017). Our research challenges the idea that higher levels of materialism uniformly reduce subjective well-being. Using a representative longitudinal database of over 5,300 Dutch consumers across three years (2013-2015) our research improves over previous, predominantly cross-sectional, studies both methodologically and conceptually. It shows that materialism is not inherently bad and moreover that subjective well-being may also influence consumer materialism.

Our multivariate autoregressive cross-lagged model address three potential sources of endogeneity which may systematically bias the size, sign and direction of the relationship between materialism and subjective well-being: measurement error, simultaneity, and omitted variables (Wooldridge 2002). Any of these sources of endogeneity causes a correlation between materialism or subjective well-being and the error term, leading to biased, and sometimes inefficient, estimates. We account for endogeneity by decomposing the observed association between materialism and well-being into true shared variance and error.

First, we include the measurement model that decomposes the total variance of our measures of materialism and well-being into their true variance and measurement error components, which we label “measurement decomposition.” This reduces potential attenuation bias due to unaccounted measurement error, yielding more precise and efficient estimates of the relationship between materialism and well-being.

Second, the model decomposes the total shared variance between materialism and well-being into two causal directions, which we label “directional decomposition.” This reduces bias due to unaccounted potential simultaneity of effects. The vast majority of materialism research is based on survey data collected at a single point in time, which impedes causal inferences. Even the few longitudinal studies have assumed that the causal direction runs from materialism to well-being, without allowing for the possibility of reverse causality (Wang et al. 2017). We propose that the relationship between materialism and subjective well-being is reciprocal. This has in fact been suggested previously (Burroughs and Rindfleisch 2002; Dittmar et al. 2014; Rustagi and Shrum 2017), but empirical research to address the issue is to our knowledge not yet available. Our model estimates both pathways simultaneously, and as such moves closer to understanding the causal processes.

Third, we control for various potentially confounders based on substantive theory, reducing the possibility of bias due to omitted variables (“covariate decomposition”). Particularly, we include age, income, education, and employment and marital status, which have been shown to affect materialism, subjective well-being, or both, as covariates (Charles, Reynolds, and Gatz 2001; Glenn and Weaver 1981a, b; Jaspers and Pieters 2016; Pieters 2013; Richins and Dawson 1992).

Our research also aims to make a conceptual contribution. We decompose the aggregate relationship between overall materialism and subjective well-being into disaggregate relationships for three key materialism dimensions, which we refer to as “construct decom-

position”. We build on the leading conceptualization of materialism by Richins and Dawson (1992) as a multidimensional construct with three dimensions: acquisition as the pursuit of happiness, acquisition centrality, and possession-defined success. These dimensions are conceptually and empirically distinct and have differential relationships with related variables such as age and loneliness (Jaspers & Pieters, 2016; Pieters, 2013). Correspondingly, they are likely to have distinct relationships with subjective well-being. Specifically, we propose that acquisition as the pursuit of happiness drives the negative association between overall materialism and well-being. This dimension reflects a dissatisfaction based on a perceived gap between consumers’ actual and desired material states. This dissatisfaction extends beyond the material domain, leading to reduced well-being. Acquisition centrality and possession-defined success are inherently more positive, reflecting emotional and social benefits of acquisition and ownership of possessions. Their associations with subjective well-being are therefore expected to be neutral or even positive. Decomposing the aggregate relationships between overall materialism and well-being disentangles the negative and potentially positive effects that materialism and well-being have on each other and informs our understanding of the mechanisms underlying them.

We found that materialism and well-being influenced each other over time, which supports the hypothesized reciprocal relationship. Specifically, higher levels of materialism led to lower later levels of well-being ( $-.045, p < .001$ ), and higher levels of well-being led to lower later levels of materialism ( $-.060, p < .001$ ). Importantly, the difference between these two standardized cross-lag effects was not significant ( $.015, p = .406$ ), implying that the two effects did not differ significantly in strength. As predicted, acquisition as the pursuit of happiness drove this negative relationship. Consumers who scored higher on acquisition as the pursuit of happiness were less satisfied in subsequent years ( $-.150, p < .001$ ), and consumers who were less satisfied later scored higher on acquisition as the pursuit of happiness ( $-.110, p < .001$ ). Possession-defined success also had a reciprocal relationship with well-being. However, possession-defined success had a positive effect on later levels of well-being ( $.054, p < .001$ ), while the effect of well-being on later levels of possession-defined success was negative ( $-.050, p < .001$ ). For acquisition centrality the relationship was unidirectional: consumers who scored higher on acquisition centrality had higher later levels of well-being ( $.047, p < .001$ ), but well-being did not affect later levels of acquisition centrality ( $.011, p = .373$ ).

Taken together, our contributions based on four decompositions (methodological and conceptual), move us closer to more accurate inferences about the size, sign, and direction of the relationship between materialism, its three dimensions, and subjective well-being. It answers to repeated calls for longitudinal studies to examine this vexing issue (Dittmar et al. 2014; Rustagi and Shrum 2017). Our findings highlight the potential of longitudinal data to make plausible causal inferences when experimental research is difficult or unethical. It emphasizes the importance of treating materialism as a multidimensional construct to reveal the distinct relationships that the three dimensions have with antecedents and outcomes. Treating materialism as unidimensional conceals these underlying relationships and suggests that materialism negatively affects well-being, despite two of its three dimensions actually having positive effects on well-being.

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# The Impact of Previews on the Enjoyment of Multicomponent Multimedia Experiences

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## EXTENDED ABSTRACT

Previews, ranging from movie trailers to music samplers, commonly preface the consumption of extended multimedia experiences such as movies, television shows, and music. Given the ubiquity of such previews, one might wonder if they have downstream effects on the final consumption experience. For example, could seeing a movie's trailer change how much consumers later enjoy the movie?

There is some theoretical precedence for the notion that previews, and the information processing they engender, can qualitatively affect downstream consumption experiences. After all, consumer experiences are to a significant degree contextually and subjectively constructed within consumers' minds, often under the guidance of marketers, rather than objective experiences (Alba and Williams 2013; Ariely and Norton 2009). A growing literature on marketing placebo effects also shows that information processing taking place before consumption can qualitatively change the subsequent enjoyment of an experience (Lee, Frederick, and Ariely 2006; Plassmann et al. 2007; Shiv, Carmon, and Ariely 2005). The rationale behind these and related findings is that pre-experiential information processing can activate expectations that become salient in consumers' minds, and change how they approach upcoming experiences (Mandel and Nowlis 2008; Shiv et al. 2005; Wadhwa, Shiv, and Nowlis 2008). Could previews have an analogous impact on the consumption of multimedia experiences? Could the nature of the preview affect how much consumers enjoy an upcoming experiences?

In investigating these questions, we focus on the impact of previews on 'extended' multimedia experiences (Ariely and Zaubergerman 2000) comprised of multiple components (e.g., several scenes in a television episode, etc.). Our conceptualization bridges a research gap between the marketing placebo effect literature and the literature on 'extended' consumer experiences, which documents the structure, composition, and time course of complex, longitudinal experiences (e.g., Ariely and Loewenstein 2000; Ariely and Zaubergerman 2000, 2003; Diehl, and Ariely 2006; Kahneman 2000; Hsee and Abelson 1991; Teixeira, Wedel, and Pieters 2012; Wirtz et al. 2003). The former, which explores how marketing actions can qualitatively change consumer experiences, typically focuses on structurally simple, 'single component' experiences (e.g., one bite of chocolate, one taste of wine). The latter, which maps the time course, structure, and composition of complex longitudinal experiences, typically does not consider how marketing actions or information processing can qualitatively change the nature of those experiences. We combine the two conceptual perspectives.

We find that the impact of previewing on enjoyment is mediated by how much a preview affects the upcoming multimedia's 'experiential coherence,' or how well the different parts of a multicomponent experience fit together. Our conceptualization predicts when previews have a negative impact (when previews induce narrow focalization on a single component, similar to focalism; Wilson et al. 2000), when the negative impact is attenuated (when previews have a broader focus on multiple components, even including the less enjoyable components), and also when previews can enhance enjoyment (when previews improve experiential coherence). This also reconciles our results with previous findings that 'spoilers don't spoil stories' (Leavitt and Christenfeld 2011). Throughout, we use real consumer experiences to enhance the ecological validity of our findings.

In Study 1, we find that a poster previewing scenes from a Mr. Bean episode will reduce the online enjoyment of the upcoming episode when the preview narrowly highlights the funniest scene;  $M_{\text{prev.}} = 6.25$ ,  $M_{\text{narrow}} = 5.73$ ,  $F(1, 256) = 4.76$ ,  $p = .03$ ,  $d = .584$ . The effect is attenuated when the preview is expanded to include pictures of other scenes (while still including the scene in the narrow preview condition).

Study 2 replicates the basic effect and moderation by exploring how different audio music previews of a new song affect the enjoyment of the song's audio-visual music video, and operationalizes relative focus of previews by manipulating how much of a song is played as a preview. A narrow preview that plays only the iTunes preview of the song results in less enjoyment of the music video;  $M_{\text{no preview}} = 6.51$ ,  $M_{\text{narrow}} = 5.78$ ,  $p = .048$ ,  $d = .511$ . However, previewing the full song (broad preview) attenuates the effect, while simultaneously ruling out alternative mechanisms such as adaptation or cognitive load.

In Study 3, we find that the effect is mediated by experiential coherence, or how well the different components of the experience fit together. We find that watching the official movie trailer of an award winning 5 minute short film reduced its enjoyment, , and that this was mediated by experiential coherence, 95% CI = [-0.708, -0.032].

We replicate the mediation in Study 4 where we manipulate (narrow) style of processing. All participants previewed a set of paintings in thumbnail form before examining each painting in full screen form. In a narrow preview condition, the preview highlighted that one of the thumbnails was a sensual female nude (all participants were male); this subsequently resulted in less enjoyment of the virtual art gallery,  $M_{\text{non focal}} = 5.59$ ,  $M_{\text{focal}} = 5.10$ ,  $F(1, 213) = 5.10$ ,  $p = .025$ ,  $d = .614$ . Again, this effect is mediated by experiential coherence, 95% CI = [-.2353, -.0177].

In Study 5, we show that previews that increase experiential coherence can improve enjoyment,  $M_{\text{control}} = 4.87$ ,  $M_{\text{broad}} = 5.30$ ,  $F(1, 198) = 4.35$ ,  $p = .038$ ,  $d = .546$ , and that this improvement is mediated by experiential coherence, CI = [0.068, 0.465]. Specifically, we create a preview for a comic book that either explains how the subsequent comic panels relate to each other narratively. Finally, Study 6 replicates the main effect and moderation results in a field setting, where participants report their online enjoyment of a popular TV show via text message. Besides finding significant differences in online enjoyment, we also found significant differences in post-experiential ratings of enjoyment, willingness to purchase, and willingness to share with friends in each study.

These findings have direct managerial implications for the marketing and consumption of multimedia and digital products, for which previewing is often an unavoidable part of the consumption experience (e.g., movie trailers on YouTube, song previews on music platforms, expert gameplay on Twitch).

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# Attribution of Authenticity: The Benefits of Self-Disclosure of Unfavorable Information

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## EXTENDED ABSTRACT

In the 2016 U.S. presidential election, questions of authenticity loomed large (Sergent, 2016; Szalai, 2016; Talbot-Zorn & Marz, 2016; Zimmer, 2016; Zogby, 2016). We suggest that when a person voluntarily discloses her/his weaknesses, because disclosing one's weaknesses is costly, this costly behavior can be only interpreted as that the target truly embraces his/her true self, and therefore, observers will view the person as an authentic individual who has embraced both negative and positive aspects of the self. Moreover, we suggest the effect of disclosing unfavorable information relies on *voluntary self-disclosure*. When disclosure of unfavorable information is not *voluntary*, the lack of information about the target's *intention* or *will- ingness* to disclose unfavorable information will prevent the recipient from making dispositional inferences about his/her authenticity.

In Study 1a, participants ( $n = 200$ ) were asked to imagine they were on an interview and met a CEO of the company. The CEO introduced himself. We randomly assigned participants to one of two conditions: The CEO either disclosed an unfavorable piece of information (being nervous about public speaking) or not. Afterward, we measured participants' impressions of the CEO on three dimensions: perception of authenticity (six items,  $\alpha = .93$ : e.g., authentic, genuine, adapted from Hahl & Zuckerman, 2014, and Ridgeway & Correll, 2006), competence (four items,  $\alpha = .89$ : e.g., competent, skillful), and warmth (four items,  $\alpha = .87$ , e.g., kind, friendly) on a scale from "not at all" (1) to "very much" (7). Each of these scales was randomly mixed in with other scales. We also measured individuals' overall impression of the CEO on a scale from "very negative" [-5] to "very positive" [5].

Compared to the no-unfavorable information condition, participants in the unfavorable information condition perceived the CEO to be more authentic ( $M_{\text{unfavorable information}} = 5.74$  vs.  $M_{\text{no-unfavorable information}} = 5.34$ ,  $F(1, 198) = 7.96$ ,  $p = .005$ ), and had better overall impressions of him ( $M_{\text{unfavorable information}} = 3.05$  vs.  $M_{\text{no-unfavorable information}} = 2.54$ ,  $F(1, 198) = 4.13$ ,  $p = .044$ ). However, perception of competence did not differ ( $F(1, 198) = .61$ ,  $p = .44$ ). Importantly, as we predicted, based on bootstrapping with 10,000 resamples, we found that authenticity [95% bootstrapped confidence interval (CI): 0.098, 0.586] and not competence (95% bootstrapped CI: -0.102, 0.090) mediated the relationship between unfavorable information disclosure and overall impression. Study 1b replicated Study 1a with a different unfavorable information: "not able to keep track of technological changes". Study 1b also examined a behavioral outcome of perceived authenticity: participants' propensity to take the job from a manager when has disclosed unfavorable information about himself if offered a position.

Study 2 tested the behavioral consequences of self-disclosure of unfavorable information using a trust game (Berg, Dickhaut, & McCabe, 1995) with real money. We randomly assigned 218 participants to play the role of either a manager or a potential employee ( $n = 109$  for each). Managers were given a script for their self-introduction. They were randomly assigned to the control condition or the unfavorable information condition. In the unfavorable information condition, they said: "I'm quite shy. I am nervous about public speaking, and I have a habit of cracking my knuckles." After the task, we separated each pair. The employee rated the manager on the following dimensions, similar to study 1: perception of authentic-

ity, competence, as well as the extent they wanted to work with the manager again.

Next, the employee (sender) played the trust game with the manager (receiver) with whom they were paired. The employee received an endowment of \$3 and was told he/she had to decide how much of the \$3 to transfer to the manager; any amount between and including 0 and \$3, in an increment of \$0.25 (a quarter), was feasible. The employee was told that any money would be tripled in transit. In turn, the manager would then have the option to send some, all, or none of the money back. The money allocation served as another key dependent measure in the study.

Compared to the no-unfavorable information condition, employees in the unfavorable information condition perceived the CEO to be more authentic ( $M_{\text{unfavorable information}} = 5.27$  vs.  $M_{\text{no-unfavorable information}} = 4.88$ ,  $F(1, 107) = 4.17$ ,  $p = .044$ ). However, perception of competence did not differ ( $M_{\text{unfavorable information}} = 5.17$  vs.  $M_{\text{no-unfavorable information}} = 5.05$ ). Similarly, participants in the unfavorable information condition wanted to work with their manager again compared to those in the no-unfavorable information condition ( $M_{\text{unfavorable information}} = 5.36$  vs.  $M_{\text{no-unfavorable information}} = 4.77$ ). In addition, those in the unfavorable information condition gave more money to their manager in a trust game ( $M_{\text{unfavorable information}} = \$2.39$ , vs.  $M_{\text{no-unfavorable information}} = \$2.02$ ),  $F(1, 107) = 4.16$ ,  $p = .044$ . Authenticity mediated the relationship between unfavorable information disclosure and as well as wanting to work with the manager again.

Study 3 demonstrated the volitional act of self-disclosure is central to our account: the choice to embrace weaknesses is the key that leads observers to make inferences about the "type of person" the discloser is. When unfavorable information is disclosed as a mandatory (not voluntary) request or when the information is disclosed by a third person (not self-disclosure), the effect no longer holds. We randomly assigned participants ( $n = 240$ ) to one of four conditions in a 2 (type of unfavorable information: unfavorable information, no unfavorable information) by 2 (disclosure of the unfavorable information: voluntary, requested) between-participants design. Significant interactions suggested that in the voluntary self-disclosure condition, candidates perceived the manager to be more authentic and were more willing to work with the manager when the manager voluntarily self-disclosed unfavorable information about himself than when the manager disclosed no unfavorable information. However, in the requested-disclosure condition, when the manager disclosed unfavorable information due to a specific task requirement, the effect disappeared.

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# Does a Blurry Background Make a High Roller?

## The Effects of Blurry Versus Sharp Backgrounds on Consumers' Risk-Taking Behavior

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### EXTENDED ABSTRACT

Blurry backgrounds are now ubiquitous in visual ads and in the design of apps and websites. Various online businesses adopted blurry backgrounds in their commercial webpage with blurry backgrounds perceived as cool and stunning (Kamps 2013). The question we ask is: is the use of blurriness simply a matter of aesthetic considerations or is it possible that the use of blurred backgrounds can impact consumer decisions, for example when choosing a hotel to stay at or purchasing a lottery ticket?

Aerial perspective theory hypothesizes that spatially distant objects appear blurrier than do spatially nearer objects (Palmer and Brooks 2008). Further, construal level theory (CLT; Trope and Liberman 2010) suggests that greater spatial distance activates a high-level construal (Liberman and Förster 2009), which in turn increases risk-taking by promoting sensitivity to payoff (Sagrignano et al. 2002). By connecting these two distinct literatures, our work leads to a novel prediction: the use of blurry backgrounds could activate a high-level construal, which in turn could facilitate consumers' risk-taking.

We report six experiments that collectively explore our theorizing. We first ran two pilot studies to examine the aerial perspective theory empirically. In Pilot Study 1a (N=570), we manipulated four levels of blurriness (from 0% to 3%) of the two photos showing horizontally juxtaposed objects (i.e., trees or houses). Participants assigned to a 2 (photo type: houses vs. trees) x 4 (blurriness: 0% vs. 1% vs. 2% vs. 3%) between-subjects design saw one of eight photos and estimated how far the objects were located. The results showed that participants' perceived distance of the objects increased linearly in proportion to the level of blurriness. Pilot Study 1b (N=215) adopted a 3 (photo type: houses vs. trees vs. buildings) x 3 (blurriness: 0% vs. 5% vs. 10%) mixed-design with photo type as a within-subjects factor, where only backgrounds (not target objects) were blurred and a categorization task (Wakslak et al. 2006) was included to assess participants' construal level. This study found that participants' perceived distance increased linearly in proportion to the level of blurriness, while their levels of construal linearly decreased. Bootstrapping results (5000 resamples) yielded a significant indirect effect of blurry backgrounds on construal through perceived distance.

In Study 1 (N=118), we adopted the website format from a real website titled Mystery Hotel (wotif.com), on which consumers book a hotel without knowing the hotel name and thereby take risks. We replaced the website's original background with two different pretested backgrounds (i.e., abstract pattern and hotel lobby) and manipulated blurriness (0% vs. 10%) for each of them. 118 MTurkers assigned to one of the four (blurriness: blurry vs. sharp) x (image type: abstract pattern vs. hotel lobby) between-subjects conditions viewed the website image and answered the two-item ( $\alpha = .97$ ) purchase intention questions for hotel booking. An ANOVA revealed only a significant main effect for blurriness, showing that exposure to blurry backgrounds increased consumers' purchase intention. A post-hoc study (N=97) confirmed that the Mystery Hotel website was significantly riskier but not more curiosity-evoking, compared to the version where hotel names were revealed. Since the pretested images were rated as equally familiar, the results also rule out the processing fluency account whereby fluency affects risk perception through perceived familiarity (e.g., Song and Schwartz 2009).

Study 2 (N=124) employed the same procedure and measures as those used in Study 1, but the study used only the abstract pattern background and adopted a categorization task after the purchase intention questions. Replicating Study 1, blurry backgrounds increased consumers' purchase intention to make a hotel booking. Blurry backgrounds also elevated participants' levels of construal. Lastly, bootstrapping results (5000 resamples) yielded a 95% CI excluding zero, suggesting that construal level mediated the effect.

In Study 3 (N=111), we aimed to replicate the effects in the online lottery domain while ruling out two alternative hypotheses: 1) ambiguity tolerance and 2) mood effects. By combining another pretested background (i.e., abstract pattern) with an online Powerball website format, and manipulating blurriness, we created a pair of fictitious Powerball website images. Participants randomly assigned to one of the two conditions (blurriness: blurry vs. sharp) saw the fictitious website and answered the two-item ( $\alpha = .89$ ) purchase intention questions. Participants then completed a 20-item ambiguity tolerance scale (AT-20), rated their feelings using six mood items, and answered a question about their lottery purchase frequency. An ANCOVA with lottery purchase frequency as a covariate showed that blurry backgrounds increased participants' purchase intention. We also found no significant differences in participants' AT-20 scores and mood scores across conditions.

In Study 4 (N=303), we investigated whether emphasizing riskiness of the target option would attenuate the effect. MTurkers assigned to a 2 (blurriness: blurry vs. sharp) x 3 (headline: payoff salient vs. probability salient vs. control) between-subjects design were presented with a real lottery task, shown with a blurry or sharp background. The main body text noted that participants had a 25% chance of winning an extra \$2, in addition to the \$0.5 recruitment fees. Headline sentences above this main text were manipulated such that either payoff (extra \$2) or probability (a 25% chance) was emphasized. In the control condition, no such emphasis was placed. Participants revealed their intention to play the lottery ("Yes" vs. "No") and completed a response category width task (Krüger et al. 2014) for construal level assessment, whereby a wider category estimation indicates a higher construal level. Blurry backgrounds increased participants' lottery participation rates in the control and payoff salient conditions, but not in the probability salient condition. Blurry backgrounds also induced wider category estimates in the control and payoff salient conditions, whereas the effect was not significant in the probability salient condition. Bootstrapping analyses (5000 resamples) also validated a moderated mediation model, showing that the mediating role of construal level was only valid in the control and payoff salient conditions.

Together, these results suggest that exposure to blurry backgrounds activates a high-level construal which in turn promotes consumers' risk-taking. Additionally, the results indicate that highlighting the riskiness of the target option may attenuate effects.

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# When products become autonomous: Drawbacks of a perceived lack of control and how to resolve it

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## EXTENDED ABSTRACT

### INTRODUCTION

Autonomous products are on the rise. Partly or fully autonomous products fulfill tasks and make decisions in more and more domains, where the consumer has previously executed actions manually. It is projected that 32.4 million units of autonomous products only for domestic tasks will be sold by 2020, representing a market value of \$11.3 billion and a growth rate of 30-35% per year (*Executive Summary World Robotics 2017*).

Therefore, the investigation of consumer perceptions of autonomous products is a research topic of growing importance (Schweitzer and van den Hende 2016). On the one hand, consumers might be attracted by an increased convenience and by the option to use the time saved to engage in different activities. On the other hand, they might reject autonomous products due to perceived disempowerment and lack of control (Schweitzer and van den Hende 2016) or higher perceived complexity and risk (Rijsdijk and Hultink 2003). The perception of having control appears to be particularly relevant in this regard, since being in control positively contributes to humans' positive emotions and well-being (e.g., Langer 1975), whereas a lack of control induces negative feelings such as stress or even depression (Peterson and Stunkard 1992).

Beyond (lack of) control, we propose "responsibility" for the outcome as an additional important factor for the perception of autonomous products. To understand post-consumption evaluations and reactions, the attribution of responsibility is particularly important (Weiner 2000). It has been shown that the valence of outcome has an important impact on the perception of responsibility (Bradley 1978; Kelley 1967; Miller and Ross 1975). Therefore, we differentiate between positive and negative outcomes obtained by an autonomous product. The relevance to investigate responsibility in case of negative outcomes obtained by an autonomous product is obvious. For example, in the context of healthcare, where autonomous products are already in place: Who feels responsible when a surgery-supporting robot or a robot to support care services coincidentally harms a person? It is important to note that legal and perceived responsibility can fall apart. Such incongruity can cause cognitive dissonance and a decrease of subjective well-being (Festinger 1957), which, in turn, might affect product adoption and customer experience (Anderson et al. 2013).

Beside negative outcomes, we also consider positive outcomes as an important factor for the product experience. Responsibility for positive outcomes raises satisfaction (Tsiros, Mittal, and Ross 2004), commitment (Van Dyne and Pierce 2004), awareness, accomplishment, and self-worth (Wolf and McQuitty 2011).

The present contribution provides the first comprehensive investigation of responsibility for outcomes obtained by autonomous products, including its psychological processes and potential interventions to increase perceived outcome responsibility. As such, we link the literature on behavioral and decisional control (e.g., Averill 1973; Inesi et al. 2011) as well as the literature on responsibility perception, i.e. self-serving bias (Bradley 1978; Kelley 1967; Miller and Ross 1975) to the increasingly important research field of consumer

perceptions of autonomous products (Rijsdijk and Hultink 2003, 2009).

### THEORETICAL BACKGROUND AND RESEARCH HYPOTHESES

#### *Perceived behavioral control*

Ajzen (1991) defines perceived behavioral control as "the individual's perception of the extent to which performance of the behavior is easy or difficult." To prevent misunderstanding of the term it is suggested to read "perceived behavioral control" as "perceived control over performance of a behavior" (Ajzen 2002). In context of autonomous products, the user is replaced as a physically active decision-maker by automated systems (Wolf 2015) and products operate without interference of the user (Rijsdijk and Hultink 2009), what leads to the following hypothesis:

*Hypothesis 1: Perceived behavioral control over products decreases with an increasing degree of product autonomy.*

#### *Responsibility*

Responsibility is the „extent to which decision makers feel a sense of ownership of the outcome and so may credit themselves for good and blame themselves for bad outcomes.“ (Botti and McGill 2006). Research of perceived responsibility shows that with increasing engagement of persons in the decision process, the emotional evaluation of the output increases as well (Botti and Lyengar 2004). DeCharms (1968) suggests that control is an important factor for the evaluation of the output, since individuals value output more positively when they perceive the behavior stems from their own choice. Output will be devaluated, in contrast, when individuals perceive their choice is restricted by environmental circumstances (see also Festinger 1957). Since the decision is an important source for control (Inesi et al. 2011) and autonomous products replace humans as physical decision-makers (Wolf 2015), we hypothesize:

*Hypothesis 2: The perceived responsibility for outcomes decreases with increasing lack of perceived behavioral control over the product.*

#### *Self-serving bias*

In the context of attribution theory, extensive research exists about the influence of the outcome domain, i.e., positive vs. negative outcomes, on the corresponding attribution (e.g., Miller and Ross 1975; Ross 1977). The research of attribution theory also detected some attributional biases, among others self-serving bias. The self-serving bias suggests that people tend to attribute negative outcomes to external circumstances and positive outcomes to themselves, as a mechanism of self-protection (Miller and Ross 1975). Following this theory, one would expect that people attribute negative outcomes of autonomous products to the product, whereas positive outcomes should be attributed to themselves (Moon 2003). Therefore, we hypothesize:

*Hypothesis 3: Positive outcomes obtained by autonomous products are more likely attributed internally, whereas negative outcomes are more likely attributed externally, i.e., to the autonomous product.*

Taken together, we expect to find a moderated mediation effect.

## EMPIRICAL STUDIES

### Study 1

*Purpose* of study 1 was to investigate whether the degree of product autonomy influences the outcome responsibility. Therefore, we conducted an online experiment with a 3 (product category: car vs. heater vs. lawn mower)  $\times$  2 (degree of autonomy: manual level vs. full autonomy)  $\times$  2 (outcome domain: negative vs. positive) between-subjects design.

*Method.* We gathered  $N = 321$  participants via Prolific. Participants have been randomly assigned to one of three product categories (car, heater, or lawn mower) as well as to one of the product autonomy conditions (manual level vs. full autonomy). After reading the product descriptions, participants answered questions about the perceived autonomy (Rijsdijk and Hultink 2003) and perceived behavioral control of the specific product (Collier and Sherrell 2010). Afterwards, participants have been randomly assigned to a positive or negative outcome description and answered three questions about the outcome responsibility (Botti and McGill 2006).

*Findings.* We conducted a moderated mediation analysis as suggested by Preacher, Rucker, and Hayes (2007). We indeed confirm a significant mediation of perceived behavioral control for the relation between product autonomy and outcome responsibility for positive outcomes ( $B = -.70$ ;  $SE = .17$ ; 95% CI [-1.04, -.38]; based on 10,000 bootstrap-iterations). In the negative outcome domain, however, the mediation effect of perceived behavioral control disappears ( $B = -.28$ ;  $SE = .1717$ ; 95% CI [-.6293, .0458]).

### Study 2

*Purpose.* Opposite to our expectations, we find in study 1, that the mediation of perceived behavioral control for the relation between product autonomy and perceived responsibility, only applied to positive (i.e., successful) outcomes but not to negative ones (i.e., failures). Therefore, we aimed in our second study to identify the process that causes the high responsibility for negative outcomes obtained by autonomous products.

In our first study, the products were described as if the participant would own them. Although this had no particular reason with regard to the experimental manipulations, it may have affected participants' responses. Therefore, we propose and test the effect of perceived ownership on the perception of responsibility of negative outcomes obtained by manual or autonomous products.

Ownership can be differentiated in legal and psychological ownership (Pierce, Kostova, and Dirks 2001). Psychological ownership describes the feelings of ownership people develop towards objects (Pierce, Kostova, and Dirks 2003). It can be defined as "the state in which individuals feel as though the target of ownership or a piece of that target is 'theirs'" (Pierce et al. 2003, 86). Beyond that, psychological ownership can appear in the absence of legal ownership (Furby 1978).

The feeling of ownership is associated with different behaviors and effects, like citizenship or experienced responsibility (Pierce et al. 2003). Already children learn from their parents to take care of their own things, what may explain the importance of responsibility for owned things (Furby 1978). Moreover, feelings of responsibility

include positive behaviors as caring for the owned product and protecting it (Pierce et al. 2003). Therefore, the feeling of owning an autonomous product may increase the perception of responsibility for the outcomes obtained by this product. Accordingly, we hypothesize:

*Hypothesis 4: Responsibility for negative outcomes obtained by autonomous products increases when individuals perceive ownership of the product, whereas responsibility for negative outcomes obtained by manual products is independent of perceived ownership.*

*Method.* We test our hypothesis in an online experiment. We used the manual vs. autonomous car vignette of study 1 but additionally varied whether the car was described as being owned by the participant vs. provided by a company (and used by the participant). Hence, we applied a 2 (degree of autonomy: manual vs. full autonomy)  $\times$  2 (ownership: owned vs. non-owned) between-subjects design. Note that we only used the scenario with a negative outcome because the perception of negative outcomes was of particular interest in the current study. We gathered  $N = 236$  participants via Prolific Academic. As in Study 1, participants were randomly assigned to one of the vignettes. After reading the product description, they answered questions on the perceived autonomy, perceived behavioral control, and perceived ownership. Then the negative outcome was described and participants stated their perceived outcome responsibility.

*Findings.* As expected, we find a significant interaction effect between perceived behavioral control and ownership condition on outcome responsibility ( $B = -0.42$ ,  $SE = .10$ ,  $p < .001$ ;  $f = 0.07$ ). A lack of control decreases the responsibility for a negative outcome only when this outcome is obtained by a non-owned product ( $B = 0.43$ ,  $SE = .07$ ,  $p < .001$ ) but not by an owned product ( $B = 0.01$ ,  $SE = .07$ ,  $p = .874$ ). Additionally, perceived behavioral control mediated the effect of autonomy degree (manual vs. autonomous product) on perceived responsibility only in case of non-owned products (Index of moderated mediation = 1.33;  $SE = .33$ ; 95% CI [0.66, 2.01]). This indicates that a lack of control accounts for reduced responsibility for a negative outcome only when the participant perceives no ownership of the product (indirect effect:  $B = -1.22$ ;  $SE = .32$ ; 95% CI [-1.85, -0.57]). For a negative outcome obtained by an owned product, participants feel responsibility irrespective of perceived control over the product (indirect effect:  $B = 0.11$ ;  $SE = .33$ ; 95% CI [-0.52, 0.77]).

### Study 3

*Purpose* was to test an intervention that could increase consumers' responsibility for positive outcomes obtained by autonomous products. We tested whether the mere option to potentially interrupt product autonomy might increase consumers' perceived controllability and, in turn, outcome responsibility, particularly for positive outcomes. We used two product stimuli (car vs. heater), which both described a fully autonomous product. In one condition, participants were told they would have the possibility to interrupt the product autonomy, whereas in the other condition they had no such option. Afterwards, participants learned of a positive or negative outcome obtained by the product. Hence, we applied a 2 (possibility to interrupt product autonomy: uninterruptible vs. interruptible)  $\times$  2 (outcome domain: positive vs. negative)  $\times$  2 (product category: car vs. heater) between-subjects design. In line with our reasoning regarding the effect of the intervention, we hypothesized a moderation effect:

*Hypothesis 5: Responsibility for positive outcomes obtained by autonomous products increases when individ-*

uals have the possibility to interrupt the product, whereas responsibility for negative outcomes is independent of the possibility to interrupt the product autonomy.

**Method.** We gathered  $N = 223$  participants online via Prolific Academic. As in the previous studies, we assessed perceived behavioral control following the product description and assessed perceived outcome responsibility following the outcome description.

The procedure of the experiment was identical to Study 1 and 2, hence, participants were randomly assigned to one of the vignettes. To further stimulate a realistic feeling for the described product, we showed pictures of the described products in addition to the product description.

**Findings.** Participants indeed perceived higher behavioral control over autonomous products with the possibility of interruption ( $M_{interruptible} = 4.11$ ,  $SD = 1.51$  vs.  $M_{uninterruptible} = 2.64$ ,  $SD = 1.53$ ; OLS regression:  $B = -1.47$ ,  $SE = .20$ ,  $p < .001$ ;  $f = 0.19$ ). Moreover, a moderated mediation analysis provides support for the expected causal pattern (Index of moderated mediation =  $-0.43$ ;  $SE = .19$ ; 95% CI  $[-0.85, -0.09]$ ). Perceived behavioral control mediated the effect of uninterruptible vs. interruptible autonomous products on the perceived responsibility for positive outcomes ( $B = -0.45$ ;  $SE = .14$ ; 95% CI  $[-0.76, -0.20]$ ). In the negative outcome domain, as expected, the mediation effect failed to reach significance ( $B = -0.18$ ;  $SE = .14$ ; 95% CI  $[-0.29, 0.26]$ ).

## GENERAL DISCUSSION

Autonomous products are becoming increasingly popular. Our findings contribute to this developing research field. In three experimental studies, we have shown that perceived control over a product is an important element for the evaluation of outcomes obtained by this product. That is, when consumers perceive a lack of control over the product, this may decrease their perceived outcome responsibility. Interestingly, we find and replicate that this effect is restricted to positive outcomes, whereas participants feel generally more responsible for negative outcomes, irrespective of whether these were obtained by manual or by autonomous products. We are able to show the boundary conditions of this effect: In Study 2, we demonstrate that the high perceived responsibility for negative outcomes is due to the perception of ownership over the product (and decreases when ownership is absent). In relation to an increasing amount of alternative consumption forms like access-based consumption or product sharing, this represents an important finding. Since companies like UBER already test autonomous cars in field ("Self-Driving Cars | Explore Pittsburgh | Uber" n.d.), it is a realistic scenario, that customers will access and share autonomous products in the future. The missing responsibility for negative outcomes might represent an important factor for customers to demand such services.

The decreased responsibility for positive outcomes due to lower behavioral control over autonomous products is also of relevant interest. Since responsibility for outcomes may increase satisfaction (Tsiros et al. 2004), commitment (Van Dyne and Pierce 2004), awareness, accomplishment, and self-worth (Wolf and McQuitty 2011), marketers need solutions to overcome the lack of responsibility. We propose one simple solution: Increasing consumers' perception to have the possibility of interrupting the product autonomy at any time increases perceived controllability and, in turn, perceived responsibility for positive outcomes. This effect is interesting because in our experimental setting consumers did actually not interfere, and the outcome was still obtained solely by the autonomous product. This intervention may be of interest for developers and designers

of autonomous products because it could increase consumers' post-purchase satisfaction.

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# Shared Values, Trust, and Consumers' Deference to Experts

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## EXTENDED ABSTRACT

Consumers develop expertise in some areas (Alba and Hutchinson 1987), but are necessarily ignorant in others and must defer to experts. Deference creates a trust problem because others often have their own agenda (Sperber et al. 2010), particularly in economic contexts where money is on the line, as well as a problem of consensus because experts frequently disagree. Although advice-taking and attitude change have been carefully studied in other contexts (Bonaccio and Dalal 2006; Fleming and Petty 2000), little work has examined a potentially key determinant of consumers' deference to expert advice: The alignment between the consumer's and expert's cultural-ideological values.

Although values influence risk assessments in domains such as climate change (Kahan et al. 2010), little is known about how experts' values influence deference in less political contexts, such as consumer choices. We hypothesized that consumers would use shared values as a cue to the broader quality of the expert's judgment (and perhaps their trustworthiness as well). Further, we hypothesized that this effect would be exacerbated among consumers who subscribe to objectivist theories of moral truth (Goodwin and Darley 2008), since this view would imply that ideologically aligned experts have superior access to fundamental truths.

**Study 1** examined whether shared values play a role in consumer advice-taking in a hedonic domain—book recommendations. Participants ( $N=198$ , 38 excluded) were introduced to two book critics—one whose biography, publications, and facial features suggested more hierarchical values (e.g., deference to authority), and one who was presented as favoring egalitarian values (e.g., political equality). After answering multiple-choice questions about each advisor's biography, participants evaluated 14 books—2 for which the advisors agreed, and 12 for which they disagreed (half recommended by each advisor, counterbalanced), with their comments adapted from real reviews at [lithub.com](http://lithub.com). For each book, participants reported their likelihood of reading the book (0–100 scale) and checked a box to receive more information about the book at the study's end (a link to the book's Amazon page). Finally, participants completed value scales used in previous work (Kahan et al., 2010).

Difference scores for product evaluations between the products recommended by the egalitarian advisor and the hierarchical advisor were strongly predicted by egalitarianism ( $b=8.97$ ,  $p<.001$ ) but had no relationship with communitarianism. This shows not only that cultural values not only predict which experts consumers defer to, but that these effects are specific to the particular dimension of experts' and consumers' worldview under consideration (we manipulated experts' egalitarianism but not communitarianism). These expressed purchase intentions also manifested in information-seeking behavior, when participants were given the opportunity to access links to the books' Amazon pages. A mediation analysis uncovered a significant indirect effect of egalitarianism on clicks via purchase intention ratings (95%CI: .010 to .035).

Moreover, a replication study with undergraduate participants and consequential choices (a chance to win the chosen book in a lottery) uncovered a similar pattern of results, with choices deferential to the egalitarian rather than hierarchist critic predicted by egalitarianism ( $b=0.47$ ,  $p=.043$ ) but not communitarianism ( $b=0.08$ ,  $p=.71$ ).

**Study 2** extended the findings to more utilitarian products (e.g., blenders, printers, dehumidifiers). Participants were introduced to the same advisors, whose biographies were altered so that they were product reviewers. Participants evaluated 10 products, for which the advisors disagreed about 8 (counterbalanced), with their comments based on real Amazon reviews. Participants reported the probability that they would consider purchasing each product, and checked a box to receive more information. As in Study 1, egalitarianism was a strong predictor of purchase intention patterns ( $b=7.11$ ,  $p<.001$ ), while communitarianism was not ( $b=-0.53$ ,  $p=.75$ ). The indirect mediation path for clicks (Egalitarianism->Purchase Intentions->Clicks) was marginally significant (95%CI: -.001 to .013). Finding similar patterns of value-based deference for utilitarian products such as blenders undercuts the possibility that the effects of Study 1 were driven by social signaling (i.e., reading books to affiliate with one's cultural group).

**Study 3** tested the mechanisms. We hypothesized that perceived judgment would play a crucial mediating role, while also measuring the role of trust. We also measured similarity to test whether judgment has an effect over-and-above brute similarity (which has been found to be a significant predictor of attitude change; Burger et al. 2004; see also Fleming and Petty 2000). As in Studies 1 and 2, differences in purchase intention were predicted by egalitarianism ( $b=3.79$ ,  $p=.019$ ) but not communitarianism ( $b=0.68$ ,  $p=.67$ ). In a parallel mediation analysis, judgment (indirect effect 95%CI: 0.02 to 3.70) and similarity (95%CI: 0.86 to 4.39) together fully mediated the effect of shared values on purchase intentions, with no further effect of trust (95%CI: -1.80 to 1.38).

An analogous study using utilitarian products and WTP as the dependent measure uncovered similar patterns of mediation, with judgment playing the dominant role.

**Study 4** tested whether the mediating effect of perceived judgment quality was itself moderated by participants' beliefs about the objectivity of moral truth (e.g., "There are no clearly true or false answers to [moral] questions" [reverse-coded]). Analogous to previous studies, deference as measured by purchase intentions were affected by egalitarianism ( $b=0.68$ ,  $p<.001$ ) but not communitarianism ( $b=-0.03$ ,  $p=.82$ ). Participants in this study also made consequential choices, which were likewise affected similarly ( $z=2.49$ ,  $p=.013$  and  $z=0.15$ ,  $p=.88$ , respectively). A moderated mediation analysis revealed that egalitarianism predicted differences in perceived judgment ( $b=1.05$ ,  $p<.001$ ), but moreso among participants high in moral objectivism ( $b=0.26$ ,  $p=.018$ ). This led to a stronger indirect effect (egalitarianism->judgment->deference) for participants high rather than low on objectivism ( $b=0.93$  vs.  $b=0.56$ ) and a significant index of moderated mediation (95% CI: 0.00 to 0.36).

**Implications.** These studies show that the match between consumers' and experts' values is a major determinant of deference, leading consumers to favor some products over equivalent others, with this effect generalizing across hedonic and utilitarian products. This is important both to practitioners and to consumer advocates. While these effects can present opportunities for marketers to better target advertisements, they also expose consumers to the risk of persuasion attempts coupled with insincere value claims, which may circumvent consumers' vigilance.

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# The Best of Both Worlds: Androgyny in Consumer Choice

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## EXTENDED ABSTRACT

The marketplace is awash with masculine or feminine brands and products designed to appeal specifically to men or women (Grohmann 2009; Yan 2016). Are such binary appeals truly effective, or might some consumers prefer brands or products that feature a blend of masculine and feminine associations?

We define an *androgynous choice* as a choice in which brand and product design dimensions are associated with masculinity and femininity. For example, Apple MacBook is an androgynous choice because the brand is masculine (a high tech brand represented by Steve Jobs- a male spokesperson) (Grohmann 2009) and the product has a feminine design (light color, thin, and slick notebook) (Lieven et al. 2015). Drawing upon the link between masculinity and femininity with agency and communion (Bakan 1966; Wiggins 1991) and simultaneous pursuance of different motives on dimensions of a single choice (Chan, Berger, and Van Boven 2012), we propose that consumers can simultaneously pursue both agentic and communal motives through acquiring androgynous choices. Furthermore, to maximize their goal attainments, people tend to prefer “multifinal” choices that satisfy multiple purposes simultaneously rather than choices associated with single purposes (Kopetz et al. 2008). Thus, we propose that androgynous choices satisfy both agency and communion and are thus multifinal and preferred over either masculine or feminine choices.

In study 1, we coordinated with a local bakery to conduct a field experiment to monitor customers’ choices of androgynous, masculine, and feminine choices. Multiple brand names were tested, and a fictional masculine (i.e., Brown Bear) and a fictional feminine brand (i.e., Sunny Bunny) were chosen. The bakery made same size cookies in the feminine (i.e., round) and masculine (i.e., rectangular) shapes. The match between the feminine brand with masculine shaped cookie produced an androgynous choice (Sunny Bunny brand/rectangular cookies), and the match between feminine brand and feminine shaped cookie produced a feminine choice (Sunny Bunny brand/round cookies). The match between masculine brand with feminine shaped cookie produced an androgynous choice (Brown Bear/round cookies), and the match between masculine brand and masculine shaped cookie produced a masculine choice (Brown Bear/rectangular cookies). Over the course of study, bakery staff put the cookies on the countertop on similar plates; brand names were printed on cards and set next to the plates in card holders. One hundred and twenty-nine customers’ choices were recorded through a hidden camera. Consumers preferred an androgynous choice (Sunny Bunny brand/rectangular cookies) over a polarized feminine (Sunny Bunny brand/round cookies) ( $N_{\text{Androgynous}} = 45$  vs.  $N_{\text{Polarized}} = 22$ ,  $\chi^2(1) = 7.89$ ,  $p < 0.01$ ). Further, consumers chose an androgynous choice (Brown Bear/round cookies) over a polarized masculine (Brown Bear/rectangular cookies), ( $N_{\text{Androgynous}} = 51$  vs.  $N_{\text{Polarized}} = 11$ ,  $\chi^2(1) = 25.80$ ,  $p < 0.01$ ). Study 1 provided preliminary support for the hypothesis that an androgynous choice will have a greater influence on consumer preferences than will single-gender choices.

In study 2, we examine whether simultaneous pursuance of agency and communion underlies consumers’ preferences for androgynous choices. A total of 211 participants viewed an advertisement for an Apple MacBook, expressed their willingness to purchase, and responded to measures of agentic and communal motives on the CSIV scale (Locke et al. 2012). Finally, participants evaluated

the product in terms of masculinity and femininity and responded to demographics. Participants perceived the Apple MacBook as an androgynous product ( $M_{\text{masculinity}} = 5.43$ ,  $M_{\text{femininity}} = 5.38$ ). The results of the analysis (Process model 1, Hayes 2017) showed that the interactive effect of agency and communion was a significant predictor of consumers’ willingness to purchase the androgynous product ( $b = .15$ ,  $p = .03$ ). To explore the significant interaction, we used the Johnson-Neyman technique (Spiller et al. 2013). The effect of agentic motives on boosting willingness to purchase an androgynous product was significant when the communion motive was higher than 6.38 ( $p = .05$ ). The outcome of this experiment provides support for our hypothesis that simultaneous pursuance of agentic and communal motives drives preferences for androgynous choices.

In study 3, we use a moderation-of-process design (Spencer, Zanna, and Fong 2005) to provide further evidence for the proposed mechanisms. We selected five choices associated with masculinity, five associated with femininity, and five associated with androgyny. Two hundred and fifty-three students were randomly assigned to one of the 4 (prime: control, agency, communion, and agency-communion)  $\times$  3 (gender associations of choice: masculine, feminine, androgynous) conditions in a mixed model with product associations serving as a within-subject factor. To invoke agency and communion, we used recall tasks (McAdams 2001). Then, respondents indicated their willingness to pay for each product (Rucker and Galinsky 2008). A mixed model ANOVA revealed a significant interaction between gender association of choice and prime conditions ( $F(3, 249) = 3.37$ ,  $p = .02$ ). Consumers indicated higher willingness to pay for masculine choices when they were primed with agentic motives ( $M_{\text{agency}} = 5.03$ ,  $M_{\text{Control}} = 4.29$ ,  $p = .03$ ). Participants showed a higher willingness to pay for androgynous choices when they were primed with agentic-communal motives ( $M_{\text{Agency and Communion}} = 6.22$ ,  $M_{\text{Control}} = 5.56$ ,  $p = .04$ ). Participants indicated higher willingness to pay for feminine choices when they were primed with communal motives contrasted with the control condition ( $M_{\text{Communion}} = 5.16$ ,  $M_{\text{Control}} = 4.28$ ,  $p = .01$ ).

Research in marketing has predominantly followed a bipolar perspective towards masculinity and femininity by studying polarized masculine or feminine choices (e.g., Debevec and Iyer 1986; Grohmann 2009). There are three main goals in the present research. First, while prior work has focused on consumers’ responses to binary masculine and feminine choices, we examine consumers’ responses to the co-occurrence of masculinity and femininity within a single choice. Second, in this work, we attempt to reconcile two diverging streams of literature that focus solely on brand or product gender associations by studying consumers’ responses to varying gender associations across brand and product dimensions. Third, while prior research has focused on identity-congruency as the main driver of consumers’ preferences for masculine and feminine choices, we focus on agency and communion as motives that explain chronic and situational preferences for such choices.

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# The Mystique of Masculine and Feminine Choices: How Aversive Feelings Underlie Preferences

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## EXTENDED ABSTRACT

Research suggests that consumers seek masculine or feminine choices to reinforce their gender identities (Debevec and Iyer 1986; Grohmann 2009). But, is the entire allure of a masculine or a feminine choice captured in securing one's sense of manhood or womanhood? If not, what other purposes might these choices serve?

Drawing on the symbolic links between agency with masculinity and communion with femininity (Bakan 1966) and research on symbolic compensatory consumption (Rucker and Galinsky 2013; Wicklund and Gollwitzer 1981), we propose that consumers consider masculine and feminine choices as sources of agency and communion, and thereby use masculine choices to alleviate low-agentic feelings (e.g., feeling incompetent, powerless, or incapable) and feminine choices to allay low-communal feelings (e.g., feeling excluded, disconnected, or isolated). Further, we suggest that these boosts in preferences for masculine and feminine choices are due to the perceptions that acquiring these choices would provide consumers with increased senses of agency and communion.

In study 1, we used an Implicit Association Test (Nosek, Greenwald, and Banaji 2005) to explore implicit cognitive associations between agentic attributes and masculine choices, communal attributes and feminine choices. Based on a pretest eight masculine and eight feminine products were chosen. Further, eight agentic and communal attributes were chosen (Fiske et al. 2002; Spence et al. 1979). One hundred ninety-four students participated in the IAT test. For each participant, the strength of the association between concepts (D-Score) was calculated. The mean IAT D-score was .50, which is significantly different from 0;  $t(185) = 15.91, p < .001, d = 1.16$ . The positive D-score shows that participants were faster in categorizing stimuli in the compatible rather than incompatible trials suggesting that consumers implicitly associate masculine choices with agency while they associate feminine choices with communion. This study provides preliminary evidence for our theorizing that consumers associate masculine choices with agency and feminine choices with communion and lays the groundwork for our proposed compensatory functions.

In study 2, we aimed to provide evidence for the effect of low-agency on preferences for masculine choices and the underlying mechanism. One hundred thirty students were randomly placed in low-agency (Horowitz et al. 2001) and control conditions. Participants viewed advertisements for a Taichi retreat, they expressed their willingness to participate in the retreat and indicated to what extent they thought that participation in the retreat would provide them with a sense of agency. An ANOVA analysis showed that there was a main effect of low-agency condition on increasing consumers' preferences to participate in a Taichi retreat ( $M_{\text{Low-agency}} = 5.82, M_{\text{Control}} = 4.49, F(1, 128) = 9.22, p < .01$ ). There was a significant effect of the manipulations on the perceptions of agency provided by the masculine choice ( $M_{\text{Low-agency}} = 6.37, M_{\text{Control}} = 5.45, F(1, 128) = 8.15, p < .01$ ). The results of the mediation analysis (Hayes 2017) suggested that participants' higher willingness to participate the Taichi retreats was due to the perceptions that these retreats would provide them with a sense of agency ( $\beta = .82, SE = .29$ ).

In study 3, we aimed to provide evidence for the effect of low-communion on driving preferences for feminine choices and the underlying mechanism. One hundred thirty-seven students were

randomly placed in a low-communion condition via a recall task (Horowitz et al. 2001) or a control condition (Horowitz et al. 2001). Participants viewed advertisements for a Yoga retreat, they expressed their willingness to participate in the retreat and indicated to what extent they thought that participation in the retreat would provide them with a sense of communion. An ANOVA analysis showed that there was a main effect of the low-communion condition on boosting the desire to participate in a yoga retreat ( $M_{\text{Low-communion}} = 6.17, M_{\text{Control}} = 4.85, F(1, 135) = 9.31, p < .01$ ). There was a significant effect of the manipulations on the perceptions of communion provided by the feminine choice ( $M_{\text{Low-communion}} = 5.78, M_{\text{Control}} = 4.93, F(1, 135) = 8.36, p < .01$ ). The mediation analysis (Hayes 2017) showed that participants' higher willingness to participate in the yoga retreat was due to the perceptions that the retreat would provide them with an increased sense of communion ( $\beta = .69, SE = .26$ ).

The present work proposes a novel compensatory function for symbolically gendered choices and recognizes that consumers' preferences for these choices may be prompted by specific aversive feelings. The results revealed that consumers hold implicit cognitive associations that link masculine choices to agentic attributes and feminine choices to communal attributes (study 1), masculine and feminine choices may be acquired in a self-completory manner to cope with aversive feelings of low-agency and low-communion, and the perceptions that obtaining these choices would provide consumers with enhanced senses of agency and communion underlie these boosts in preferences (studies 2 and 3). Given that daily life is infused with events and interactions that can trigger low-agentic or low-communal feelings and be detrimental to psychological and physiological health (Smith and Jordan, 2015), this research contributes to the understanding of consumers' choices and their impact on consumers' well-being. Prior research shows that consumers can compensate for low-agentic feelings through acquiring products that symbolize power, status, intelligence, or conspicuous consumption (Mandel et al. 2017), while they can compensate for low-communion through pursuing anthropomorphic choices, risk-taking, and spending on others (Mandel et al. 2017). While these forms of compensation play an important role in reducing the distress caused by experiencing low-agency and low-communion, they may also harm consumers' financial welfare through spending on products that may have no functional value other than symbolic, overspending on others, or taking on unnecessary risks (Rucker and Galinsky 2008). In this work, we focused on how consumers can employ their daily functional choices (e.g., activities and food choices) to alleviate low-agentic and low-communal feelings. Given the pervasiveness and ease of identifying masculine and feminine themes in colors and shapes of products, brands, and food options, this work holds important implications for devising solutions for enhancing consumers' well-being.

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# Effortful but Valuable: How Perceptions of Effort Affect Charitable Gift Choice and Valuations of Charity

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## EXTENDED ABSTRACT

### INTRODUCTION

There has been a recent trend in charitable giving, in which increasing number of donors are requesting that their donations be used for a specific initiative, instead of being directed to a charity's general, unrestricted fund. Although consumers' decision to make a restricted or unrestricted charitable donation directly affects how charities function and operate, no research has yet examined what affects consumers' donation choice and why. We propose that although targeting a donation to a specific initiative enhances preference matching, consumers concurrently perceive the process of choosing among several charitable initiatives as being difficult. Thus, we predicted that the extent to which consumers are focused on the procedural difficulty of an action should affect the likelihood of them making a restricted or unrestricted donation. Specifically, when consumers increase their focus on action feasibility, they're more likely to delegate their gift choice to charity, thereby make unrestricted donations. Such tendency should be considerably reduced as consumers increase their focus on action desirability. Furthermore, based on previous work that people often derive value from investing effort (Loewenstein, 1999), we anticipated that consumers who make restricted charitable donations, thus have exerted more cognitive effort to identify a particular designation of their contributions, would attach a greater value to the charity post-giving, than consumers who make unrestricted charitable donations.

### THEORETICAL BACKGROUND

Restricted charitable donations enable consumers to aid a particular initiative that he or she considers most worthy of supporting thus is often referred to as *donor-centered funds*, as opposed to *general* or *unrestricted funds*. Prior work has shown that consumers respond positively to the opportunity to earmark their donations (Helms, Scott, & Thornton, 2012), although there exists a substantial variability in whether consumers choose to do so (Helms, Scott, & Thornton, 2013; Eckel, Herberich, & Meer, 2017). Among several reasons why consumers may choose to make unrestricted donations despite the ability to target a specific initiative, we focus on decision difficulty. Specifically, previous research has shown that when a decision involves alternatives that preclude any from being easily verified as being superior or inferior, it creates a feeling of uncertainty (Scholnick & Wing, 1988) which often lead consumers not to exercise a choice (Tversky & Shafir, 1992) or to delegate the decision to parties that they perceive impartial (Botti & McGill, 2006). Charitable initiatives are essentially different ways that consumers can aid needy others. Therefore, we argue that an objectively superior or inferior alternative is difficult to identify, as there are no objective criteria for judging a better or worse way of helping. In many cases, valuations are not read off a predetermined list but instead are constructed on the spot (Lichtenstein & Slovic, 2006). Thus, we argue that choosing one initiative among multiple requires donors to invest some amount of cognitive effort in order to identify an initiative that most closely fits their interests and ideals. Simply put, we propose that making a restricted donation is perceived as more cognitively difficult and thus requires more effort than making an unrestricted charitable donation.

If indeed the decision difficulty associated with identifying a desired initiative to help is what deters consumers from targeting a donation, the extent to which consumers focus on such difficulty should predict the likelihood of them making a restricted or unrestricted charitable donation. Specifically, the relative focus on action desirability versus feasibility often serves as a strategy in establishing preferences (Gollwitzer, 1990), such that when people increase their focus on action desirability, they tend to establish preferences based on maximizing the primary benefit gained from the action (Sagrignano, Trope, & Liberman, 2002), whereas when people increase their focus on action feasibility, they tend to establish preferences based on maximizing the ease or convenience in pursuing the action (Irmak, Wakslak, & Trope, 2013). Because actions that are easier to execute are higher in feasibility, we predicted that consumers with greater focus on action feasibility (vs. desirability) should exhibit more pronounced tendency to make unrestricted donations, while such tendency should be reduced as consumers increase their focus on action desirability.

We also explored the consequences of consumers' choice to make a restricted or unrestricted charitable donation. People often derive value from effort that they have invested in achieving a goal (Kaufman, 1999; Lane, 1992; Loewenstein, 1999), such that people who go through a greater amount of difficulty and thus exerted more effort to attain something tend to value it more highly than people who attain the same thing with a minimum of effort (Lewis, 1965). Similarly, we predicted that when consumers have made more cognitive effort to identify a specific program of the charity that most closely aligns with their interests, it is likely that consumers would endorse the charity more than consumers who delegated their donation choice to charity. In particular, as commitment is defined as 'an enduring desire to maintain a valued relationship (Moorman, Zaltman, & Deshpande, 1992)', we anticipated that consumers who made restricted charitable donations would exhibit greater charity commitment post-giving, than consumers who made unrestricted charitable donations. The following three studies tested our hypotheses.

### METHODS AND RESULTS

In study 1, we tested the idea that consumers perceive making a restricted charitable donation to be more difficult than making an unrestricted charitable donation. Participants (N = 201) read a brief description of needy children and a donation request. The appeal explained that if a donation is made, participants could choose to direct the donation to one of the following: child nutrition, education, emergency aid, humanitarian action, building new homes, and where it's most needed. The latter option represented the unrestricted gift option, which is the standard practice for charities to use such phrasing when signaling to donors that they are making an unrestricted donation to charity (e.g., see [worldvision.org](http://worldvision.org); [redcross.org](http://redcross.org)). Nevertheless, to confirm that individuals perceived this option as delegating the decision to charity, a pretest (n = 70) asked participants which of the above gift options (child nutrition, education, emergency aid, humanitarian action, building new homes, where it's most needed) granted the charity the most freedom in deciding how collected donations are distributed. The percentage of participants who chose one of the specific initiatives as the option that grants the charity the most freedom was contrasted with the percentage of participants who



chose “where it’s most needed” as the option that grants the charity the most freedom using a one-sample binomial test. As expected, “where it’s most needed” was dominantly chosen (75.7%,  $p = .000$ ).

We instructed participants to imagine that they had agreed to donate and indicate which of the options they wished to direct their donation to. If participants designated their donation to where it’s most needed, we coded their response as 1, indicating an unrestricted donation. If participants designated their donation to a particular charitable initiative, we coded their response as 2, indicating a restricted donation. Participants then rated the decision difficulty. The results showed that participants who made restricted donations reported experiencing greater decision difficulty ( $M = 2.42$ ,  $SD = 1.38$ ) compared to those who made unrestricted donations ( $M = 1.89$ ,  $SD = 1.22$ ,  $t(195) = 2.92$ ,  $p = .004$ ).

In Study 2, we tested whether consumer focus on action feasibility versus desirability predicts the likelihood of making a restricted or unrestricted donation to charity. We manipulated action focus via priming a why versus how mindset. Specifically, participants ( $N = 226$ ) described three goals that they wanted to accomplish, and those in the why mindset condition ( $n = 108$ ) elaborated on three reasons why they wanted to accomplish each goal, while those in the how mindset condition ( $n = 118$ ) elaborated on three ways that they could accomplish each goal (Henderson & Burgoon, 2014). Such priming procedure that induces people to focus on the outcome value versus step-by-step process has been shown to shift focus to action desirability versus feasibility as well as transfer to subsequent judgments (Freitas, Gollwitzer, & Trope, 2004).

Participants then read a brief description of needy children. We told participants that one way they could help was by obtaining donations from the researchers, who would provide funding when participants watched and evaluated some materials for a future psychology study. Participants read that if they earn donations from evaluating psychology materials, they could choose to direct the donations raised to one of several charitable initiatives or leave their donation unrestricted (the options provided were identical to Study 1). Participants indicated whether they would participate, and only the participants who agreed moved forward (67%,  $n = 152$ ).

Before participants designated their donation to one of the presented options, participants first rated the extent to which they were focused on desirable (choosing an option that best matches their interests/ideals) and feasible (choosing an option that is most simple/convenient) aspects of their donation choice. Participants then made their donation choice. As in previous study, if participants designated their donation to where it’s most needed, we coded their response as 1, indicating an unrestricted donation. If participants designated their donation to a particular charitable initiative, we coded their response as 2, indicating a restricted donation.

The results showed that our manipulation was successful, such that participants primed with a why mindset focused more on action desirability than those primed with a how mindset ( $M = 5.80$ ,  $SD = .85$  vs.  $M = 5.42$ ,  $SD = 1.12$ ,  $t(150) = 2.35$ ,  $p = .02$ ). In contrast, participants primed with a how mindset focused more on action feasibility than those primed with a why mindset ( $M = 4.07$ ,  $SD = 1.35$  vs.  $M = 3.48$ ,  $SD = 1.29$ ,  $t(150) = 2.75$ ,  $p = .007$ ). Furthermore, we found a significant main effect of mindset on donation choice ( $\beta = .94$ , S.E. = .34, Wald = 7.78,  $p = .005$ ), such that 55.1% of participants in how mindset condition made unrestricted donations, while only 32.4% of participants in why mindset condition chose to do so.

In study 3, we tested our last hypothesis that participants would attach a greater value to the charity thus exhibit greater charity commitment, when they chose to make a restricted donation as opposed to when they chose to make an unrestricted donation. Before the

main task began, we notified participants ( $N = 140$ ) that all participants would be entered into a lottery to win a bonus of \$25. We then presented participants with an appeal from a charity requesting help in raising donation for needy children. We further explained that if a donation is made, participants could designate their donation to one of several initiatives or leave their donation unrestricted. Participants indicated whether they would donate some portion of their prize money if they win the lottery, and only the participants who were willing to donate (59%,  $n = 83$ ) moved forward.

We manipulated participants’ donation choice via providing instructions pertaining to desirability or feasibility. Specifically, participants in restricted donation condition were instructed to choose an option that most closely fits their interests, while participants in unrestricted donation condition were instructed to choose an option that is most convenient. Participants then made their donation choice which we coded as 1 if they made an unrestricted donation, and 2 if they made a restricted donation. Participants then rated 11 items aimed to measure their commitment to the charity ( $\alpha = .88$ ). Example items included “I will likely to give again to this charity” and “I feel a sense of belonging to this charity.”

The results showed that the instructions given to participants to alter their donation choice was successful in affecting their actual choice ( $\beta = 1.06$ , S.E. = .46, Wald = 5.26,  $p = .02$ ). 53.7% of participants made unrestricted donations when provided with an instruction pertaining to feasibility, while only 28.6% participants provided with an instruction pertaining to desirability chose to do so. When entering the effect of instruction (desirability vs. feasibility), participants’ donation choice (restricted vs. unrestricted) as predictors of charity commitment, we found that there was only a significant main effect of donation choice. Specifically, participants who made restricted donations reported greater charity commitment than those who made unrestricted donations ( $M = 4.93$ ,  $SD = .82$  vs.  $M = 4.40$ ,  $SD = 1.05$ ,  $F(1,79) = 4.97$ ,  $p = .03$ ).

## DISCUSSION

Consumers’ decision to make a restricted or unrestricted charitable donation directly affects how charities distribute the received funds across various needs of the charity. Given the influential role of consumers’ donation choice on charity operations, understanding the psychological processes in which consumers make their donation choice is both theoretically and practically important. To that end, the present article is the first to examine how consumers respond to an opportunity to earmark their gifts for a specific purpose of a charity as well as examine when consumers are likely to give in a restricted or unrestricted manner. We also examine what implications consumers’ donation choice have for charities. Specifically, our findings suggest that charities can reap distinct benefits from receiving restricted or unrestricted donations, such that unrestricted donations provide immediate flexibility in utilizing the received funds while restricted donations increase consumers’ willingness to extend the relationship with charity. Thus, if the charity’s goal is to maximize fund flexibility, we propose that charities would benefit from inducing potential consumers to focus more on action feasibility. For example, when communicating to potential donors, charities could emphasize *how* they go about helping the needy rather than emphasizing *why* they do it. On the other hand, if the charity’s goal is to foster sustained donor engagement, we propose that charities would benefit from inducing potential consumers to focus more on action desirability. For example, charities could emphasize *why* donors should help, or what are the primary benefits or end values associated with their contributions. Nonetheless, the current research has limitations. Specifically, Study 3 measured participants’ commitment with the charity imme-

diately after participants have made their donation choice and it was self-reported. Thus, future research should explore whether consumers' donation choice has impact on charity commitment after a longer delay period, and whether the differences in the level of commitment is manifested at the behavioral level (e.g., actual likelihood of making another donation to charity).

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# When Do People Learn *More* from Others' Prosocial Behavior?

## A Meta-Analysis of Prosocial Modeling Effect

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### EXTENDED ABSTRACT

#### INTRODUCTION

Prosocial behavior is contagious, such that prior work has shown people (across all ages) rely on social examples – whether and what others contribute – as guides of their own prosocial decisions. Specifically, both children and adults are more likely to cooperate (Doescher & Sugawara, 1992; Braver & Barnett, 1976), donate or share resources (Poulos & Liebert, 1972; Wagner & Wheeler, 1969) and care for others (Gray & Pirot, 1984; Bryan & Test, 1967) when they learn that others have done the same.

The prototypical prosocial modeling situation involves a prosocial model and someone who observes the model's behavior (referred to as observer in this paper). Specifically, an observer is exposed to a prosocial model who helps someone in need. Then, the observer is given the opportunity to also help someone in need. The critical outcome of interest is whether the observer imitates the model's behavior.

Despite the widespread use of modeling in encouraging helping behavior, research has suggested that the effects of prosocial modeling events vary as a function of the social context in which they occur (Masor, Hornstein, & Tobin, 1972). Specifically, some findings suggest that prosocial modeling has negligible effect when helping is costly (Wagner & Wheeler, 1969), when the intensity of modeling behavior is low (Rosenbaum, 1956) and often doesn't generalize to other behaviors than those that are modeled (Braver & Barnett, 1976). Thus, our first goal of this meta-analysis was to examine the robustness of the prosocial modeling effect.

Our second goal was to examine the conditions that have previously been demonstrated to moderate the modeling effect. Specifically, literature on identity congruence has shown that identity impacts the effectiveness of social information (Smith, Bruner, & White, 1956) such that the more similar the individual is to the source of the social information, the stronger its impact is likely to be. Indeed, social identities may be diagnostic of the decisions or judgments at hand, and thus other consumers' behavior can become more relevant to a judgment (Feldman & Lynch, 1988) when aspects of these consumers are similar to the target consumer's identity (Reed, 2004). Such findings would suggest that prosocial modeling effect should be greater when the model and the observer share similar characteristics. Nevertheless, some findings suggest the opposite, such that witnessing acts of moral excellence elicits a state of moral elevation (Haidt, 2000). Thus, exceptional moral characters, rather than models that resemble one's next door neighbors, are more effective in increasing helping behaviors (Freeman, Aquino, & McFerran, 2009). Given such mixed findings, we utilize a meta-analytic approach to examine the role of similarity between the model and observer in the effect of prosocial modeling.

Finally, we tested for additional moderators of modeling effects, including characteristics of model (gender, single vs. multiple), characteristics of observer (gender, age, students or non-students), proximity of the model and observer (presence of verbal interaction, acquaintance), characteristics of modeling behavior (e.g., donation

vs. caring) and characteristics of outcome behavior (e.g., outcome behavior measured in public vs. private). In so doing, we aimed to provide an extensive review of when prosocial modeling effect is likely to be increased or decreased.

#### METHODS AND RESULTS

*Sample of Studies:* For an initial over-inclusive list of studies, we searched PsycINFO, PsycARTICLES, EBESCO, Social Sciences Citation Index, Web of Science, Dissertations Online, ERIC, and Google Scholar for articles that contained either of the following items: prosocial, altruis\*, help\*, shar\*, donat\*, volunteer\*, cooperat\*, giv\*, charit\*, genero\*, moral\*, model\*, imitate\*, bystander, learn\*, observ\*, mimicry, media, song, lyrics, game, advertis\*, television and film. We also searched for references of all relevant articles and posted a call for papers on several listserves in psychology and education. This process allowed us to start with as comprehensive a list as possible. From this list, we retained all studies that had (a) at least one group exposed to prosocial modeling; (b) a clear control group with which modeling groups could be compared; (c) random assignment to these groups and (d) behavioral observations of outcome variable (as opposed to prosocial emotions or intentions). These criteria produced a list of 42 articles that contained 120 eligible studies (4 unpublished). The dataset embraced a total of 9,325 participants.

*Variables retrieved from each study:* Our focal moderator was the similarity between the model and the observer. First, we coded for gender match or mismatch between the model and observer and the age differences (younger, same age, older) between the model and observer. We also coded for a number of other potential moderators. Specifically, we coded for gender of the model and whether the model was single individual or multiple individuals. We coded for gender and age of the observer, as well as whether the observer was a student or not. We additionally coded for variables that may induce interpersonal proximity between the model and the observer. In particular, we coded for whether the model was an acquaintance or non-acquaintance to the observer and whether there was a verbal interaction between the model and observer. In terms of the behavior-relevant characteristics, we coded the type (formal or informal) and medium (direct or indirect) of modeling behavior. We defined formal helping as behaviors that are proximal to characteristics of charitable giving, which often involves a transfer of material resources to others in need (e.g., donating money or tokens). Other behaviors that involve emotional or physical support were categorized as informal helping, which include cooperation and picking up dropped pencils. In regard to the medium, we categorized modeling medium as direct, when the observer was exposed to prosocial model(s) in person. We categorized modeling medium as indirect, when the observer was exposed to prosocial model(s) via a reading a written material, listening to a verbal description, or watching a film. Lastly, we coded information regarding the measured outcome behavior. Specifically, we coded the type of outcome behavior (formal or informal) and whether the behavior was measured in private or public. We categorized outcome behavior as private, when there were no others

present during measurement of outcome behavior. In contrast, we categorized outcome behavior as public, when there was at least one other present during measurement of outcome behavior. Lastly, we coded for whether the type of modeling behavior match or mismatch with the outcome behavior. For example, if modeled and outcome behavior were both formal giving (e.g., donation), such combination was categorized as 'match'. If modeled behavior was formal giving while the outcome behavior was informal giving, such combination was categorized as 'mismatch'.

*Effect sizes and analysis strategy:* All effects sizes were calculated as the standardized differences in dependent measures between prosocial modeling and control groups. Effect sizes were calculated directly from the means, standard deviations, and sample sizes for the experimental and control groups wherever possible. When not, effect sizes were computed from F ratios, t-test, or chi-square test. All effect sizes were converted to Hedge's  $g$ , a standardized effect size that corrects for a slight positive bias in Cohen's  $d$  that is present in all small samples (Hedges, 1981). R's *robumeta* package (Fisher, Tipton, & Zhipeng, 2017) was used to calculate average effect sizes. This analysis allowed for the clustered data (i.e., effect sizes nested within samples) by correcting standard errors to take into account the correlations between effect sizes from the same sample. Given the diversity of study characteristics in the dataset, some variation in the true effect was expected across these studies. Thus, a random-effects model was used to calculate pooled effect sizes. A Cochran's test revealed the studies to be significantly heterogeneous,  $Q$  ( $df = 41$ ) = 158.26,  $p < .0001$ , supporting this choice. Random-effects models tend to be less vulnerable to Type 1 error than fixed-effects models and are thus widely recommended (Cumming, 2014).

*Results:* Across 42 studies, the average effect size of the difference between prosocial modeling and control groups on helping behavior was  $g = 0.76$ , 95% CI = [0.56, 0.96], indicating a large effect of prosocial modeling on observers' helping behavior. Next, we examined the possibility of the publication bias. In so doing, we examined the distribution of studies in a funnel plot (plotted according to their sample size and standard error) using Duval and Tweedie's (2000) trim and fill approach. The funnel plot of the effect size distribution was significantly asymmetric,  $z = 3.30$ ,  $p < .001$ , and the trim and fill method was used to correct for this asymmetry by estimating missing studies, yielding an estimated effect size of  $g = .33$ ,  $p < .001$ , 95% CI = [0.14, 0.53]. The adjusted effect is smaller than the non-adjusted effect, suggesting the presence of underreporting of null findings. A significant effect nevertheless emerged across the studies. On the basis of this estimate, the results should not be discounted as artifacts of publication bias.

*Similarity between model and observer:* We examined the moderating role of similarity between the model and observer in the effect of prosocial modeling. First, we examined the role of gender match or mismatch between the model and observer. The mean effect size when there was a gender match between the model and observer was  $g = .87$ , 95% CI [0.43, 1.31]. The mean effect size when there was a gender mismatch between the model and observer was slightly larger ( $g = 1.16$ , 95% CI [0.43, 1.88]), although the difference was not statistically significant ( $p = .40$ ). Next, we examined the role of age differences between the model and the observer. As there were no cases in our dataset in which the age of the model was younger than the observer, we were only able to compare the effect sizes when the model's age was relatively similar to the observer or relatively older. The mean effect size when the model's age was relatively similar to the observer was  $g = .59$ , 95% CI [0.40, 0.79] while when the model was relatively older, the mean effect size was  $g =$

1.00, 95% CI [0.59, 1.40]. This difference was marginally significant ( $t(24.1) = 1.95$ ,  $p = .06$ ).

*Other potential moderators:* To explore other potentially relevant variables, we first examined characteristics of the model. Whether the model was a single individual ( $g = 0.73$ , 95% CI [0.51, 0.94]) or multiple individuals ( $g = .87$ , 95% CI [0.43, 1.31]) did not influence the modeling effect ( $t(16.3) = .68$ ,  $p = .51$ ). There were also no statistically significant differences in the effect sizes when the models were males only ( $g = .68$ , 95% CI [0.29, 1.06]), females only ( $g = .81$ , 95% CI [0.21, 1.41]) or mixed ( $g = 1.00$ , 95% CI [0.68, 1.32]). However, we found that the composition of observer gender matters. Specifically, the effect size was significantly larger when the observer was composed of only females ( $g = 1.17$ , 95% CI [0.69, 1.64]), compared to when the observer was composed of males-only or mixture of males and females ( $g = .70$ , 95% CI [0.49, 0.92]),  $t(9.12) = 2.38$ ,  $p = .04$ . Furthermore, when the observer was composed of the same gender, the effect size was larger ( $g = 1.04$ , 95% CI [0.57, 1.50]) than when the observer was composed of mixture of males and females ( $g = .58$ , 95% CI [0.42, 0.74]). This difference was statistically significant ( $t(22.5) = 2.07$ ,  $p = .05$ ). Neither characteristics of the observer (age, students or non-students) nor the proximity between the model and the observer (verbal interaction between the model and observer, acquaintance between the model and observer) influenced the prosocial modeling effect.

Of note, the type of modeling and outcome behavior had significant influence on prosocial modeling effect. When the modeling behavior was formal, the mean effect size was  $g = .94$ , 95% CI [0.61, 1.27]. When the modeling behavior was informal, the mean effect size was  $g = .51$ , 95% CI [0.30, 0.71] and the difference was statistically significant ( $t(29.8) = -2.40$ ,  $p = .02$ ). Similarly, when the outcome behavior was formal, the mean effect size was  $g = .87$ , 95% CI [0.58, 1.15] while the mean effect size was  $g = .56$ , 95% CI [0.32, 0.79] when informal. The difference was marginally significant ( $t(23.4) = -1.77$ ,  $p = .09$ ). Whether modeling was communicated in a direct ( $g = .88$ , 95% CI [0.54, 1.21]) or in an indirect ( $g = .61$ , 95% CI [0.43, 0.79]) manner did not significantly influence the modeling effect ( $p = .14$ ). Lastly, whether the outcome behavior was measured in private ( $g = .76$ , 95% CI [0.53, 0.99]) or in public ( $g = .78$ , 95% CI [0.38, 1.18]) did not significantly influence the modeling effect ( $p = .90$ ).

Finally, we examined whether the matching information of modeled and outcome behavior influences the modeling effect. When the type of modeling behavior was identical to the outcome behavior (e.g., both behaviors were formal or informal), the mean effect size was  $g = .90$ , 95% CI [0.61, 1.17] while when the type of modeling behavior mismatched the outcome behavior (e.g., modeled behavior was formal while outcome behavior was informal), the mean effect size was smaller ( $g = .54$ , 95% CI [0.35, 0.73]). This difference was statistically significant ( $t(18.64) = 2.27$ ,  $p = .03$ ).

## DISCUSSION

Across 42 studies ( $n = 9,325$ ), effect-size analyses revealed that prosocial modeling produced a reliable, large-sized effect ( $g = .76$ ). The literature was also found to be robust to selective reporting of significant findings (i.e., the file-drawer effect). Such findings suggest that prosocial modeling is an effective tool to increase helping behaviors.

We found no evidence that the more similarities exist between the model and observer, the more impactful effect the modeling should produce. Specifically, modeling effect was similar regardless of whether there exists gender match or mismatch between the model and observer. In fact, modeling effects were larger when the model was older (as opposed to similar age) than the observer.



Among additional variables that we explored, we found evidence that modeling effects are larger for female observers than males or mixed (males and females) observers. We also found that modeling effects are larger when the modeled behavior is of similar type to outcome behavior (e.g., modeling and outcome behavior are both formal or informal helping). Interestingly, although not tested in previous prosocial modeling research, we found evidence that modeling behaviors that are formal (i.e. donating) produce greater effect than modeling behaviors that are informal (i.e. caring). The aim of the present research was to test the robustness of the prosocial modeling effect as well as explore moderators. Indeed, practitioners in charitable organizations, educational institutions and business firms commonly use prosocial models to stimulate charitable giving, cooperation, citizenship behavior and green consumption. Thus, our aim was also to provide a practical guide regarding when modeling effects are likely to be maximized or minimized in inducing helping behaviors. We look forward to future research that delves more deeply into the mechanisms for why certain moderators in our investigation produced more or less effect of prosocial models.

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## Parallel Practices of Visual Domination and Subversion

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### EXTENDED ABSTRACT

Volunteer tourism is seen as a form of good will tourism (Sin 2009), appealing to those who want to make a difference whilst travelling. Despite growing scrutiny over this utopian framing of volunteer tourism (Palacios 2010; Raymond and Hall 2008), there is limited exploration of this travel phenomenon (Alexander 2012; Nadeau and Lord 2017).

Consequently, we know little about the broader sociocultural conditions which shape the ways in which this consumption practice is performed. As Urry (2002) exhorts, it is important to consider tourism in relation to wider economic, social, and cultural processes. This is also in line with a growing academic argument that discourses of ethical consumption, while advocating individual responsible consumption, depoliticize and deflects responsibility away from governments and large corporations (Carrington, Zwick, and Neville 2016), and that 'ethical' consumption practices should be explored as a structural rather than individual phenomenon. What is also less understood is how these sociocultural discourses are played out visually. This is surprising given a rich literature stream in marketing about the performative power of images, and the rise of social media. With the advent of various social media platforms, visual consumption has become a paramount means of apprehending the world and presenting one's identity (Schroeder 2005), where the communicative power of photography generates and maintains these discourses in a ubiquitous and seemingly natural way (Schroeder and Borgerson 2005). To address these theoretical asymmetries we ask: what are the broader sociocultural discourses which frame volunteer tourism, and how do they shape visual representational practices in a volunteer tourism marketplace?

This paper draws on postcolonial theory (Brace-Govan and de Burgh-Woodman 2008), which allows scholars to critically evaluate issues of cultural Othering, racism and exploitation when representing and marketing the 'third world' (Ashcroft, Griffiths and Tiffin 1995), and has become an important tool for researchers critiquing the role of the West in dictating the development agendas of third world nations (Udombana 2000). The promise of 'civilizing' the 'primitive' underpins the imbalance of power in the binaries of colonizer/colonized, West/East, Global North/Global South (Bhabha 1990; Said 1993; Spivak 1987) and perpetuates a global divide that continues to exist today. These binaries of 'us and them' underpin the exchange of aid in volunteer tourism, highlighted through the primarily North to South flow of volunteer tourists (Palacios 2010). Despite the idealized promise of intercultural encounters to break down boundaries between self and Other in this context, the encounters are inflected by histories of colonialism which continue to structure relationships between the Global North and South (Bhabha 1990; Said 1993; Spivak 1987).

Our exploration is grounded in a critical visual analysis of purposively selected consumer-generated visual representations of volunteer tourism experiences on Instagram. A hashtag search of #volunteertourism, #voluntourism, and #volunteerabroad results in over 30,000 images, and 9 consumer-generated images displaying volunteer-host interaction were selected for close analysis. The coding process included first cycle and second cycle coding methods, following Saldaña's (2016) and Rose's (2001) recommendations for visual analysis. Grouping first cycle codes into emerging themes formed each of four sociocultural discourses around volunteer tour-

ism, and the final stage of analysis was to critically analyse these themes within a satirical, consumer-generated Instagram site, 'Barbie Saviour'.

Whilst our findings reveal that a 'postcolonial gaze' dominates consumer-generated visual representations of volunteer tourism, parallel practices of visual subversion were also identified, casting doubt upon the postcolonial gaze. Volunteer tourists' Instagram images expressed the discourse of 'making a difference' through consumer hashtags such as "giving back", but such idealism was counteracted with hashtags emphasizing the travel component of experiences. The discourse of helplessness was also visualized through a display of colonial patterns of travel and an absence of adult aid recipients. Next, the discourse of sentimentality was identified through visual displays of love and happiness in images, as well as through consumer hashtags, included the harmful stereotype of poor but happy. Finally, we identified signs of power discrepancies in these images, visualized through differences in wealth and modernity between volunteer tourists' and the children pictured in their photographs, as well as through the dominant positioning of volunteer tourists' as rescuers in these images.

Parallel practices of visual subversion were also identified. The satirical Instagram account, Barbie Savior, reflects the growing use of parody as a consumer tactic for marketplace resistance (Mikkonen and Bajde 2013). Images frequently depict Barbie as a rescuer and highlight disparities in wealth between Barbie and the locals in her images. Furthermore, Barbie being labelled as "20 years young" and "not qualified" in the bio section of the Instagram account specifically opposes the naive belief in volunteer tourism, in that the mostly young, inexperienced and unskilled volunteer tourists can make significant changes to poverty simply due to being Western (McGehee 2012; Nutt 2011). In short, the returned volunteer tourists behind Barbie Savior utilize humorous tactics to problematize volunteer tourism and dismantle the postcolonial gaze that shapes the marketplace.

This study demonstrates the usefulness of a postcolonial perspective in enabling marketing scholars to confront structural biases which shape the representational contours of 'ethical' markets, thereby advancing the argument that postcolonial theories can re-frame marketing phenomena in productive ways (Brace-Govan and de Burgh-Woodman 2008; Tadajewski and Brownlie 2008). Our sample of consumer images embody the article's themes and are representative of our ideas concerning how the postcolonial gaze constrains these marketplace actors' ability to perform volunteer tourism practices ethically. Thus, we follow the interpretivist approach of examining a limited range of materials in order to make broader points about representation and identity in visual materials (Gombrich 1999; Buchanan-Oliver, Cruz, and Schroeder 2010). Our study delivers a critique of the broader sociocultural factors that underpin volunteer tourism, thus extending ethical consumption research beyond the terms of consumer identity projects and offering insights into the intertwined and not-so-visible linkages between marketplace actors, practices, and ideologies. This study highlights the need for consumers to obtain preparatory education about the political, social, economic and cultural histories of the places they visit, to enable these cross-cultural engagements to explore systems of poverty and inequality more sustainably.

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# Corporate Social Responsibility and Dishonest Consumer Behavior

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## EXTENDED ABSTRACT

Increasingly, organizations are proclaiming their values by taking stands on controversial social issues. These actions often take the form of corporate social responsibility (CSR). However, little research investigates polarizing CSR issues. Although CSR can influence purchase behavior toward the organization (e.g., boycotting), we propose a novel way in which consumers may respond to polarizing CSR: dishonest consumer behavior, i.e., the extent to which consumers lie and cheat the organization for financial rewards. Dishonest consumer behaviors are highly costly for organizations. For example, return fraud and abuse were expected to cost retailers about \$22.8 billion in 2017 (Total Retail 2018). Thus, investigating factors that impact dishonest behavior is important from a theoretical and practical perspective.

We propose that the effect of CSR on dishonest behavior depends on the consumer's cause-related identity, which refers to the degree of fit between the CSR cause and the consumer's self-concept (Sen and Bhattacharya 2001; Winterich and Barone 2011). Although prior work on CSR considers the effects of cause-related identity, it does not examine incongruent or oppositional identity. In contrast, we view cause-related identity as a continuum from congruent to neutral to incongruent, where incongruent cause-related identity is conceptualized as one that is the opposite of the consumer's self-concept (Reed et al. 2012).

We propose that the moderating role of cause-related identity is mediated by anticipatory self-threat. Anticipatory self-threat refers to the expectation that the individual's positive self-view cannot be maintained after he or she acts in a certain way (White et al. 2012). When a CSR cause is congruent with the consumer's self-concept, dishonest behavior would hurt their self-view because their dishonest behavior does not reflect who they are, both by the fact of acting unethical and because it means they do not support the cause. To reduce this anticipatory self-threat, they would be less likely to act dishonestly toward an organization engaged in CSR than one not engaged in CSR. In contrast, when the CSR is incongruent, CSR will backfire. Although dishonest behavior would still hurt their moral self-view as in the case of our baseline, i.e., no-CSR, it would also boost their overall self-view by affirming their cause-related identity. Thus, CSR (vs. no-CSR) would reduce the anticipatory self-threat, increasing dishonest behavior.

Moreover, we expect an asymmetric effect of CSR under incongruent and congruent identity. Because of consumers' motivation for self-verification (Swann et al. 1989), consumers will consider the information that an organization supports the identity-congruent [identity-incongruent] CSR cause as positive [negative]. Consumers react more strongly to negative than to positive information (Baumeister et al. 2001). Thus, we expect that CSR will have a greater impact on dishonest behavior under incongruent (vs. congruent) cause-related identity condition.

Using actual dishonest behavior, study 1 tested these predictions using a 2 (CSR: present, absent) by (cause-related identity: military veteran support, measured continuously) between-subjects design. All participants read the description of a company, and those in the CSR present condition read about its CSR in the domain of military veteran support. Participants could cheat the company by over-reporting their performance for monetary rewards. After completing filler tasks, participants indicated military veteran support

identity (Bolton and Reed 2004) along with other identities such as political ideology. The interaction between CSR and cause-related identity was significant. CSR (vs. no-CSR) significantly decreased [increased] cheating for participants with the congruent [incongruent] military veteran support identity. Consistent with the proposed asymmetric effect, the coefficient for CSR was larger in the absolute size for participants with the incongruent (vs. congruent) identity.

Study 2 tested mediation via anticipatory self-threat (H2) using 2 (CSR: present, absent) by 3 (cause-related identity: LGBT support congruent, neutral, incongruent - measured) between-subjects design. We first measured cause-related identity using a categorical measure to separate neutral and incongruent identity more clearly. Then, participants read the description about a clothing retailer where CSR was manipulated. We measured their intention to return the used shirt and anticipatory self-threat. For the intention, the interaction between CSR and cause-related identity was significant. The effect size of CSR was bigger in the incongruent (vs. congruent) condition. Anticipatory self-threat was a significant mediator.

Given that incongruent CSR leads to dishonest behavior, how can we attenuate this effect? Building on the anticipatory self-threat mechanism, we propose that making moral values situationally salient will attenuate the effect. When moral values are salient, anticipatory self-threat will be heightened from considering acting dishonestly itself (Mazar et al. 2008). Thus, we expect that when moral values are salient, anticipatory self-threat will be elevated regardless of an organization's CSR and the consumer's cause-related identity, attenuating the backfiring effect of CSR.

Study 3 tested the moderating role of salience of moral values using a 2 (cause-related identity: refugee support congruent, incongruent - measured) x 3 (salient value: competence, honesty, care) between-subjects design. Since our focus was on testing whether salient moral values attenuated the effect of incongruent identity on dishonest behavior, we included only the CSR present condition. After we measured refugee support identity, we manipulated salient values using a writing task. Next, participants read the description about a theme park's CSR activity in the domain of refugee support and indicated their intention to lie about their child's age to get a discount on the ticket and anticipatory self-threat. For the intention, the interaction between cause-related identity and salient value was significant. As predicted, in the competence salience condition, participants with incongruent (vs. congruent) identity showed significantly higher intention for acting dishonestly. In the honesty and care salience conditions, the intention was not different between incongruent and congruent conditions, suggesting that the backfiring effect of CSR under the incongruent condition was attenuated. In study 2 and 3, we also ruled out alternative explanations of liking for and perceived morality of the organization and expected harm to the organization.

Overall, we demonstrate the effects of polarizing CSR on dishonest behavior and show a condition under which CSR backfires. We also demonstrate that the effect is driven by egoistic motives (e.g., to avoid feeling bad about themselves) rather than altruistic motives (e.g., expected harm to the organization).



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# Boomerang Effect: How Sustainable Disposal Options Spur Green Consumers to Overconsume

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## EXTENDED ABSTRACT

One co-author's mother cheerily donates her clothing to a local charity and revels in her quarterly yard sales. She reports her deep affinity for the environment and avoidance of waste, akin to the set of consumers whose values center on environmental responsibility, reduction of waste and consideration of planetary resources (Haws, Winterich, and Naylor 2014). After donating her clothes to a local charity or hosting her yard sales, however, she usually comes home with armloads of new purchases. Does a sustainable disposal option, such as donating or selling, lead consumers to buy more new items? Disposal and dispossession practices are among the most understudied fields in marketing and consumer behavior (MacInnis and Folkes 2010). The present research investigates the effect of disposal on subsequent consumption decisions and contributes to the literature on disposal and sustainable consumption. Specifically, we explore how disposal justifies consumption of new items for consumers whose values center on environmental responsibility (hereafter, "green consumers").

Our goal is to determine when and why the attitudes-behavior gap in sustainable consumption might ironically widen for green consumers (Haws et al. 2014). In particular, we focus our lens on disposal and dispossession practices such as donation and selling of used goods to understand the downstream impacts of this particular set of sustainable behavior, which delays the arrival of the product to the dump or rubbish bin (Phipps et al. 2013). We propose that green consumers who are the most focused on avoiding waste in their consumption (Haws et al. 2014) will be licensed by disposal and dispossession options that are perceived as producing the least amount of waste on the environment.

Virtuous behaviors from charitable giving and volunteering to recycling and healthy food choices can license consumers to choose a more self-indulgent or immoral subsequent behavior (e.g., Khan and Dhar 2006; Ross and Kapitan, 2018). For example, individuals are less likely to engage in moral actions after they recall past moral (vs. immoral) behavior (Jordan, Mullen, and Murnighan 2011). The mere presence of a healthy option leads to an indulgent food choice by vicariously fulfilling a healthy eating goal (Wilcox et al. 2009). Similarly, individuals are found to use more resources (e.g., paper) when the option to recycle is available (Catlin and Wang 2013). Importantly, research suggests that licensing effects can be stronger for individuals whose values can be fulfilled by the previous virtuous behavior (Kivetz and Zheng 2006; Wilcox et al. 2009).

Building on this literature, we propose that sustainable disposal options such as selling or donating will encourage consumers to purchase new items more. Notably, this effect will be more likely to occur for green consumers who hold stronger pro-environmental values against incurring waste and ensuring goods live on (Haws et al. 2014; Luchs et al. 2011). That is, we argue that sustainable disposal will ironically lead green consumers to consume more goods, which may eventually produce more waste for society. This is mainly because sustainable disposal can fulfill green consumers' values or goals associated with their pro-environmental identity as it is expected to reduce waste for society. As such, green consumers will be more likely to perceive sustainable disposal as prosocial and virtuous behavior reducing waste for society. This, in turn, will lead green consumers

to be licensed to purchase new items without concerns about potential negative environmental impacts of their consumption following disposal via donating or selling of used items. Four studies provide converging evidence for these predictions.

## Study 1

Study 1 aimed to provide initial evidence that sustainable disposal may drive enhanced future consumption for green consumers. To this end, we recruited a sample of clothing donors, asked them to first recall their experiences donating clothing, and asked them to report how likely they would be to purchase new clothing.

### *Method and Procedure*

One hundred and two participants (59.8% female) recruited from Amazon's MTurk participated in this study in return for monetary rewards. Participants were first instructed to recall and describe a recent clothing donation experience. Participants were then asked to consider a shopping scenario, in which they found a t-shirt that was appealing to them (See Appendix A). After reading the scenario, participants reported their purchase intention (two items; e.g., "How likely would you be to purchase the t-shirt?";  $\alpha = .93$ ). In addition, participants completed a scale measuring green consumption values (six items;  $\alpha = .95$ ; Haws et al. 2014; e.g., "It is important to me that the products I use do not harm the environment.") Finally, participants completed other background measures.

### *Results and Discussion*

A regression analysis using green values (mean-centered) as the independent variable and purchase intention as the dependent variable revealed a significant effect of green values on purchase intention ( $\beta = .20$ ,  $t(96) = 1.95$ ,  $p = .05$ ). This finding suggests that participants who had stronger green values were more likely to purchase a new shirt on a shopping trip after recalling recent donation behavior. In the next study, we further examine the proposed effect by manipulating green values.

## Study 2

The purpose of Study 2 was to enhance the internal validity of the proposed effect by manipulating green consumption values. We also extended the type of sustainable disposal options (e.g., donating and selling).

### *Method and Procedure*

One hundred and ninety-two undergraduate students (53.6% female) participated in the study with a 2 (consumption values: green vs. control) X 2 (disposal type: donate vs. sell) between-subjects design. First, participants completed an essay task making salient their green consumption values (vs. an essay task on a neutral topic (i.e., typical day)). Next, participants considered a scenario in which they found an appealing t-shirt at the mall a few days after they had sold (vs. donated) their clothing (Appendix B). After that, participants reported purchase intention as in study 1 ( $\alpha = .89$ ). Participants also completed a manipulation check for green consumption values ( $\alpha = .98$ ) and other background measures.

### Results and Discussion

An ANOVA on green values revealed our manipulation was successful ( $M = 5.46$  vs.  $M = 3.65$ ;  $F(1, 190) = 76.92, p < .001$ ).

An ANOVA using consumption values and disposal type as independent variables and purchase intention as the dependent variable showed a main effect of consumption values on purchase intention ( $F(1, 188) = 3.95, p < .05$ ). Participants whose green values were salient ( $M = 5.27$ ) were more willing to purchase the new shirt compared to those in the control condition ( $M = 4.78$ ). The effect of disposal type ( $F(1, 188) = .09, p = .76$ ) and the interaction were NS ( $F(1, 188) = .01, p = .91$ ).

Study 2 demonstrated that consumers whose green values are salient are more likely to purchase new clothing after sustainable disposal activities—i.e., donating and selling of used items. Making green values temporarily salient can alter the way that disposal influences consumption for consumers who may not be intrinsically green as well. Also, the effect emerged across both donation and selling conditions, indicating that either form of sustainable disposal leads to a licensing effect for green consumers. In the next study, we seek to determine the underlying mechanism for this effect.

### Study 3

In study 3, we sought to explore the proposed underlying mechanism of this effect via waste perceptions. To this end, we also explored a theoretically relevant boundary condition of the effect—i.e., an unsustainable disposal option (i.e., trashing) which does not reduce waste perceptions (Spencer, Zanna, and Fong 2005). If the positive effect of green values on subsequent consumption following a sustainable disposal is driven by reduced perceptions of waste, the observed effect should disappear when disposal increases waste perceptions (e.g., trashing used items).

#### Method and Procedure

Seventy five undergraduates (36% female) participated in a study with a two-group (disposal type: donate vs. trash) between-subjects design, with green consumption values measured continuously. Participants read a disposal and shopping scenario similar to study 2. The scenario varied only in disposal options (donate vs. trash) (see Appendix C.). After that, participants indicated purchase intention ( $\alpha = .92$ ). Next, participants indicated waste perceptions on two items (“Purchasing this shirt is a waste for society,” “Purchasing this shirt is a waste for society?”;  $\alpha = .70$ ). Participants also completed a scale of green consumption values as in study 1 ( $\alpha = .95$ ) and other background measures.

#### Results and Discussion

As expected, regression analysis revealed a significant interaction between disposal and consumption values ( $\beta = -.73, t(71) = 3.01, p < .01$ ). In the donation condition, participants with stronger green consumption values were more likely to purchase the new shirt ( $\beta = .34, t(35) = 2.22, p < .05$ ). In the trash condition, we found an opposite effect: those characterized by stronger green values were less likely to purchase the new shirt ( $\beta = -.39, t(36) = 2.07, p < .05$ ).

Bootstrapping analysis for moderated mediation (Hayes 2012; Process Model 8; N of bootstrap = 5,000) revealed a significant index of moderated mediation (95% CI =  $-.872$  to  $-.046$ ). Specifically, the indirect effect of green consumption values on purchase intention via waste perceptions was significant in the donation condition (95% CI =  $-.780, -.062$ ). In contrast, the indirect effect was NS in the trash condition ( $-.162, .221$ ). These results supported our prediction that waste perceptions underlie the positive effect of green values on purchase intention following a sustainable disposal behavior (i.e., donating).

Study 3 provided evidence for the mediating role of waste perceptions in the effect of green values on purchase of new items following sustainable disposal. In the next study, we explore a boundary condition for the observed effect.

### Study 4

The objective of study 4 was to explore a theoretically and practically relevant moderator of the effect of green values on overconsumption following sustainable disposal. In doing so, we sought to provide additional support for the underlying mechanism through waste perceptions. According to our theorizing, green consumers should be less inclined to purchase a new item following donation when donating is described as practically ineffective in reducing waste for society. For example, when a charitable organization cannot use all of the donated clothing, donated items can be sent to landfills (Matteis and Agro 2018), increasing waste for society. Thus, we manipulated need for donation in order to mitigate the positive effect of green values on consumption following donation.

#### Method and Procedure

One hundred and ninety-one undergraduates (52.9% female) participated in a study with a two-group (need for donation: high vs. low) between-subjects design, with green consumption values measured continuously. Participants first read and evaluated a news article. Depending on condition, the article described that charitable organizations either need more donations of clothing or have no need for clothing donations (Appendix D). Next, participants considered a clothing donation and consumption scenario (same as Study 2). After reading the scenario, participants indicated purchase intention for a new shirt ( $\alpha = .94$ ), waste perceptions ( $\alpha = .86$ ) and green consumption values ( $\alpha = .93$ ).

#### Results and Discussion

As expected, regression analysis on purchase intention revealed a significant interaction between need for donation and green values ( $\beta = .33, t(187) = 2.06, p < .05$ ). In the high need for donation condition, participants with stronger green consumption values reported higher purchase intention ( $\beta = .31, t(95) = 2.79, p < .01$ ). In the low need for donation condition, the effect of green values on purchase intention disappeared ( $\beta = -.02, t(92) = .16, p = .87$ ).

Bootstrapping analysis for mediated moderation (Hayes 2012; Process Model 8) revealed that waste perceptions underlie this effect (95% CI =  $.070$  to  $.443$ ). The indirect effect of green values on purchase intention via waste perceptions was significant in the high donation need condition ( $.025, .309$ ). In contrast, the indirect effect was NS in the low need condition ( $-.195, .013$ ).

Consistent with our theorizing, consumers with green values were not likely to purchase more clothing following disposal via donation when they learned that clothing donations were not needed and would not be helpful in reducing waste. Not only do the findings offer a way to help green consumers avoid the observed licensing effect, but this also provides confirming evidence for the mediating role of waste perceptions in the proposed relationship.

#### Conclusion

Four studies provide converging evidence that sustainable disposal options, which are thought to reduce waste associated with disposal, can ironically lead green consumers to consume more new items, which can create more waste for society in the end. This boomerang effect of sustainable disposal on new consumption for green consumers is mainly due to the perception that donating or selling unwanted items reduces waste and environmental harm for society, a key consideration for green consumers whose consumption values center on environmental responsibility. Furthermore, this research

demonstrates theoretically relevant boundary conditions and moderators of the effect – i.e., unsustainable disposal option and lack of actual need for donation by a charitable organization. These findings contribute to the literature on disposition, licensing effect, and sustainable consumption.

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# Assemblages of Denim: Transforming from a Mundane to a Remarkable Consumption Object

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## EXTENDED ABSTRACT

### INTRODUCTION

In the contemporary consumer culture, consumer items and their meanings are resources which consumers use to form their identities, establish communities, reproduce cultural values through rituals or resist to dominant ideologies (Muniz and O'Guinn 2001, Rook 1985, Thompson 2004). However some consumer items or practices are inconspicuous, invisible, are away from the consciousness of people. They are part of the habitual side of the daily life such as food (Couplan 2005), cars (Dant 2004) or denim (Miller and Woodward 2012). Although a consumer object is often categorized as either a mundane or a remarkable item, recent research has been looking at the fluid nature of consumer objects. For example, Hagberg (2016) studied the historical transformation of shopping bags as mundane objects through time by entering into different consumption practices. Sofonova and Valcheva (2012) identified mechanisms of historical transformation of bottled water from a mundane to a remarkable consumer object. In this study, we aim to extend Miller and Woodward's (2012) study on denim by explaining how denim transforms and retransforms from the ordinary to the remarkable status in everyday life consumption. In this study, our problematic is to understand this continuous transformation of the nature of a consumer item from mundane to remarkable. In a grocery store or at the train station, a denim trouser becomes this blindingly obvious, ordinary thing, but at other instances, it becomes edgy, stylish, formal, or very authentic. Even the same trouser as an object can shift between these categories.

Assemblage theory allows us to understand this fluid and emergent nature of consumer object categories (mundane or remarkable). Becoming a mundane or remarkable denim trouser necessitates a disassembling of the elements of the object (fabric, color, style) and the consumer (gender, age, occupation, bodily parts like long legs) and then these elements form assemblages with other elements like time, place, other clothing items, community, and consumption situations (like rituals). When we analyze these parts and their exteriority relationship with each other, we found that there are two main assemblages occur which defines either the ordinary or the mundane. That is, this study delineates the process of how ordinary and remarkable as categories of consumption objects form.

We conducted this study in Eskişehir, Turkey. Eskişehir is a city located in the northwest of Turkey with approximately a population of 800000 and two universities. From the 2000s onwards, the city witnessed an urban regeneration process, aiming to transform the small rural town to a modern European city (Babadoğan 2005). Today new recreation sites, shopping malls, and commercialized street life of Eskişehir made global consumer culture available to young university students who have recently moved from different parts of Turkey. In addition to spending their time on the campuses, they socialize and enjoy their leisure times in cafes, restaurants, and theme parks. They are exposed to fashion items, novelties, and local as well as global brands in the shopping malls of the city. Jean consumption in this dynamic context allows us to see multiple ways and situations of jean consumption where ordinary and remarkable jean categories emerge.

### METHOD

This study is based on the data gathered from in-depth interviews, focus groups, and participatory observations. Data collection began with participant observations in university canteens and shopping malls in Eskişehir. At the same time, we conducted six in-depth interviews with university students, ages from 17 to 24. Then, we conducted three focus group interviews with female university students since they appropriated denim in a wide array of situations. After the transcription of the data (30 pages of field notes, 65 pages of interview transcript and 40 pages of focus group transcripts – all single space) we conducted inductive coding. We developed preliminary themes and decided to expand our research by theoretical sampling (Creswell, 2006). By applying snowball sampling procedures, we reached six more informants including both men and women; working, housewife and unemployed; married, divorced and single. Ages of latest informants are range from 29 to 32. Interviews lasted 60 to 80 minutes and were recorded and transcribed (single space 120 pages). In-depth interviews generated information on informants' decisions on their clothing purchase, denim choice and consumption situations. Then to understand the subjective meaning of denim, we asked for their experiences on wearing denim. We look for dramatic changes, high emotional situations in which jeans or denim has a place. Afterward, we wanted to learn where they prefer to wear jeans. By doing this, we would be able to see whether denim is a part of daily life or more special for the informant. After this primary analysis, we recognized the ordinary and remarkable categories emerge from the data. To understand how these categories form, we decided to extend the data collection and analyze the data from an assemblage theory perspective.

In the data, there are highly recognizable territorialization, deterritorialization, and reterritorialization processes and, material and expressive components in denim consumption experiences of informants (Deleuze and Guattari, 1987; DeLanda, 2009). In the analysis we adopted the following stages of analysis of the assemblages: 1) describing the alloy of heterogeneous bodies of human and non-human elements, 2) description of material, expressive and imaginative qualities of these bodies, 3) depiction of territorialization and deterritorialization processes as a result of the interactions of these heterogeneous parts, 4) defining the agencies of the human and non-human elements in these territorialization and deterritorialization processes. After introducing the context of blue jean consumption in Turkey, we provide the findings of the study.

### CONTEXT

Clothing has always been a symbolic and political issue in Turkey. Sumptuary laws and clothing legislations had long been part of the Turkish history. While the Turkish Republic was forming, new dress codes were issued in order to harmonize people's clothes with the modern Western world by leaving aside the traditional and religious clothing aside and to establish social unity and solidarity by eliminating the differences between different groups and identities such as urbanite, peasantry, bureaucracy, religious ranks, Muslim, and the non-Muslim population (Doğaner, 2009: 33). While some people agreed on these regulations and accepted them, others resisted passively by not being so visible in the public sphere. Turkey later

on faced with a head-scarf ban in universities from the early 1970s to late 2000s. This clothing issue was a perfect example to see the tension between secular and Islamic publics of the country since it is a highly controversial and symbolic issue in Turkey. Not only head-scarf but the veil was a tool of stigmatization in society because Turkish secularists used it to strengthen their hegemonic political conception of the Turkish Republic (Gürbüz, 2009). However, later on, it becomes more of a fashion concept (Sandıkcı ve Ger, 2010). Throughout its history, like head-scarf, denim possessed symbolic and political meanings as well.

Turkish consumers met denim during the late 1950s, after getting closer to the West and America as a result of Marshall Aid (Çalışlar and Güler 2003). Consequences of the intense admiration of the American way of life are the popularity of smuggled American products sold illegally in the big cities like İstanbul, Ankara, and İzmir. During the sixties, while European fashion favored functional and simple styles and cheap fabrics which are accessible to everyone, equality, and suitability to contemporary urban lifestyle, denim became an essential fabric for the fashion designers. Its repercussions were seen in Turkey. As well as ordering jeans to tailors, fashion-conscious women started sewing their jeans at home in this closed market economy. In the meantime, another critical wave of interactions was through hippies who were passing by Istanbul on their way to Katmandu. Second-hand jeans of the broke hippies sold and became popular among the youth who have associated themselves with this global counterculture (Çalışlar and Güler 2003). The seventies and early 80s, there was a political turmoil in the country, although at the beginning leftist student groups rejected blue jeans as an American icon but later appropriated as the working class clothing by making changes like cutting of the brand names or wearing them with green parkas and army boots. Rightist students rejected wearing blue jeans and preferred a conservative style like suits or cord trousers (Kasapoğlu Akyol 2010).

In the 1980s, after the Turkish government adopted neo-liberal economics and markets are opened, foreign blue jean brands such as Levi's and Wrangler. Reputable global brands like Levi's became the symbol of prestige among upper middle-class consumers. During the 80s and 90s, immigration from the rural parts of the country to the big cities created a tension in the cities. Jeans became the symbol of the western modern city life differentiating the university students of peasantry backgrounds from the urbanites. In 1990s blue jean became the symbol of youth, comfort, and freedom as well. By the 2000s, blue jeans were spread to the society; jeans find its place in the lives of young-old, rich-poor, rural-urban, conservative-liberal, religious-secular.

People wear jeans with several meanings whereas their choice may be seen in distinct occasions like job, education, spare time or even some ceremonies. Today especially among the middle-class youth who are exposed to the global fashion discourses, wearing practice is considered more like combining jeans with other clothing items and accessories. Some prefer jeans because of its comfort, its role in creating equality among different factions of the society and others prefers it to form authentic identities. In this study, we are interested in this fluid role of denim in the lives of the consumers, how it is shifting its role from a mundane to a remarkable consumption object.

## FINDINGS

Our findings reveal that denim trousers are objects becoming blindingly obvious in some instances and can be remarkable items for consumers in shaping their identities at other times. Utilizing assemblage theory perspective, we conceptualize continuous trans-

formation of denim from ordinary to remarkable item for young Turkish consumers.

The informants interpret denim as an ordinary item by using the terms: comfortable to wear, easy to use, a durable fabric, can be worn anywhere, prefer to wear denim to the situations where I do not need to think about my dressing, denim is suitable for shopping, picnic (informal environments), week-ends, or at the café, no need to spent effort or to think about what to wear, wear and go out, wrapped in the wardrobe (no need for ironing and hanging), it can be bought from cheap or expensive shops, for anyone, does not represent richness or poorness, and does not emphasize a gender position (makes a women unseen because it gives a masculine look rather than emphasizes the femininity), or a life saver.

*"You can buy a pair of jeans from the bazaar. If you have Money, you can buy from an expensive shop. It is something everyone can wear... All are same, the same blue color" (Arzu, F, 30)*

*"I do not have ironing problem. I wake up in the morning and wear the pair of jeans I wrapped up" (Caner, M, 30)*

*"If I do not want to spend effort, I wear jeans" (Jale, F, 32)*

*"When we are at a picnic! Grass, kids, people wearing jeans. It is normal...or we are in a cafe at Bağlar, everybody wearing jeans, youth... normal" (Rabia, F, 29).*

*Interviewer: ...OK! We have heard about your clothing style. What is the place of blue jeans in your clothing style?*

*Informant #4: Indispensible (Loughing)*

*Informant #1: Ordinary...*

*Interviewer: Can you open it more?*

*Informant #4: In everyday life, we keep wearing, using jeans.*

*Informant #5: For me, it is the most functional (Focus Group #1)*

Unlike the mundane denim, stylish and authentic denim, which is special to the consumer and often used for its symbolic meaning in the identity creation process is also identified. A body of ideal shape (defined by the global fashion discourse), denim (befitting, ripped, stonewashed), complementary parts (high-heels, jacket, silk blouse), and places (formal, informal, work, leisure) assembles the denim. Stylish ones are described by these terms: style (tight, skinny, ripped etc.), material characteristics of denim (e.g. pockets, colors of threads, or tones of blue different than the denim blue, such as ice blue), branded denim delivering fit between body and cut, ideal bodily aesthetics of long legs and skinny body necessary for a befitting stylish jean, harmony with other clothing items and accessories, fit between the situation, the jean and the other items worn (restaurant, at night, silk blouse), fashionable jeans, western and American myth of blue jean, low rise, and feminine jeans (transforms men to an "emo" person, feminizing, making him distinct), designer jeans, ornamented jeans with crystals or embroidery. Here are some scripts mentioning these elements of stylish jeans:

*What we called jeans was blue, even a single tone of blue. Now there is ice blue, light blue, dark blue, black... the threads of the pockets or the threads on the sides... was like yellow threads on the blue denim. Now their colors are the same. When the colors are the same, you can wear them to formal places... My black jeans... I have a black leather jacket... I wear my black jeans with this jacket. It gives a rock style... I associate this color with rock" (Arzu, F, 30)*

*It is about the ratio of the height to width ration [of the human body].(Zeynep, F, 30)*

*“For example, if I am coming to the school, I wear an appropriate shoe, such as a high heel which makes it close to a classic style. Japanned leather [shoes]can be suitable. Everything does not fit with jeans but I try to make them match. On top, I will wear a shirt but a sporty shirt...” (Arzu, F, 30)*

*According to me, jeans fit better to the people who are tall and with long legs. (Arzu, F, 30)*

*Sempre [a restaurant]is an expensive and a cool place. They [customers of Sempre]pranked themselves out when coming. It is not like coming to a wedding ceremony but they have a different style. You may feel yourself awkward [as not belonging to a group with a jean]. (Jale, F, 32,)*

The network of human and non-human components of the denim assemblage with their expressive and material qualities shape denim as mundane or remarkable. The material and expressive qualities of the place (e.g. a fancy restaurant with its brand image and atmospherics), other clothing items (e.g. a black shirt with gold details), accessories (e.g. a necklace), fashion discourses (e.g. being stylish and aesthetic or body type), brands, and other people in the context (e.g. friends, relatives, colleagues) are bodies of heterogeneity. The components and the rules of interaction among components can differ according to what appropriateness refer to in a specific situation (e.g. aesthetics, comfort, or functionality). Also, the same denim trouser can be part of different assemblages. It can fit a fancy restaurant as well as a student canteen. There are situations where denim cannot form an assemblage such as formal situations. For example, an assemblage containing a professor in the university context is seen as inappropriate, because university represents the workplace (a formal place) for a professor.

Mundane denim is an assemblage of human and non-human actors such as the denim itself, the situation which denim is worn, the persons' body and the bodily experiences like fitting on the body, feeling comfortable. In the assemblage of mundane denim, an essential element is the denim fabric itself; it should be a coarse cotton fabric in denim blue color. This material element has a role in the territorialization of the ordinary denim in the society. However while this material element of the assemblage transforms to a different fabric which is flexible, in a different color or thinner, then the mundane denim deterritorializes and transforms into stylish denim which is more authentic and remarkable.

However, the material element of the denim fabric now transforms into a more expressive element. For example, the flexible fabric may mean trendy and befitting. While the expressive role of the fabric becomes influential, the stylish denim territorializes. Depending on the changes in the heterogeneous bodies in the assemblages and the influence of their material and expressive characters, denim jeans continuously reproduced as mundane or stylish in the society. Between mundane and stylish denim, black denim possesses a different position. Black jeans are not mundane jeans; they deterritorialize what a mundane jean is as a result of color, the material quality of the denim. Black jean is specific; it is preferred when going out at nights or combined with black jackets to get a rock star image. As can be seen, the rock start cool identity created with black jeans reveal that

black jeans can be a component in the stylish denim assemblage and has a role in the territorialization of the stylish denim.

Denim has the capacity to code/decode both material and expressive roles in both different assemblages. For ordinary denim assemblage, mundanity, comfort, usefulness, casual wear, sneakers, and functionality are leading parts. The materiality of denim is becoming more significant than its expressive meaning. When it is ordinary, denim is a problem solver and unnoticed clothing object. Those types of denim are not spectacular. They are clothes that anyone can wear anywhere.

Remarkable denim assemblage is the opposite of ordinary denim. For remarkable denim assemblage, high-heels, advertising discourse, fashion discourse, top clothing, and ideal beauty are the prominent parts. Consumer use denim when they want to be seen or realized. When it is remarkable denim, its expressive roles become more important than its materiality. It can be black, stretchy or skinny, but most importantly it needs to be remarkable. Besides, denim's relation with other parts of the assemblage is more powerful than mundane denim. It needs to match with high-heels or jacket inevitably. So consumer's capacity to create denim assemblage is more vital at remarkable denim assemblage.

Sociohistorical background of the Turkish context highlights that western and American life are admired and used as status markers (Üstüner and Holt 2010). Denim like its European counterparts do not only operate as a mundane object but at the same time it becomes a stylish one used in defining the identities through conforming the global fashion discourse's understanding of aesthetics. Therefore, denim representing western fashion utilized as a symbolic resource in establishing a modern western identity and transforms to the remarkable denim.

## DISCUSSION

This study contributes to the consumer research literature demonstrating that the dualities of mundane-remarkable, invisible-conscious, ordinary-extraordinary are oversimplifications. Denim consumption was presented as a mundane consumption item (Miller and Woodward 2012). However adopting the assemblage theory perspective, we demonstrate that consumer items can transform from mundane to remarkable, as a result of the territorialization and deterritorialization processes of the denim. We bring an alternative understanding of the notion of “liquid” consumption (Bardhi and Eckhardt 2017) by demonstrating the continuous transforming nature of the denim, the consumer object. Unlike Hagberg (2016) and Sofonova and Valcheva (2012) studying the transformation of consumer objects historically, our study shows the fluid nature of consumption objects at a single period. Miller and Woodward (2012) emphasize denim as a mundane object in the British context.

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# The Impact of Product Type on Disposal Intentions

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## EXTENDED ABSTRACT

Despite early suggestions that product characteristics might play a significant role at the stage of disposition (Jacoby, Berning, and Dietvorst 1977), extant research focused largely on the impact of product characteristics on consumers' choice and consumption, leaving the impact of product characteristics on disposition largely uninvestigated. Although empirical studies recently started to study the impact of several product characteristics such as form distortion and size on recycling intentions (Trudel and Argo 2013), the research is yet to identify the role of other product characteristics on disposition intentions. In the current research, we investigate how hedonism/utilitarianism dimension of a product impacts recycling versus trashing intentions.

Based on past research suggesting that hedonic products evokes a sense of guilt (Strahilevitz and Myers 1998), we predict that hedonic products are more likely to be recycled than trashed. This prediction relies on the assertion that recycling is a compensatory behavior consumers actively engage in when they experience guilt related to a consumption act such as buying products with excessive packaging (Dahl, Honea, and Manchanda 2003).

The disposition decision for utilitarian products, however, is likely to be different from decisions about hedonic products. Disposition of utilitarian products is generally not based on psychological obsolescence, which refers to replacing a product for symbolic reasons such as the product being unfashionable or less attractive (Cooper 2004). Rather, they are disposed due to physical obsolescence. In other words, consumers dispose of utilitarian products when they are no longer physically capable of conferring the practical utility they are used for due to raw material degradation. Consequently, consumers are likely to perceive little value from recycling utilitarian products—which are perceived to be depreciated—at the stage of disposition, leading to higher trashing intentions.

We tested our predictions in four experiments. In study 1, three research assistants observed student customers' disposition behavior (of plain coffees and coffees with cream topping) at the cafeteria of a college during a period of ten days. A pretest among a sample from the same university showed that plain coffee is perceived as more utilitarian than hedonic, whereas a coffee with cream topping is perceived as more hedonic. 127 observations was noted. Among 59 plain coffee cups, 34 cups (57.6%) were trashed whereas 25 cups (42.4%) were recycled. Conversely, among 68 cups of drinks with cream topping, more cups were recycled (49 cups; 72.1%) than trashed (19 cups; 27.9%). A binary logistic regression revealed that this effect was significant ( $\chi^2(1)=11.05, p<.001$ ).

In study 2, MTurk participants ( $N=104$ ) indicated either a hedonic or a utilitarian possession. Next, they stated their intentions to either recycle or trash this product when they decide to no longer use it on a 101-point scale. We obtained a significant interaction ( $F(1, 100)=9.95, p<.01$ ). In the utilitarian condition, participants indicated a significantly higher intention to trash ( $M_{trash}=45.8; M_{recycle}=25.5; F(1, 100)=4.69, p<.05$ ). In the hedonic product condition, this pattern reversed ( $M_{recycle}=44.6, M_{trash}=22.6; F(1, 99)=5.26, p<.03$ ).

Study 3 ( $N=200$ ) had a 2 (consumption goal: utilitarian vs. hedonic goal) x 2 (disposal type: trashing vs. recycling) x 2 (guilt: low vs. high), between-subjects design. In the hedonic (vs. utilitarian) condition, participants were asked to imagine that they had a kindle

for reading lowbrow (vs. highbrow) books. Following past research showing that price deals reduce guilt associated with consumption (Choi et al. 2014), we used price promotion as the guilt-reducing cue. In the high-guilt (vs. low-guilt) condition, participants were told that they bought the kindle at the original market price (vs. at a price discount of 50%). Finally, participants indicated on a 101-point scale their intention to either recycle or to trash when they no longer use the kindle. We found a significant interaction of product type and disposal type ( $F(1,192)=19.45, p<.001$ ). Consumers reported a significantly higher intention to recycle the hedonic kindle ( $M_{recycle}=50.0, M_{trash}=30.6; F(1, 192)=8.83, p<.004$ ). Conversely, when consumers considered the kindle for using for utilitarian purposes, their trashing intentions were higher ( $M_{recycle}=23.5, M_{trash}=45.6; F(1, 192)=10.66, p=.001$ ). Moreover, when no guilt-reduction cue was provided, participants in the hedonic condition reported significantly higher intentions to recycle ( $M=62.0$ ) than to trash ( $M=28.7; F(1,192)=11.88, p<.001$ ). However, this effect disappeared when participants were asked to think that they purchased the kindle at a discounted price ( $M_{recycle}=39.4, M_{trash}=32.6; F(1,192)=.52, p>.45$ ). On the other hand, providing the guilt reduction cue did not change the pattern of findings in the utilitarian condition. Participants' intentions to trash a kindle for utilitarian purposes was higher than recycling in both high guilt ( $M_{trash}=47.2, M_{recycle}=24.8; F(1,192)=5.48, p=.02$ ) and low guilt ( $M_{trash}=44.1, M_{recycle}=22.2; F(1,192)=5.19, p<.025$ ) conditions.

We tested the process prediction for utilitarian products in Study 4 ( $N=240$ ), which employed a 2 (product usage goal: hedonic vs. utilitarian) x 2 (disposal: recycling vs. trashing) x 2 (product condition information: absent vs. worn out), between-subjects design.

Participants were first asked to think about a shirt they use either for utilitarian or hedonic purposes. Next, participants were asked to further imagine that they decided to no longer use his product. In one condition, they were informed that they decided to longer use the shirt because it was worn out. They finally indicated their intention to recycle or trash the shirt on a 101-point scale. The results replicated our basic prediction ( $F(1, 232)=60.39, p<.001$ ). In the utilitarian condition, trashing intentions ( $M=66.4$ ) were significantly higher than recycling intentions ( $M=33.3; F(1,232)=33.73, p<.001$ ). This pattern reversed in the hedonic condition ( $M_{recycle}=63.8, M_{trashing}=33.1; F(1,232)=26.91, p<.001$ ). The worn-out condition of the shirt did not influence the disposal intentions for the hedonic product ( $M_{worn-out-recycle}=62.6, M_{worn-out-trash}=39.7; F(1,232)=7.46, p<.01; M_{not-worn-out-recycle}=65.1, M_{not-worn-out-trash}=27.1; F(1,232)=21.37, p<.001$ ). The physical condition of the shirt, however, exerted a significant influence on consumers' disposal intentions for the utilitarian shirt. When no information regarding the shirt's physical condition was provided, trashing intentions ( $M=58.4$ ) were significantly higher than recycling intentions ( $M=40.3; F(1,232)=5.06, p=.025$ ). When participants were told that they were disposing the product because it wore out, the significance of the difference between trashing ( $M=74.9$ ) and recycling ( $M=25.8$ ) intentions improved ( $F(1,232)=34.89, p<.001$ ).

The current research advances extant knowledge on consumer disposal behavior by investigating the impact of product type—as it relates to hedonic and utilitarian perceptions—on disposal decisions. Recently, a research stream developed by Trudel and colleagues (Trudel and Argo 2013; Trudel, Argo, and Meng 2016) found that several product characteristics such as form and size distortion, and

identity expressiveness influence whether consumers would recycle or merely bin the product. We contribute to this research stream by showing that a significant product-related variable—whether the product is perceived as hedonic or utilitarian—which has been long shown to influence consumer behavior at choice and post-choice stages influences consumer decisions also at the stage of disposition. We replicated the proposed effect across three types of products—paper cups, electronics, and garment—which play a significant role in waste generation (EPA 2012). Our findings provide significant implications for public policy makers, who put significant efforts to increase these figures.

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# Increasing Consumption of Larger Product Sizes through Symbolic Congruity: Size Label Color and Product Temperature

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## EXTENDED ABSTRACT

In product packaging, size labels provide semantic information indicating the relative magnitude of a product, and color influences consumer perceptions in both physical and physiological ways (i.e., Aydinoglu and Krishna 2011; Creusen and Schoormans 2005; Hagtvedt and Brasel 2017; Krishna et al. 2017; Labrecque et al. 2013; Prelec et al. 1997; Spence 2011). Among these associations lies temperature: red associates with aggression and warmth, while blue tends to represent calmness and cold (Bagchi and Cheema 2013; Bellizzi and Hite 1992; Chebat and Morrin 2007; Labrecque et al. 2013; Mahnke 1996; Mehta and Zhu 2009; Mehta et al. 2017; Szocs and Biswas 2014).

Importantly, color, size labeling, and temperature can all accelerate (or decelerate) arousal, which can increase (decrease) consumption accordingly. The common view of color is that warm colors – especially red – are more arousing, while cool colors (i.e., blue) are more relaxing (Bellizzi and Hite 1992; Crowley 1993; Gorn et al. 2004; Kaltcheva and Weitz 2006). Temperature itself can affect arousal, with warmer temperatures generally suppressing arousal (Cheema and Patrick 2012; Halali et al. 2017; Tham and Willem 2010). Further, larger product sizes lead to generally higher rates of arousal and consumption than smaller sizes (i.e., Scott et al. 2008; Aydinoglu and Krishna 2011; van Ittersum and Wansink 2012; van Kleef et al. 2014; Karemeas et al. 2015; Ilyuk and Block 2016; Roose et al. 2017).

Research has appeared to neglect the potential effects of combining color and temperature cues in congruent ways (i.e., red with hot products and blue with cold products). We argue that such combinations could lead to boosted arousal and higher perceived value of larger sizes. Although prior scholars have shown that red tends to be more arousing than blue (i.e. Bellizzi and Hite 1992), we argue that congruity between color as a symbol of temperature and the temperature of a product itself can also be stimulating, which can make blue more arousing when paired with cold products and red less arousing when paired with hot products. As such, because red is typically associated with warmth and blue with coolness, blue size labeling for warm products and red size labeling for cool products create sensory mismatches that may dampen arousal toward the given product. Further, we propose that environmental temperature may moderate this influence due to its own effects on arousal (Cheema and Patrick 2012; Halali et al. 2017; Tham and Willem 2010). Four studies test these predictions.

Study 1 established the initial effect of size labeling and product temperature on arousal. This 2 X 2 between-subjects study utilized images of bottled water labeled either small or large in either red or blue. Label color and labeled size interacted to predict arousal, which was higher for the large size than for the small size in the blue condition but not in the red condition.

Studies 2a and 2b extend study 1 by testing both arousal and a key consumer outcome variable (WTP) within the same studies. In study 2a (2 X 2 between-subjects design), we test our predictions using a cold product context (milk) with similar size and label conditions. For the blue label, WTP was significantly higher for the large size than for the small size, but there was no significant difference for the red label. Further, arousal mediated for blue but not for red

Study 2b replicated study 2a using a hot product (coffee). As expected, WTP was not significantly different across size conditions for the blue condition but was significantly higher for the large size than for the small size in the red condition. Once again, arousal was a significant mediator, but only for the red label.

Study 3 was a controlled laboratory experiment involving either a cool room or a warm room, either hot or cold products, and either red or blue size labeling (2 X 2 X 2 between-subjects design), with selected size (definitely the small – 1 to definitely the large – 7) as the DV (unlike prior studies, subjects saw both small and large as available options in this study). The three-way interaction of room temperature, product temperature, and size label color was significant. For the cool room condition, the interaction of product temperature and size label color was significant: for the hot product condition, subjects exhibited a stronger preference for the larger size when the sizes were printed in blue as opposed to red, while the difference was equally strong and not significant for the cold product. Meanwhile, for the warm room condition, this interaction was not significant. Further, arousal mediated the three-way interaction and selected size.

Taken together, the four studies above show that congruity between size label color and

product temperature drives up arousal, increasing the desire and perceived value of the larger size. Further, air temperature moderates these effects, suggesting that a cooler air temperature can override incongruities when at least two of the three temperature-related factors align (color temperature, product temperature, and air temperature) and that warmer air temperatures reduce the effects on arousal. These studies change our understanding of the arousing properties of color: red may not always be more arousing than blue when the temperature-related symbolic properties of color are taken into account. Beyond academia, these findings are important to firms that sell beverages of certain temperatures, especially when different sizes are involved, and shows that aligning packaging elements such as size labels with product and air temperatures can boost consumer responses and perceived value in larger available sizes.

The above studies are limited in a few ways. First, consumers did not actually handle hot or cold products; we plan to address this limitation through a field study in which subjects will handle products that are either hot or cold. Second, the effects are limited to beverages; while beverages are a major component of the market, additional product contexts would provide broader generalizability for the theory. Third, we test only two variables (selected size and WTP) in the above findings, so subsequent studies will include additional variables to broaden the scope of consumer responses.

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# Enhancing Perceptions toward In-Home Artificial Intelligence Devices through Trust: Anthropomorphism and Non-Branded Device Messages

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## EXTENDED ABSTRACT

In a world of connected devices and technology, consumers are opening their homes to artificial intelligence (AI) devices, such as Google Home, Amazon Echo and HomePod. These devices are changing the way consumers interact with brands/products, companies, information, and each other. A source of entertainment, information, home control, and personal reminders, in-home AI devices offer convenience and personalized content on-demand through voice-control. With more machines exhibiting human intelligence (Siau and Yang 2017) and the integration of AI in these devices, the topic has remained under-researched. Thus, this exploratory research seeks to better understand how owners and non-owners feel about in-home AI devices and what barriers, like trust, may be preventing some from adopting this product.

Study 1 was a qualitative pretest with a mixed sample of 114 students and MTurk panelists (male = 41; mean age = 33) was conducted. The pretest goal was to determine barriers to adoption among non-owners (N = 58) and to ascertain owners' (N = 56) interaction with their devices. More specifically, owners were asked to elaborate on the uses with their devices, while non-owners were asked why they do not own a device and what would motivate a purchase. After data collection concluded, participants' comments were reviewed for references to trust by owners and non-owners.

Trust was a commonly cited concern among non-owners. While several participants mentioned concerns with high prices or lack of perceived benefits/value, many participants were worried about unauthorized listening or tapping of personal data. Also, non-owners indicated that they would more likely adopt a device with greater assurances of privacy and information protection, indicating that trust inhibits adoption. Meanwhile, device owners cited a variety of uses and engagements with their in-home AI devices, and a few cited trust-related concerns. A comment theme for owners was the humanlike aspect of their device, indicating conversational uses and considering their devices to be household members. Consumers may develop an affinity for their devices through their anthropomorphic characteristics. Anthropomorphism may be a way of increasing trust toward in-home AI devices. To explore this concept, Study 2 tested the influence of anthropomorphism on consumer trust toward AI devices.

Based on the findings of study 1, study 2 examined the influence of anthropomorphism, or the attribution of human characteristics to inanimate objects, as a way of boosting trust (Aggarwal and McGill 2007/2012; Epley et al. 2007; Kim and Kramer 2015; Maeng and Aggarwal 2014; Toure-Tillery and McGill 2015; Triantos et al. 2016; Waytz et al. 2014). 101 MTurk panelists (male = 45; mean age = 36) participated in a 2 (anthropomorphic cue: absent versus present) between-subjects experiment that included an image of a common in-home AI device with an icon of a female personal assistant in gray (anthropomorphic condition) or no icon at all (control condition). Purchase intentions were significantly higher for the anthropomorphic device, and current owners indicated higher purchase intentions toward the device than non-owners. However, the interaction was not significant. Further, mediation analysis revealed that the anthropomorphic device led to higher warmth, which led to higher trust; consequently, trust led to higher purchase

intentions. Although purchase intentions did not exhibit a significant interaction, the question remained if anthropomorphism boosts trust among owners and non-owners. Therefore, the analysis of the independent variables on trust was repeated. Trust was significantly higher for the anthropomorphic condition and for current owners. Additionally, a marginally significant interaction emerged, such that among non-owners, the anthropomorphic condition led to significantly higher trust than the control condition, whereas owners exhibited a non-significant difference.

Study 3 next examined how branded directions in AI information affected trust of in-home AI devices and willingness to adhere to those directions as well as rely on the device for future assistance. Each subject participated in a 2-level (instructions: non-branded versus branded) between-subjects design. Subjects were instructed to imagine that they were consulting an in-home AI device for directions to remove a stain from a garment and read a list of instructions that included either Tide (branded instructions) or no brand name (unbranded instructions). The main effects of ownership on adherence to directions and future reliance on the device were not significant. Meanwhile, the main effects of branding on both adherence to directions and future reliance were both significant. Further, a marginally significant interaction emerged for adherence to directions, with non-owners indicating similar willingness to follow the instructions between the non-branded and branded conditions. However, owners were significantly more willing to follow the directions in the non-branded condition than in branded condition. Meanwhile, the interaction of ownership and branding on future reliance was not significant. Serial mediation with the branding manipulation as the sole initial predictor was significant and full, such that the branded condition led to significantly higher perception of the device as a marketing agent, which subsequently reduced trust and in turn led to lower adherence to directions and future reliance.

This research provides the first examination of how owners and non-owners of in-home AI devices feel about the device and how barriers to adoption can be reduced through anthropomorphism and unbranded instructions related to general product usage. Study 1 identified trust as a barrier to adoption among non-owners and a main concern among owners. Study 2 considered the humanlike characteristics of the device and confirmed that an anthropomorphic cue boosts trust among owners and non-owners. Study 3 found that in-home AI devices using branded content are considered marketing agents and are therefore less trusted, leading to lowered adherence to instructions and future reliance on the device. In sum, these findings provide valuable insight on the adoption and use of these devices. While a few limitations exist (experimental design, sample size, brand usage), the area of AI research offers extensive opportunities to better understand consumer behavior toward in-home AI devices.

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# Deprivation of Control and the Phonetic Appeal of Brand Names

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## EXTENDED ABSTRACT

People must often respond to control threats of different nature in their daily lives: mundane (e.g., stockout) or tragic (e.g., natural disaster), negative (e.g., flight delay) or positive (e.g., early delivery). Research documents a wide range of responses that people can implement to compensate for low control states, from overestimating one's ability to control random events (Langer 1975) to seeking structure (Cutright 2012). In this research, we uncover a compensatory strategy to restore control that involves the phonetic appeal of certain brand names.

Specifically, we investigate consumers' attraction for brand names containing plosive consonants (i.e., "b", "d", "g", "k", "p", and "t") in the context of perceived control loss. Past research suggests that executing articulatory movements in the mouth to produce sounds can bear sensory information (Strack, Martin, & Stepper, 1988; Topolinski et al., 2015; 2017). Here, we propose that plosives entail a physical action that reflects one's readiness for action because of the abrupt popping sound made by a stoppage of air in the mouth followed by a sudden explosive release. Based on past research suggesting that individuals exert greater effort immediately following a loss of control as a way of regaining control (Greenaway et al., 2015a), we hypothesize that perceived control loss increases the appeal of plosive-based brand names because plosives elicit the feeling of doing something.

In a pilot study ( $N=130$ ), we sought to provide evidence for the assumption that brand names containing plosive (*versus* fricative) consonants are more likely to elicit a disposition to act. Using a computerized lexical decision task, we observed that when participants were exposed to plosive-based prime words, they were faster to recognize the word "action" and "effort" as real words ( $M=635.21.25$ ,  $SD=124.67$ ) than when they were exposed to fricative-based prime words ( $M=650.24$ ,  $SD=123.48$ ;  $F(1, 129)=2.93$ ,  $p=.089$ ). We further found that participants were slower to recognize the words "calmness" and "passivity" as real words following prime words containing plosives ( $M=693.68$ ,  $SD=161.40$ ) compared to fricatives ( $M=654.42$ ,  $SD=117.63$ ;  $F(1, 129)=13.99$ ,  $p<.001$ ). We found no effects with fillers words.

In Study 1 ( $N=123$ ), we tested our hypothesis that people prefer brand names containing plosives to the ones containing fricatives when their sense of control is threatened. We observed a main effect of condition where perceived control loss resulted in the choice of more brand names containing plosives (vs. fricatives),  $b=.18$ ,  $SE=.09$ ,  $Z=4.51$ ,  $p=.034$  ( $M_B=50.8\%$ ,  $M_{CD}=55.4\%$ ).

In Study 2 ( $N=105$ ), we sought to provide evidence of mechanism by restoring control following the control threat by having participants make (or not) a personal choice to boost personal control. Furthermore, we sought to rule out an alternative explanation based on the possibility that plosives are overrepresented among top brand names and thus could drive preferences based on a sense of familiarity. Accordingly, Study 2 measured brand liking for alveolar

plosives ("d", "t") because their overrepresentation does not exceed the overrepresentation of alveolar fricatives (e.g., "s"). As expected, we found a significant simple effect of perceived control loss when control was not restored,  $b=2.80$ ,  $SE=1.35$ ,  $t(101)=2.08$ ,  $p=.040$  (*Estimated value*  $_{high\ control}=10.83$ ,  $SE=.96$ ; *Estimated value*  $_{low\ control}=13.63$ ,  $SE=.96$ ). This effect, however, became non-significant when participants' sense of control was restored,  $b=2.29$ ,  $SE=1.39$ ,  $t(101)=1.65$ ,  $p=.103$  (*Estimated value*  $_{high\ control}=11.19$ ,  $SE=.99$ ; *Estimated value*  $_{low\ control}=13.48$ ,  $SE=.97$ ).

In Study 3 ( $N=244$ ), we sought to replicate the findings of Study 2 and identify an important boundary condition—i.e., the presence of a context-relevant interventionist external agent—that would illustrate when plosives are likely to lose their appeal in contexts of reduced control. As such, Study 3 placed the locus of control restoration on the service provider who either intervened or not in the context of a cancelled flight. We found a significant simple effect of perceived control loss when the service provider did not intervene to restore control ( $b=.76$ ,  $SE=.36$ ,  $Z=2.06$ ,  $p=.039$ ;  $M_{High\ control}=40.3\%$ ;  $M_{Low\ control}=59.0\%$ ). However, this effect became nonsignificant when the service provider intervened to restore control,  $b=-.10$ ,  $SE=.36$ ,  $Z=-.28$ ,  $p=.779$  ( $M_{High\ control}=47.5\%$ ;  $M_{Low\ control}=45.0\%$ ).

In conclusion, when making decisions regarding brand names, managers need to consider the sensory information that consumers may extract from them, and specifically the use of plosives to anticipate low control states. By uncovering a novel response to control threat, our findings contribute to the recent infusion of compensatory control research to understanding consumer behavior.

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# Disgusting? No, Just Different! Understanding Consumer Skepticism Towards Sustainable Food Innovations

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## EXTENDED ABSTRACT

Though desperately needed, consumers reject sustainable consumption alternatives which deviate far from the norm. Labgrown meat and insectbased meat substitutes, for instance, could revolutionize the food industry, but consumers are disgusted by both, arguing they are unnatural and carriers of disease respectively (Verbeke et al., 2015; Vanhonacker et al. 2013). Mapping perfectly onto textbook definitions of disgust elicitors like impurity and pathogens, consumer arguments have been embraced as the obvious cause of these innovations' failure—with limited success.

We argue that addressing these consumer rationales has shown limited success as sustainable consumption alternatives are not rejected based on their inherent features. Instead, we find that consumers reject foods that are not normal to them *because* they are not normal to them and only post hoc rationalize their rejection.

In the socialization process, norms—culture's guidelines of what is normal and approved of—get internalized and are complied with as a goal in itself (Gintis, 2003). Important norms are more likely to be internalized (Villatoro et al. 2015) accordingly, internalized norms can be seen society's important values. Any behaviors that oppose these will elicit moral disgust (Cottrell & Neuberg, 2005). While it is tempting to view disgust as an inherent feature accompanying specific products, we find that this is not the ultimate cause. The same product can be considered delicious or appalling, depending on one's internalized norms. In other words, we argue sustainable consumption alternatives elicit disgust not because they are feared to be impure or unhealthy, but rather because they are considered abnormal.

To establish the relationship between normalness and disgust, 43 attendees of a health event were sequentially presented with two novel foods, either camel milk and horse meat or dried grasshoppers and seaweed. Treating observations as independent in spite of the within-subjects design, we could stack them. We find that consumption correlates negatively with both perceived abnormalness ( $r(83)=-.50, p<.001$ ) and perceived disgust ( $r(83)=-.40, p<.001$ ). Abnormalness and disgust correlate positively ( $r(83)=.69, p<.001$ ).

We hypothesized that the awareness of engaging in normviolating behavior is sufficient to elicit disgust. Accordingly, in study 2, we presented a cupcake to 137 participants, half of which were informed about its insectbased, normviolating colorant before assessing it. We find significant differences in the disgust expected during its consumption between aware ( $M=.19, SD=1.08$ ) and unaware participants ( $M=-.20, SD=.88$ );  $t(131.683)=2.29, p<.05$ ). Seeing that participants experiencing disgust were unlikely to eat the cupcake ( $r(137)=-.23, p<.05$ ), we conclude that disgust is elicited by normdeviating foods and will consequently lead to rejection.

Study 3 tested the links between internalized norms, disgust, and rejection. 145 participants saw a picture of one of two ambiguously looking food items: (1) a hamburger described as either made of lab-meat (normviolating) or an unfamiliar breed of cattle (normcongruent), (2) a fried isopod described as either an insect (normviolating) or a kind of shrimp (normcongruent). The relationship between the foods (norm-violating vs. normcongruent) and their rejection was tested with perceived normviolation and disgust as serial mediators using Hayes' (2013, model 6) PROCESS macro with

10,000 bootstrapped samples at a 95% confidence interval, showing a significant indirect effect of the food on rejection with the two mediators norm-violation and moral disgust (.29, 95% CI .11, .56). The total indirect effect was also significant (1.19, 95% CI .44, 1.93). A food perceived as a normviolation will elicit moral disgust which will then lead to rejection.

Presenting participants ( $N=222$ ) with two unfamiliar food items, anteggs and crabeggs, study 4 replicated study 3 and supported its results while excluding any potential confounding effects of familiarity with the food item. Serial mediation was tested using model 6 in the PROCESS macro (Hayes, 2013) with 10,000 bootstrapped samples at a 95% confidence interval. We confirmed a significant indirect effect of the food on rejection through the two mediators of normviolation and moral disgust (.37, 95% CI .20, .63) and a significant total indirect effect (1.26, 95% CI .65, 1.92). Even unfamiliar foods that are not subject to a norm, but are derivatives of a food item, are regulated through norms.

Studies five and six tested the final hypothesis that consumers' rationales are constructed post hoc, to support rejection. A pre-study asked participants ( $N=205$ ) whether they would consume cow's, camel's or dog's milk and to list both reasons supporting and arguments that could change their decision. We used milk as all its inherent features are comparable, but for cultural reasons cow's milk is seen as normal and healthy, camel's milk as somewhat abnormal (seen in study 1) and dog's milk as outrageous (Curtis, 2016). This study's main goal was to find the arguments participants justify their rejection with to use in study 5, a quasi-replication of Haidt's (2001) rationalization study. Study 5 asked participants ( $N=67$ ) to taste milk either described as dog's milk (actually goat's milk) or camel's milk (actual camel's milk). Afterwards a personal interview asked each participant to explain their decision with the interviewer being trained to challenge participants' arguments. While coding and analyzing has not yet concluded, during the interviews we found that participants who rejected, often used easily refutable arguments but would not change their minds, even after their arguments collapsed, hinting at those arguments being post hoc rationalizations. More detailed results will be shared during the conference.

Study six primed participants ( $N=128$ ) with either a disgusting or neutral video-clip and warned them about the clip's potential effects on subsequent studies. In an alleged unrelated subsequent study participants were presented with milk (camel's or Jersey milk) to taste voluntarily and one random rationalization out of a set of eight (based on the pre-study). Preliminary analyses confirm that participants in the disgust condition agreed more with a random confabulated argument ( $M=3.34, SD=1.37$ ) than participants in the neutral condition ( $M=2.80, SD=1.22$ ;  $t(126)=2.38, p<.05$ ). This indicates that circumstantial disgust leads consumers to look for arguments supporting their aversive feeling, even when the disgust elicitor is explicitly highlighted.

Concluding we can say that in the case of sustainable consumption alternatives, disgust is elicited through perceived abnormalness and ultimately wrongly attributed to the foods' features.



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# Social Sharing of Negative Emotions in Virtual Travel Communities

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## EXTENDED ABSTRACT

Virtual communities offer a social environment in which several emotional processes take place. After a collective emotional event, such as a terrorist attack, these communities can provide individuals a space for social contact and emotional support and an opportunity to reduce the negative emotions arising from these situations (Rimé, 2009). The novelty and importance of this type of event coupled with the broad media coverage elicit strong negative emotions, such as sadness and fear, and stimulate people to engage in social sharing (Luminet et al., 2004). Socializing negative emotions help individuals to obtain cognitive clarity, and to regulate their emotions by venting, obtaining emotional and social support, and being in touch with others (Duprez et al., 2015). Also, people may feel stimulated to express their sympathy, and share feelings of sorrow or concern for those involved in the event (Eisenberg & Miller, 1987). The objective of this article is to analyze the social sharing of negative emotions triggered by a terrorist attack in a virtual travel community. Specifically, we examine the cases of anger, sadness, and fear. We also analyze sympathetic feelings expressed in these contexts.

We conducted a multi-method study in two steps. Firstly, we collected all threads and their replies in the TripAdvisor Paris Forum from 01/01/2014 to 31/12/2017 (1,072,499 posts, including 101,393 opening posts and replies), comprising the URL, name of posting person, date and time, index of reply, content, number of previous posts on TripAdvisor, and location. Emotions were extracted with the R package *syuzhet* (Jockers, 2015) using a large dictionary for word-emotions associations developed via crowdsourcing on Amazon's Mechanical Turk. For the quantitative data analysis, we compared the threads and their replies seven days before and after the Paris terrorist attack on several characteristics by performing t-tests of the mean or the proportion. We also compared sympathy scores of the period after the attack across various groups of threads. Secondly, we conducted a qualitative analysis of the 20 largest threads created within seven days in the Paris Forum after the Paris terrorist attack and the thread that was created after the Nice terrorist attack on July 14, 2015 in the same forum.

The results of the quantitative analysis demonstrated that the terrorist attack affected the number of replies, time dynamics, and the emotional content of the posts. The number of replies increased from 8.39 (mean before the attack,  $M_{BA}$ ) to 13.23 (mean after the attack,  $M_{AA}$ ,  $p = 0.008$ ) per thread. Three categories were examined in relation to time dynamics: (a) duration, which refers to the time difference between the opening post and the last post in the same thread without a significant difference between before and after the attack; (b) timing, which refers to the average time between the first post and replies ( $M_{BA} = 53.68$ ,  $M_{AA} = 3.36$ ,  $p = 0.000$ ); and (c) timing within period, which refers to the average time between the first post and replies within the period of seven days before and after the attack ( $M_{BA} = 0.70$ ,  $M_{AA} = 0.58$ ,  $p = 0.001$ ). The negative emotional content of the posts increased after the terrorist attack; specifically, we identified that anger ( $M_{BA} = 0.54$ ,  $M_{AA} = 0.91$ ,  $p = 0.000$ ), sadness ( $M_{BA} = 0.91$ ,  $M_{AA} = 1.23$ ,  $p = 0.000$ ), and fear ( $M_{BA} = 0.79$ ,  $M_{AA} = 1.37$ ,  $p = 0.000$ ) were stronger after the attack compared to before the attack. This was not the case for disgust, which showed to be the same before and after the attack ( $M_{BA} = 0.48$ ,  $M_{AA} = 0.49$ ,  $p = 0.423$ ). We also examined the difference of articulated sympathy in the posts' contents before and after the terrorist attack. For that, we developed a dictionary with 75 terms identifying

the expression of sympathetic concerns based on the first thread created in the Paris Forum after the attack (Paris Update). The analysis of all threads in the Paris Forum demonstrated an increase in sympathy after the terrorist attack ( $M_{BA} = 0.18$ ,  $M_{AA} = 0.75$ ,  $p = 0.000$ ). When conducting the analysis based only on the threads that had at least one sympathy word (sympathy > 0), this difference was also significant ( $M_{BA} = 1.95$ ,  $M_{AA} = 3.80$ ,  $p = 0.000$ ).

Three main categories emerged from the qualitative analysis. Firstly, individuals used this forum to exchange information about the attack, such as places affected and number of victims, and its possible impact on touristic products. Despite this informational content, the exchanges were permeated by a strong, predominantly negative emotional content. Secondly, individuals used the forum to share previous experiences in similar situations, such as other terrorist attacks, and to recount problematic moments during trips. The experiences narrated expressed positive emotions, such as love, or negative emotions, such as sadness and anger. In general, participants agreed that continuing a trip to Paris is a way to demonstrate courage and resistance against terrorism, and this message provided support and comfort for those who were anxious or hesitant about traveling. Thirdly, the forum was also a space where people shared their emotions about the attack, the victims, and the city. Our analysis also shows the important process of emotional sharing based on sympathetic feelings.

Our results demonstrate changes after a terrorist attack in the characteristics of posts, such as number of replies, time dynamics, and emotional content, and in posters' profiles in a virtual travel community. These results were triangulated with a qualitative analysis of the larger threads created after the attack, showing that these effects correspond to mechanisms of sharing information, experiences, opinions, and emotions elicited by the attack. In general, the exchanges seem to have a positive effect on participants: on one side, they gave them the opportunity to vent the negative emotions elicited by the attack; on the other side, they offered them a space where emotional support and sympathetic concerns could be shared. New studies must be conducted to analyze if the participation on virtual travel communities can minimize the negative impact of these events on individuals' perceptions of touristic products.

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# Just Let the “New me” do it: How Anticipated Temporal Landmarks Cause Procrastination

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## EXTENDED ABSTRACT

Moments that elicit feelings of a “fresh start” have been shown to spur goal initiation. However, successful goal pursuit requires not only goal initiation but also persistent effort investment to an existing goal. While prior work has focused on the motivating effects of temporal landmarks as a type of fresh start on the initiation of a goal, the current research draws attention to a dark side of temporal landmarks by examining the effect of anticipated temporal landmarks on motivation to persist in an *ongoing* goal. We find that when an upcoming temporal landmark becomes salient, individuals perceive their current and future selves as two separate agents, delegate responsibility to their future self (i.e., “intrapersonal loafing”), and thus exert less effort to pursue their ongoing goals. For example, for people who have been pursuing a dieting goal, a focus on the upcoming New Year will ironically lead them to feel less motivated to continue on their diet, because they expect their new, future self can pick up the slack.

In Study 1, we tested our predictions using Google search field data (“Google Trends”). The frequency of searches for the term “calorie” was used as a proxy measure of motivation to pursue a diet goal ( $N = 4,565$ ). We compared the frequency of the search during the period right before temporal landmark (i.e., when a temporal landmark is more salient and thus more anticipated), to the average search volume. As predicted, the search volume for the term “calorie” was lower during the period right before the temporal landmarks, compared to the average search volume during other periods (all  $ps < .012$ ).

In Study 2, we tested our hypotheses in a more controlled setting, in which we manipulated the salience of a temporal landmark by framing one’s upcoming life event as a new beginning or not (Dai, Milkman and Riis 2015). Participants who had a current weight loss goal ( $N = 182$ ) read a scenario about an expected job position change in 3 days, which was framed either as a first-time event (anticipating-temporal-landmark condition) or as a regular and repetitive event (control condition). Participants indicated their motivation to pursue their weight-loss goal “today”. As predicted, participants in the anticipating-temporal-landmark condition were less motivated to pursue the goal “today” ( $M = 4.31, SD = 1.54$ ) than the control condition ( $M = 4.81, SD = 1.48; t(180) = -2.24, p = 0.03$ ).

In Study 3, we aimed to test the first logical step in our theorizing (i.e., perceiving the current and future selves as separated) by directly manipulating whether participants anticipated a distinct future self while working on a current goal and examining whether such an anticipation would impair their motivation. Participants ( $N = 62$ ) solved math problems in seven rounds that included the base line period (rounds 1-2), anticipation period (rounds 3-5), and the post period (rounds 6-7). All participants chose a character to represent themselves in the task, and completed the first two rounds (base line). Half of participants learned that they would work with a new character starting in the 6<sup>th</sup> round, and the other half did not receive this information. We analyzed participants’ effort investment (the number of solved problems per round) in the anticipation period. Regardless of the manipulation, participants solved more problems as they progressed, reflecting a learning effect. However, this increase was smaller when anticipating the identity change ( $M = 3.79, SD = 7.46$ )

than the control condition ( $M = 7.93, SD = 7.35; t(60) = -2.20, p = .032$ ), suggesting a lowered motivation for the task.

In Study 4, we aimed to test the other half of our theory by examining whether the demotivating effect is mediated by one’s responsibility shift to the future self. Participants ( $N = 320$ ) who had a work-out goal imagined that their birthday was coming in 3 days. We framed this birthday as a birthday that coincided with the beginning of a cycle or as one of many regular birthdays (Dai et al. 2015). Participants reported their motivation to work out “today” and responded to two goal-responsibility shift questions (e.g., “I felt that I can easily make up for the skip later”). As predicted, those in the anticipating-temporal-landmark condition reported lower motivation ( $M = 3.48, SD = 1.84$ ) than those in the control condition ( $M = 4.16, SD = 1.97; t(318) = -3.15, p = .002$ ). This effect was mediated by increased tendency to shift the responsibility to the future self ( $a \times b = -.25, 95\% CI = -.50, -.04$ ).

In Study 5, we explored whether the effect of anticipated temporal landmarks can be mitigated if participants are reminded of the contributions they have been making to the goal. The procedure was similar to Study 4, except for the addition of the reminder manipulation. Participants wrote down specific activities that they had done for the work-out goal either at the beginning of the study (reminder condition) or at the end of the study (no reminder condition). Two-way ANOVA yielded a predicted significant interaction ( $F(1, 430) = 4.05, p = .045$ ). No reminder conditions replicated the previous findings ( $M_{anticipating-temporal-landmark} = 6.68, SD = 2.06$  vs.  $M_{control} = 5.88, SD = 2.38; F(1, 430) = 6.47, p = .01$ ). However, when there was a reminder, motivation did not differ between the two conditions ( $M_{anticipating-temporal-landmark} = 5.91, SD = 2.46$  vs.  $M_{control} = 6.01, SD = 2.37, p = .77$ ).

In sum, the current research documents a detrimental effect of anticipating temporal landmarks on one’s motivation to pursue an ongoing goal. Given that previous research has focused on positive effects of temporal landmarks on motivation (Dai, Milkman and Riis 2014; Peetz and Wilson 2013), we advance the field’s understanding of how motivation dynamically changes before or after temporal landmarks. In addition, we identify a novel mechanism of intrapersonal loafing such that loafing occurs not only with other individuals, but also with other temporal selves within an individual.

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# Can't Take the Heat? Randomized Field Experiments in Household Electricity Consumption

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## EXTENDED ABSTRACT

In residential electricity consumption, informational interventions such as in-home displays and social-comparisons have been shown to increase the salience of price changes (Jessoe, 2014 #3) (Jessoe and Rapson 2014) and impact an electricity system: the times when demand is at its highest and conservation is needed most (Joskow and Wolfram 2012).

This paper examines the relative effectiveness of passive and active information interventions on appliance-level, household electricity consumption in two randomized field experiments over a two year period (2013-14). The first field experiment focuses on critical peak pricing (CPP) on summer days during peak evening hours where the price is higher and the second on off-peak, lower price nights. The contribution of our research is three fold. First, we examine the long-term effectiveness of passive and active information interventions on household energy consumption during critical peak pricing days. The passive informational interventions include (i) providing access to an online personal account to track electricity consumption in real time or (ii) sending a simple text message stating "A Pecan Street Project critical peak pricing event is taking place tomorrow 4PM to 7PM". The active interventions include sending the passive text message plus (iii) an action such as "pre-cool your home" or "reduce your air conditioning usage" or "do not use your clothes dryer", or (iv) "Your experimental electric rate will be \$0.64 per kilowatt hour from 4 p.m. - 7 p.m."

Second, studying the differential impact of price increase during peak demand versus price decrease during off-peak demand on consumer price elasticity for electricity consumption. Finally, identifying the breakdown of consumers' price elasticity at the appliance level.

Three hundred households from a neighborhood in Austin, Texas were recruited to participate in the field experiment. All participants in the four treatment groups were told that during the months of June through October, there would be critical peak load pricing on certain days from 4PM to 7 PM. All participants continued to receive and pay their Austin Energy electric bills, which reflected the normal Austin Energy electric rates (\$0.4654/kWh). To provide a monetary incentive for customers to participate in the four treatments, Pecan Street, an organization focused on advancing research and innovation in energy conservation, established a credit account for each participant that reflected a participant's response in terms of energy saving. The amount of credit in participants' accounts was adjusted every month at the time they received their electric bill. The adjustment reflected the difference between what participants actually paid Austin Energy and what they would have paid if the experimental rates were in effect. If the bill using the experimental rate was lower (higher) than participants' Austin Energy bill, the difference was deposited (deducted) in their credit account. At the end of the experiment, payments were issued to participants equal to the amount of the final credit in their account. If there was a negative credit in a participant's account, the participant paid nothing. The control group was not told about critical peak load pricing nor charged a higher electric rate during critical peak load periods or received any text messages.

A peak load price is a feature which applies only during certain designated days of the summer months (June, July, August, and Sep-

tember). That is, a summer peak price of \$0.64 per kWh was applied to participants' energy consumption during the weekday afternoon hours of 4-7 P.M., but only on days designated as "Critical Peak" days.

A total of 24 treatment days were conducted during the months of June through October in 2013 and 2014. The minute and appliance level (bedroom, air conditioner etc.) electricity consumption from each of the 300 households provided us with 360 million observations, including the pre-treatment period, i.e., March-June 2013.

The economics of information (Stigler 1961) would suggest that theoretically, all four treatment conditions may be effective in reducing energy consumption relative to the control. Interestingly, we find that only the pricing treatment had a significant impact on reducing electricity consumption. Accordingly, we estimate a price elasticity of residential energy consumption of -0.17 during critical peak pricing and that turning down air conditioning comprises the bulk of the response (63%), followed by living room activities (10%).

In a second field experiment, we test whether the critical peak pricing effect is symmetric, i.e., whether households increase their consumption of electricity by the same amount if the price is lowered during off-peak periods. West Texas has a lot of wind power and low wholesale prices on off-peak nights. We conducted an additional treatment for the 62 households in the pricing trial during the five windiest months: March, April, May, November, and December. The treatment occurred during 10PM to 6AM in 2013 and 2014. The treatment rate was 2.65 cents/kWh. The households received text messages 24 hours before the first day of the month.

Upon controlling for all other factors, the triple diff-in-diff results suggest that the impact of a price decrease during off-peak has statistically significantly increased the electricity consumption ( $b=.004$  (clustered s.e.=.0008),  $p < .01$ ,  $R^2=.19$ ,  $n=90,000,000$ ) during the off-peak periods, implying an elasticity of -0.43, more elastic than that during critical peak pricing.

Our results have important welfare and policy implications. The consumer welfare gain from reduced critical peak consumption over 27 critical peak days applied to the Energy Reliability Council of Texas (ERCOT) region is about \$39.1 million. Similarly, reducing price during off-peak periods increases consumer welfare by about \$100 million due to load shifting. Further, our results point to the appliance usage most amenable to energy conservation during critical peak time. In contrast to previous results from crisis periods, such as the California electricity crisis (Reiss and White 2005) and the time shortly after the Fukushima disaster, there is little evidence in our study of a consumer response to pure informational appeals (Ito, Ida, and Tanaka 2018).

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# Why is 1 out of 20 Riskier than 5%? Effect of Representing Unlikely Events as Frequency versus Percentage on Risk Perceptions

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## EXTENDED ABSTRACT

Consider two individuals contemplating the purchase of a new laptop computer. Both are interested in the same specific brand and model. While one individual comes across a product review stating that 5% of the brand's laptops are expected to require repairs, the other individual reads a review reporting that 1 out of 20 of the brand's laptops is expected to require repairs. Although the likelihood of failure is relatively low and objectively equivalent, the numeric representation of the probability information in the two reviews differs such that the expected performance information is provided in terms of percentage (5%) and frequency (1 out of 20) formats, respectively. Will the perceived risk associated with purchasing the laptop differ across the two individuals? Will one of them be more likely to buy the laptop? If so, which of the two individuals, and why? What if the performance information is described positively such as functioning satisfactorily rather than negatively such as requiring repairs? Surprisingly, despite the relatively large literature examining the influence of probability format (e.g., Kirkpatrick and Epstein 1992; Slovic, Monahan and MacGregor 2000), as well as the framing of attributes and outcomes (Tversky and Kahneman 1981; Levin, Schneider and Gaeth 1998), the answers to these questions are not clear. Further, since different theoretical perspectives lead to competing predictions, the current research seeks to examine how the numeric representation of a relatively low probability in terms of a frequency versus percentage affects risk perceptions, and provide insights into the underlying reasons for the effects.

Our results suggest that risk perceptions are higher and purchase intentions are lower when a probability in the negative frame is represented as a frequency (1 out of 20) than as an equivalent percentage (5%; study 1). Moreover, a consistent finding in the context of relatively low probabilities (studies 2a and 2b) is that probability frame moderates the effects of probability format on risk perceptions such that while risk perceptions are higher in the frequency (vs. percentage) format in the negative frame (1 out of 20 vs. 5%), there is no difference in the positive frame (19 out of 20 vs. 95%). Study 3a attests to the robustness and generalizability of the findings by showing a similar pattern for a less extreme probability level (2 out of 20 vs. 10% and 18 out of 20 vs. 90%) and to a frequency that is not represented as "1 out of" some number. Further, although probability frame does not affect risk perceptions in the percentage format when the probability is extreme (5% is not different than 95%), the effect of frame emerges when the probability is not as extreme (10% > 90% as well as 20% > 80%). Thus, framing does not affect evaluations when the probability level represented as a percentage is at the extreme but has an effect at less extreme levels. In contrast, frame affects risk perceptions when the relatively extreme probability is represented as a frequency (1 out of 20 > 19 out of 20).

We also identify a boundary condition such that at a moderate probability level, risk perceptions do not vary across the frequency and percentage formats even in the negative frame (4 out of 20 vs. 20%). Further, probability frame has a similar effect wherein risk perceptions are higher in the negative (vs. positive) frame for both frequency and percentage formats. Taken together, the pattern of findings across the studies suggest that the effects of probability format on risk perceptions are likely to manifest when the numerators

are relatively small, thus facilitating individuals to imagine or identify themselves with the situation.

We further provide insights into the underlying mechanism. Our finding that risk perceptions are higher when a probability in the negative frame is represented as a frequency (1 out of 20) than a percentage (5%) is in contrast with the idea that a specific probability of occurrence will be perceived as less likely and thus less risky when it is denoted by a ratio of 1 out of some number (Denes-Raj and Epstein 1994). Importantly, we generalize the finding to a frequency that is not represented as "1 out of" some large number (i.e., 2 out of 20 vs. 10%).

Instead, we find that probability information described as a frequency evokes greater negative affect than an equivalent percentage. Based on the premise that a probability described as a frequency is more concrete than an equivalent percentage because it is easier to process, understand, and is more aligned to how statistical information is experienced (Denes-Raj and Epstein 1994; Gigerenzer and Hoffrage 1995), we argue that the extent to which individuals can imagine themselves or identify with the situation is likely to be higher with frequency than percentage format. A frequency format is thus likely to evoke greater negative affect thereby increasing risk perceptions relative to an equivalent percentage, particularly when the probability is framed negatively. Study 3a specifically shows that a frequency (vs. percentage) format facilitates the extent to which individuals imagine themselves in the situation when the probability is in the negative frame. We highlight the underlying process by demonstrating that the extent to which individuals can imagine (or identify) themselves in the situation mediates the effect of probability format and frame on risk perceptions.

Finally, study 4 explicitly tests the extent to which individuals' construal level in terms of high-level, abstract and low-level, concrete processing moderates the effects of probability format. Matching the probability format with construal level (i.e., pairing frequency with low-level construal and percentage with high-level construal) has a significant effect on extent of imagining, negative affect, and risk perceptions, but these effects attenuate when there is a mismatch (i.e., pairing frequency with high-level construal and percentage with low-level construal). Thus, it provides compelling evidence for the underlying reasoning for our findings.

In sum, this research addresses the questions raised in the introductory illustration and contributes to the literatures on probability judgments, affective decision making, and risk perceptions. We propose a conceptual framework that explains the differential effects of probability format, based on how format information is processed, and suggest moderators for the effects.

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# Narrative Transportation and Cognitive Responses: The Other Side of the Story

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## EXTENDED ABSTRACT

Narrative transportation is the sensation of being physically relocated (“transported”) into a story (Green and Brock 2000). Narrative transportation is posited to robustly and positively affect persuasion (Escalas, Moore, and Britton 2004; Hamby, Brinberg, and Daniloski 2017; Moyer-Gusé 2008). A key explanation for the effectiveness of narrative persuasion is that narrative transportation reduces counterarguing (Escalas 2007; Green and Brock 2000; van Laer et al. 2014) where people become absorbed in a story (Green and Brock 2000). Because narratives engross the consumer in the story, the transported consumer engages in less counterarguing of the advertised product, which increases persuasion. The implication for marketers is clear: “stories are orders of magnitude more powerful than sets of facts, no matter how those facts are packaged,” (Aaker 2018, 6).

The current work explores two critical questions on this topic. First, do stories always beat facts? Second, can story-based advertisements be improved by incorporating compelling facts, or will facts detract from story enjoyment?

On the first question, although we accept that narrative transportation can reduce counterarguing, we suggest this is an incomplete story of how narrative transportation operates. Specifically, cognitive-response models suggest that greater attention to messages need not inherently produce greater counterarguing. Rather, when message arguments are strong, greater attention to message content can cause bolstering, or the generation of positive message-related thoughts (Greenwald 1968; Petty and Cacioppo 1986). If narrative transportation disrupts cognitive processing, it should be capable of either aiding or inhibiting persuasion. Specifically, narrative transportation should hinder persuasion when it disrupts consumers’ ability to bolster strong message arguments.

On the second question, this paper explores how to best blend facts with narratives. Prior narrative research suggests that one should hide message arguments within narratives to maximize persuasion because it is believed that arguments fundamentally disrupt transportation (Slater and Rouner 2002; Wang and Calder 2006, 2009). In contrast, we suggest that facts relevant to the story’s plot do not necessarily represent an interruption. A narrative’s persuasive power comes from its ability to selectively direct attention (Green and Brock 2000). We suggest that marketers might use this power to draw attention towards message arguments, rather than away from them. Thus, rather than hiding message arguments throughout a narrative, marketers may produce greater persuasion by emphasizing arguments. One way to do this is to consolidate arguments, or group arguments in the story in a bullet-pointed list or other prominent manner such that they are noticeable, rather than disbursing arguments, or hiding them throughout the story (Reynolds 1992; Almer, Hopper, and Kaplan 2003) researchers must ensure sufficient attention to experimental materials to provide usable data. The current study suggests an experimental design feature to encourage participants to thoroughly process information contained in experimental materials. Based on Reynolds’ (1992). If stories can draw attention toward arguments and still remain transporting, consolidating (strong) arguments will lead to greater persuasion than disbursing them.

*Experiment 1.* The study design was 2 (narrative vs. facts alone) x 2 (strong vs. weak arguments), between subjects. Participants (N = 397) read either a list of facts about a fictitious cell phone, or those

same facts embedded within a narrative about mountain climbers. The cell phone facts presented were pretested to be weak or strong. Participants indicated their attitude toward the cell phone on a 9-point semantic differential scale. When arguments were weak, narratives led to greater persuasion than facts alone ( $M_{\text{narrative}} = 6.83$ ,  $M_{\text{facts-only}} = 4.04$ ,  $p < .001$ ), but when arguments were strong, narratives led to less persuasion than facts alone ( $M_{\text{narrative}} = 6.82$ ,  $M_{\text{facts-only}} = 7.53$ ,  $p = .0093$ ). Put differently, strong facts presented by themselves were more persuasive than narratives with the same facts. This represents a rare reversal of the positive relationship between transportation and persuasion.

*Experiment 2.* We sought evidence for cognitive elaboration as a mediating process via measurement of participants’ message-relevant thoughts. The design was the same as Experiment 1. Participants (N = 389) saw the same cell phone facts and/or story as used in Experiment 1. Then, participants indicated on a two item scale their use intent for the fictitious cell phone. They also listed the thoughts they experienced while reading the advertisement. The use intent results mirrored Experiment 1’s attitude results for both weak arguments ( $M_{\text{narrative}} = 5.75$ ,  $M_{\text{facts-only}} = 3.04$ ,  $p < .001$ ), and strong arguments ( $M_{\text{narrative}} = 6.62$ ,  $M_{\text{facts-only}} = 7.32$ ,  $p = .020$ ). A moderated mediation analysis (Preacher, Rucker, and Hayes 2007; Hayes 2013) with narrative condition as the independent variable, argument quality as the moderating variable, use intent as the dependent variable, and an index of message-related thought favorability (Wegener, Petty, and Smith 1995) as the mediating variable was significant: the 95% bias corrected confidence interval (CI) did not contain 0 (index = -0.46, SE = 0.08; 95% CI [-0.65, -0.32]).

*Experiment 3.* Experiment 3 had a 3 (Narrative-Disbursed, Narrative-Consolidated, Facts only) x 2 (Strong vs. Weak arguments), between subject design. Participants (N = 600) saw a list of facts about a fictitious medication, a story with those same facts disbursed throughout, or a story with those same facts consolidated in one attention-grabbing location. For strong arguments (when consumers were likely to bolster), the story with consolidated arguments was more persuasive than the story with disbursed arguments ( $M_{\text{consolidated\_strong}} = 7.60$ ,  $M_{\text{disbursed\_strong}} = 6.79$ ,  $p = .005$ ). For weak arguments (when consumers were likely to counterargue), the story with disbursed arguments was more persuasive than the story with consolidated arguments ( $M_{\text{consolidated\_weak}} = 5.38$ ,  $M_{\text{disbursed\_weak}} = 6.07$ ,  $p = .015$ ).

Narrative transportation is an important means of persuasion. However, extant literature contains little theory regarding when transportation’s effect on persuasion can backfire, which suggests stories always trump facts. Across three experiments we demonstrate that though narratives increase persuasion when arguments are weak, when arguments are strong narratives decrease persuasion compared to facts (experiments 1 and 2) due to the disruption of bolstering (experiment 2). This implies, and we demonstrate, that when strong arguments are present, facts should be consolidated within stories (experiment 3). This work may also offer insights for marketing practitioners. Our findings suggest marketers may need to be more strategic about the use of stories in advertising than prior research suggests. We provide guidance on when narratives may actually be ineffectual in advertising, and also provide new insight on the best ways to incorporate facts into advertising narratives.



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# Cueing Backwards: Attention Processes In Multi-Attribute Choices

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## EXTENDED ABSTRACT

Marketeers are naturally interested in biasing purchase decision in their favor. This can either be achieved bottom-up, biasing the choice between different alternatives, or top-down, influencing the decision-making process, e.g. which decision strategy is applied. The following series of experiments explores one backward cueing method that aims at directing attention to memorized information to influence the choice and the decision strategy applied.

Decision making in multi-attribute choices is flexible, adaptive and varies between individuals. For example, one key feature that allows to discriminate between different decision-making processes is whether compensatory or non-compensatory strategies are applied (Gigerenzer & Todd, 1999). Compensatory means that less valid cues can overwrite cues of higher validity, contrarily non-compensatory means that more valid cues cannot be overwritten by less valid cues. Several factors in the environment have been proposed to influence the decision making process (Bröder & Schiffer, 2003; Rieskamp & Otto, 2011) namely Structural Modeling (SM. Even without feedback and training, the environment, such as the distribution of the validity of the information influences which strategy is applied (Krefeld-Schwalb, Donkin, Newell, & Scheibehenne, 2018; Mata, Schooler, & Rieskamp, 2011) ISBN : "9780199894727", ISSN : "0882-7974", PMID : "18179298", abstract : "Are older adults' decision abilities fundamentally compromised by age-related cognitive decline? Or can they adaptively select decision strategies? One study (N = 163. Recently it was suggested that one of the driving forces behind the adaptation of decision making are attentional processes. Spatial cueing single attributes in a multi-attribute choice task, increased the influence of these attributes on the choice (Platzer, Bröder, & Heck, 2014). Cueing spatial locations of a previously presented information increases visual attention to this position and the likelihood that this information is retrieved from memory (Souza & Oberauer, 2016), even for verbal material (Krefeld-Schwalb, 2018) and if the cue does not contain retrieval-relevant information (Scholz, Klichowicz, & Krems, 2018). But not only memory retrieval may be biased toward cued options, but also choices and the applied decision-strategies are influenced by the cued information (Platzer et al., 2014; Renkewitz & Jahn, 2012). Beyond influencing the weight of single attributes, Platzer and colleagues (2014) suggested that cueing influences directly the decision strategy applied. Their results show that cueing valid information supports the use of non-compensatory strategies, whilst cueing less valid information increases the motivation to search for more information in memory, and thus the use of compensatory decision strategies.

We will report three experimental studies investigating the mechanisms underlying the influence of the cueing effect. In the first experiment we investigated the size of the cueing effect. In the second experiment we analysed the interaction of the cueing effect with different decision-making environments, defined by the distribution of the cue validities. Finally, experiment 3 was further designed to exclude alternative explanations of the cueing effect.

In the first experiment participants had to choose one out of two movies (alternatives) they think would be more successful at the box offices based on the recommendations (cue values) of 6 movie critics (cues). Those critics had varying probability of having recommended

the more successful movie in the past (validities). This information was presented in an information board, with columns representing the two movies and the rows representing the cues. Asterisks illustrated recommendations, and hyphens illustrated no recommendations of the movies. One critic could recommend both, one, or none of the movies. The critics' probabilities to predict the more successful movie, thus the cue validities were depicted in percentages on the left side of the respective row [65%,63%,63%,62%,60%,58%]. In cued trials, after the complete information had disappeared, the frame of one of the rows was emphasized. Consequently, participants were asked to make their choice in the following choice task, on the memorized information.

We replicated the cueing effect on the choice, and on the decision strategies applied in this experiment. Controlling for the correspondence of the cue and the strategies we showed that cueing increased the use of compensatory decision strategies. In experiment 2 we investigated the cueing effect in a slightly adapted preferential choice task and whether it interacts with the decision environment, defined by the distribution of the cue validities (Krefeld-Schwalb et al., in press; Mata, Schooler, & Rieskamp, 2011) ISBN : "9780199894727", ISSN : "0882-7974", PMID : "18179298", abstract : "Are older adults' decision abilities fundamentally compromised by age-related cognitive decline? Or can they adaptively select decision strategies? One study (N = 163. The distributions were either uniform [65%,63%,63%,62%,60%,58%], j-shaped [90%,69%,68%,66%,63%,60%] or linear [90%,83%,76%,69%,62%,55%], manipulated block wise within subjects. Although, decision making differed between the environments in experiment 2, with increased use of non-compensatory decision strategies in the j-shaped conditions, the cueing effect was replicated in all conditions and did not differ between them. Finally, a third experiment was designed to exclude alternative explanations of the cueing effect. In particular we ascertained that the participants were aware that the cue does not provide any additional information on the choice. In two of three conditions, manipulated within subjects, participants were either instructed that the cue might help them to memorize the previously presented information (condition 1) or distract them from this information (condition 2), while condition 3 was conducted without cueing.

The cueing effect on the choice was replicated again, but only in condition 1 ("memory" instructions). Beyond that decision making was influenced as in the previous experiments in both cueing conditions.

To conclude, our series of experiments provides strong support for the effectiveness of cueing in multi-attribute choices. In particular, drawing attention to the spatial position of an attribute after its presentation in a multi-attribute choice task led to an increased influence of this attribute on the choice. Furthermore, cueing increased the probability that individuals applied a compensatory decision strategy. Particularly, cueing increased the probability that all previously presented information was recalled and integrated in the choice, whilst the cued information still received a higher weight on the choice.

Thus, we suggest that backward cueing is an effective means to influence decision making in the consumer context and beyond.

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# Taking a Leaf out of my Review: The Asymmetrical Link between Linguistic Similarity and Attitude Certainty for Writers and Readers of Product Reviews

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## EXTENDED ABSTRACT

Firms and research have recognized the importance of investigating what makes WOM persuasive (e.g., Homburg, Ehm, and Artz 2015; Rosario et al. 2016). In particular, several studies have suggested that people who express certainty in their opinions are more persuasive (Karmarkar and Tormala 2010; Petty, Briñol and Tormala 2002; Tormala 2016). A common interpretation of these findings is that firms would benefit from reviews by consumers who are certain in their opinions. However, we question this intuition through identifying novel links between attitude certainty and linguistic components of reviews – specifically, linguistic similarity of product reviews to each other.

Literature on the links between repetition, similarity, validation and certainty suggests that information repetition and consistency makes people more certain about it (e.g. Dechêne, et al. 2010; Kendal, Giraldeau, and Laland 2009; Koriat 2011, 2012; Skurnik et al. 2005), and that opinions that are held by more people are perceived as more valid (e.g. Cialdini 2009; Nakahashi, Wakano, and Henrich 2012; Petrocelli et al. 2007; Zou et al. 2009).

Research on linguistic similarity shows that mimicking the other parties' language or adjusting one's linguistic style to another person's increases liking and trust (Moore and McFerran 2017) and the likelihood to reach an agreement (Huffaker, Swaab, and Diermeier 2011; Ludwig et al. 2013; Su, Mariadoss and Reynolds 2015; Sagi and Diermeier 2017; Swaab, Maddux, and Sinaceur 2011)..

Building on these literatures we suggest that:

*Hypothesis 1* when consumers read product reviews that are linguistically similar to each other, their attitudes about the product become more certain. This increase in attitude certainty is mediated by an enhanced perception of validity.

Further, as uncertainty increases the need for validation (e.g. Tormala and Rucker 2007):

*Hypothesis 2* we expect similar reviews to influence uncertain consumers more than certain ones.

But does attitude certainty have a positive effect on review writers' linguistic similarity as well? Following the same logic of connecting need for validation, attitude certainty and linguistic similarity, we arrive to an insight that stands in contrast with our prediction in H1 and H2: writers of product reviews who are certain in their attitudes, experience lower need for validation and therefore *do not* write reviews that are similar to other reviews. Uncertain review writers, however, have higher need for validation and therefore they are more likely to consult with other reviews when writing their own. Consequently we predict that:

*Hypothesis 3* reviews of uncertain writers would be more linguistically similar to other reviews, whereas reviews of certain authors would be less similar to other reviews.

## Method

We investigate the link between certainty and linguistic similarity in reviews in six studies. Study 1 tests the link for readers (H1) and study 2 does so for writers (H3). In **Study 1** participants read five hotel reviews that were similar or different from each other and expressed their attitude certainty about the hotel. We found that, supporting our prediction, product attitudes were more positive and attitude certainty was higher after reading similar reviews than different ones. Mediation analysis suggested that attitude certainty mediated the effect of review similarity on product attitudes. In **Study 2** we manipulated participant's attitude certainty about a short video that they watched, then showed all participants a "previously written review" of the video, and then they wrote a review of their own. Using automatic text analysis we found significantly higher linguistic similarity of the reviews to the example review in the uncertain condition. **Study 3** tests H2 by manipulating readers' certainty about a camera before reading a set of similar/different reviews. We find that for uncertain readers similar reviews increase attitude certainty, but for certain readers the effect of linguistic similarity on attitude certainty is attenuated. **Study 4** replicates our Study 2 results for writers, and rules out an alternative explanation that uncertain consumers write reviews that are similar to other reviews because they seek validation of their opinion and not because they are unsure as to what to write. In **Study 5**, we replicate Study 1 with a set of negative hotel reviews, in order to eliminate an alternative explanation that similarity simply elevates positive attitudes (the similarity effect). Finally, **Study 6** manipulates need for validation and shows that it mediates the effect of language similarity on certainty in readers. We found that for people with low need for validation similar reviews did not have a significantly different effect on attitudes than different reviews. However, when participants felt high need for validation, reading similar reviews had significantly higher effect on attitudes, compared with reading different reviews.

## Discussion

We identify an ironically asymmetrical link between attitude certainty and linguistic similarity: while linguistic similarity in product reviews increases attitude certainty of readers of the reviews, those similar reviews are more likely to have been the output of uncertain review writers. This work informs literature on attitude certainty offering linguistic similarity as a source of validation. Importantly, we simultaneously investigate readers and writers of reviews.

From a managerial perspective, our findings reveal novel insights related to how managers may alter their approach to collecting user-generated content (from writers) to achieve optimal impact on consumers of that content (readers), given these uncovered opposite connections between attitudinal certainty and linguistic similarity for writers and readers. Further, the current work examines similarity of consumer-generated information about products. But what if *any* similarity of *any* text from *any* source has a analogous effect, simply as a consequence of repetition of information? If so, then similarity of marketer-originated texts, such as advertising, should have a similar impact on attitude certainty.

Finally, as linguistic similarity has been introduced in literature as an implicit measure of trust (e.g. Mohammadhassanzadeh and Shahriari 2013; Moore and McFerran 2017; Scissors et al. 2010), the



current work is closely related to the ACR 2018 conference theme, as it belongs to the general investigation of the link between language and trust.

Although it is our faith that this paper is not similar to other papers, we hope that nevertheless, our readers will be certain in their positive attitudes about it!

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# How Mortality Salience Shapes Consumers' Responses to Brands

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## EXTENDED ABSTRACT

Consumers are frequently exposed to death-related information (e.g., news about terrorist attacks, natural disasters), which may make their mortality salient (MS; Greenberg et al. 1990). Yet, the understanding of how MS influences everyday consumption is still limited (Huang et al. 2018). Adding to this literature, we propose that MS can systematically impact consumers' brand preference. Specifically, we argue that (a) MS sensitizes consumers to the perceived perpetuity of brands, and (b) exciting (vs. other) brands tend to be perceived as less perpetual. As a result, MS dampens consumers' preference for brands with an exciting but not with other personalities.

Consumers can "manage" their fear of death by symbolically achieving perpetual existence (Lifton 1973). The onset of MS thus can drive consumers to focus on the means to attain perpetuity (Mikulincer and Florian 2000). Building on this, we propose that MS can increase the weight of perpetuity-related aspects in consumer preference.

We study this proposition in the context of branding. Brands may possess different personalities (Aaker 1997). We argue that different personalities are associated with the notion of perpetuity to varying degrees. Specifically, many of the traits comprising an exciting brand personality (e.g., young, contemporary) are fleeting in nature. Exciting states also tend to be short-lasting (Eysenck 2016). Thus, brands with an exciting (vs. other) personality tend to be perceived as having relatively lower levels of perpetuity. Because MS makes consumers become more sensitive to perceived perpetuity, we propose that exciting (vs. other) brands tend to be preferred less under MS.

Six studies provide support for our propositions. A pilot study showed that exciting (vs. other) brands are perceived as relatively less perpetual. Specifically, participants evaluated the perpetuity of the 42 brand traits comprising the five brand personalities (Aaker 1997). Supporting our proposition, traits associated with an exciting personality were rated as significantly less perpetual than those associated with sincere, competent, sophisticated, and rugged personalities.

Study 1 demonstrated the effect of MS on brand preference. Participants were randomly assigned to a 2 (MS vs. control)  $\times$  2 (exciting vs. control brand) between-participants experiment. Participants were first primed with MS (vs. not) using an established procedure (Ferraro et al. 2005). They then evaluated an exciting (vs. control - sincere) brand (Aaker 1997). A significant two-way interaction supported our predictions. In the MS, compared to the control condition, the exciting brand had significantly lower evaluations; the control brand had equal evaluations across both MS and control conditions.

Study 2 tested the mediating role of perceived perpetuity. Participants were randomly assigned to a 2 (MS vs. control)  $\times$  2 (exciting vs. control brand) between-participants experiment. The MS manipulation was identical to that in Study 1. We used a different brand and dependent variable (purchase intention), and measured brand's perceived perpetuity. We found a significant two-way interaction on purchase intention. In the MS, compared to the control condition, the exciting brand elicited significantly lower purchase intention; the opposite was true for the control brand.

A moderated mediation analysis showed that, as predicted, the MS  $\times$  brand personality interaction on perceived perpetuity was

significant. The perceived perpetuity had a significant effect on purchase intention. The moderated mediation index excluded zero. The indirect effect of MS on purchase intention through perceived perpetuity was significant for the exciting, but not for the control brand.

Study 3 directly manipulated the perceived perpetuity of exciting brands. Participants were assigned to a 2 (MS vs. control)  $\times$  2 (perpetual exciting vs. non-perpetual exciting brand) between-participants experiment. The MS manipulation was identical to that in Study 1. Participants evaluated pretested descriptions of a perpetual vs. non-perpetual exciting brand. We found a significant two-way interaction on brand evaluation. Supporting our propositions, the non-perpetual exciting brand was evaluated significantly lower in the MS compared to the control condition, while evaluations of the perpetual exciting brand did not differ significantly.

A moderated mediation analysis revealed that, as expected, the MS  $\times$  brand's perpetuity interaction on perceived perpetuity was significant. The perceived perpetuity had a significant effect on brand evaluation. The moderated mediation index excluded zero. In line with predictions, the indirect effect of MS on brand evaluation through perceived perpetuity was significant for the non-perpetual exciting, but not for the perpetual exciting brand.

Studies 4a-4b explored the real-life implications of MS on the brand equity of hundreds of brands following two death-reminding tragedies: 9/11 and Hurricane Katrina. We used a large-scale longitudinal dataset collected quarterly by a leading consulting firm (Mizik and Jacobson 2008) to conduct an analysis within a difference-in-differences framework. Brand equity was the dependent variable, and ratings for exciting brand personality and a dummy variable for MS (0 = Quarters before, and 1 = Quarters after 9/11 and Hurricane Katrina, respectively for each study) was the independent variable.

Study 4a showed a significant exciting personality  $\times$  MS interaction on brand equity. The positive impact of exciting personality on brand equity significantly decreased after 9/11. A spotlight analysis showed that equity of very exciting brands significantly decreased following 9/11, while brands low in excitement were not significantly affected. Study 4b revealed a similar significant exciting personality  $\times$  MS interaction. Again, the positive effect of exciting personality on brand equity significantly decreased after Hurricane Katrina. A spotlight analysis showed that equity of very exciting brands significantly decreased after Hurricane Katrina, while brands which were low in excitement were not significantly affected. Similar decreases were not observed for any other brand personality in neither of the Studies 4a-4b.

In summary, four experiments and two field-based investigations offered converging support that MS can dampen consumers' preference for exciting brands because they are perceived to be less perpetual. This effect does not manifest with other brand personalities. This research adds to literature on MS by showing that MS sensitizes people to brand aspects related to perpetuity, which in turn influences consumers' preference. We also contribute to the branding literature by demonstrating that MS can systematically influence consumers' preference for brands with different personalities.

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# Two-by-Two: Categorical Thinking About Continuous Bivariate Data

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## EXTENDED ABSTRACT

Most variables that companies care about are continuous in nature, but they are often analyzed categorically. For instance, consider Rogers' (1962) innovation adoption curve, one of the most celebrated ideas in marketing. Though there are no natural boundaries on the continuum of innovativeness, customers are classified into five categories (innovators, early adopters, early majority, late majority, and laggards) based on arbitrary cutoffs, in this case defined by the mean and standard deviation (e.g., the cutoff for innovators is two standard deviations above the mean). Similarly, many companies ask customers to indicate their recommendation likelihood on a 0-10 scale, where 0 means "not at all likely" and 10 means "extremely likely." Instead of analyzing the data continuously, customers are grouped into three categories—detractors (scoring between 0 and 6), passives (scoring 7 or 8), and promoters (scoring 9 or 10). The percentage of detractors is then subtracted from the percentage of promoters to compute a Net Promoter Score.

We propose that the ubiquity of such analyses is not just statistical convention, but rather reflects a natural tendency of the mind. Just like our perceptual system automatically divides the continuous spectrum of wavelengths into distinct colors, or separates continuous differences in voice onset time into discrete phonemes, decision-makers tend to simplify and structure continuous data by discretizing it, a strategy we call "categorical thinking." Categorical thinking can be advantageous in that it facilitates communication. But categorical thinking can also harm judgment quality. One downside has been well-noted: Categorical treatment of continuous variables ignores meaningful variation, leading to flawed inferences.

This paper highlights an additional problem with categorical thinking. When people think about data categorically, they do not weigh all observations equally, which is a prerequisite for interpreting the data correctly. They focus disproportionately on observations where both X and Y are high, akin to what happens when people interpret the relationship between dichotomous variables. When people evaluate dichotomous variables, a highly robust finding is that people's judgments demonstrate "cell weight inequality": some observations have more influence on judgments of contingency than others. Specifically, the joint presence of variables (i.e., the A-cell) has the largest impact and the joint absence of variables (i.e., the D-cell) has the smallest impact.

Dichotomous data is different from continuous data, which may invite very different cognitive processes, and researchers have explicitly cautioned against extrapolating from one literature to the other (Broniarczyk and Alba 1994). Nevertheless, given people's penchant for categorical thinking, we hypothesize that it is common for decision-makers to intuitively analyze continuous bivariate data by treating it more like a contingency table, where they first group observations into categories, and then compare frequencies. Thus, we predict an analogue of A-cell bias for continuous data.

We show that categorical thinking occurs naturally, though it can be amplified or attenuated depending on how the data are pre-

sented. Categorical thinking leads to an overweighting of observations where both variables are high (i.e., the A-cell). We also demonstrate several ways in which categorical thinking makes people susceptible to misinterpreting the data. For instance, data transformations that do not change the correlation, but do change frequencies in different cells, can dramatically alter perceptions of relationship strength. Reverse-coding of variables can have a similar effect.

In Study 1, we demonstrate an analogue of the A-cell bias for continuous marketing data that is presented in various formats (sequential presentation, tabular presentation, and scatterplots). In Study 2, we show that people's mental representation of the A-cell is malleable and dependent on data coding. People weight observations with high numeric values more, regardless of their objective meaning, and thus they interpret identical data differently when variables are reverse-coded. Studies 3 and 4 provide process evidence that categorical thinking leads to the A-cell bias. In Study 3, we show that the A-cell bias can be amplified by adding dividing lines to scatterplots. People's verbalizations of their thought process mediate the effect of this manipulation on the A-cell bias. In Study 4, we show that the A-cell bias can be attenuated by interventions that discourage categorical thinking such as adding a regression line to data, asking people to draw their own regression line, or including an ellipse around the data cloud.

Companies' decision-making apparatus is increasingly organized around data analysis and visualization. Procter & Gamble's managers now meet in "business spheres" that immerse their teams in data. Tableau, a leading data visualization software company, envisions future business meetings where managers work together with their teams, creating visuals on the fly, as they try to understand their data. As this approach becomes more common, it will be critical for companies to understand the biases inherent in intuitive data analysis.

As we have shown, one important source of bias comes from thinking about continuous data categorically, and failing to weight all observations equally. This tendency makes people highly susceptible to data interpretation errors. We demonstrated that judgments and decisions can change dramatically based on the position of a few data points. Similarly, people reason very differently about identical data when variables are reverse-coded. And merely overlaying dividing lines on a scatterplot substantially changes how it is interpreted. The implication is that seemingly innocuous and arbitrary data analysis decisions can lead to very different judgments.

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# Both Good from Afar...and Far from Good? Mental Representation Changes Consumer Preference for Products from a Brand with a Reputation for Innovativeness

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## EXTENDED ABSTRACT

There is widespread agreement that firms and brands benefit from fostering a reputation for innovativeness. For example, past research has documented a variety of ways in which a reputation for innovativeness improves firm performance, including improved stock returns (Mizik and Jacobson 2008), increased customer loyalty (Henard and Dacin 2010), and increased customer satisfaction (Kunz, Schmitt, and Meyer 2011), among other benefits (Barone and Jewell 2013; Stock and Zacharias 2013; Zandan 1992).

However, it is also common for consumers to have apprehensions about innovativeness. For example, consumers are more likely to associate innovative products with expectations for product malfunctions as compared to their less innovative counterparts (Ali 2000; Marks 2012; Schneider and Hall 2010). Therefore, consumers may simultaneously maintain both positive and negative associations with innovation. On one hand, innovation has the potential to introduce desirable and novel products and product features to the market (Henard and Dacin 2010; Kunz, Schmitt, and Meyer 2011). On the other hand, these novel products and product features may be less likely to function in accord with expectations, as compared to more established offerings (Ali 2000; Hirunyawipada and Paswan 2006; Kiely 1997; Pavlou 2003; Ram and Sheth 1989).

Building on the understanding that a reputation for innovativeness is accompanied by associations related to both desirability (e.g., exciting new features) and feasibility (e.g., functional risk, the possibility of product malfunction), we contend that the effect of a brand reputation for innovativeness on consumers' interest in products from that brand will vary based on whether the behavioral context directs consumers' attention to either desirability-related or feasibility-related product associations.

Research in this area of Construal Level Theory (Trope and Liberman 2003, 2010) has repeatedly shown that abstract representations shift attention to products' desirability-related attributes, whereas concrete representations shift attention more toward feasibility-related concerns (e.g., Dhar and Kim 2007; Trope and Liberman 2003, 2010). On this basis, we predict that when the behavioral context favors a reliance on abstract representations, a brand reputation for innovativeness will have a positive effect on product preference, because consumers will be more likely to associate products from that brand with the desirability-related aspects of innovativeness (e.g., exciting new features). In contrast, when the behavioral context favors a reliance on concrete representations, a brand reputation for innovativeness will have a negative effect on product preference, because consumers will be more likely to associate products from that brand with the feasibility-related aspects of innovativeness (e.g., functional risk).

In our experiments, we primarily vary mental representation through the elicitation task. Specifically, participants in our experiments make either isolated evaluations of the products or they make choices between them. This method for manipulating mental representation was chosen for two primary reasons. First, recent research by Meyvis, Goldsmith, and Dhar (2012) demonstrates that the task of evaluating products in isolation (vs. making choices among the same products) prompts the adoption of more abstract (vs. concrete) representations. Second, we chose this manipulation of mental representation

in order to ground our inquiry in relevant marketplace phenomena.

Formally, we offer the following predictions:

*Hypothesis 1* Consumers' preference for products from a brand with a reputation for innovativeness (vs. other reputations) will be higher among those asked to evaluate such products in isolation (vs. in a choice task).

*Hypothesis 2* The positive effect of a brand reputation for innovativeness (vs. other reputations) on preference in evaluation is mediated by a shift in expectations for desirability-related attributes (i.e., novelty and value).

*Hypothesis 3* The negative effect of a brand reputation for innovativeness (vs. other reputations) on preference in choice is mediated by a shift in expectations for feasibility-related concerns (i.e., quality concerns).

We test these hypotheses in four experiments. Experiment 1 used a 2 (brand reputation: innovativeness vs. consistency) by 2 (response mode: choice vs. evaluation) design. Participants began the experiment by reading about two different blender manufacturers who had recently introduced blenders under their own brand name. One brand was focused on innovation, the other on consistency. Participants then saw blenders from each of these brands and either (1) chose their preferred blender or (2) evaluated their purchase likelihood for each blender. Participants in the choice condition preferred blenders from the company focused on consistency; Participants in the evaluation condition evaluated blenders better when they came from the company focused on innovation.

In experiment 2, participants saw a blender from a company focused on innovation or focused on consistency. They evaluated the blender on purchase likelihood, perceived quality, and novel features. Participants in the innovation condition rated the blender higher on both purchase likelihood and novel features, but not higher on perceived quality. Consistent with our hypothesis, there was a significant indirect effect of a reputation for innovativeness on purchase likelihood through novel features, but not through perceived quality. Under an abstract mental construal, a reputation for innovativeness increases purchase interest because it increases the perception that the product is likely to have novel features.

In experiment 3, participants made multiple choices between two blenders—one from a company focused on innovation and the other from a company focused on consistency. Replicating the results of experiment 1, participants preferred the blenders from the company focused on consistency. We found a significant indirect effect of a reputation for innovativeness on choice through both perceived quality and novel features. Under a concrete mental construal, a reputation for innovativeness increases perceptions of the product's novel

features but also decreases perceptions of the product's quality. The net effect is a decrease in purchase interest.

In experiment 4, we manipulated both brand reputation and construal level. Consistent with our conceptual account, a brand reputation for innovativeness decreased quality perceptions (relative to a brand reputation for quality) under a concrete mental construal. However, under an abstract mental construal, a brand reputation for innovativeness had no effect on perceived quality.

# Millionaires on Instagram: Millennials' Display of Experiential Luxury and Personal Branding Strategies on Visual Social Media

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## EXTENDED ABSTRACT

Modern luxury research draws upon the concept of conspicuous consumption, the act of publicly displaying luxury goods as a means of showing-off one's wealth (Veblen, 1899). Millennials are considered to be the next generation of luxury consumers. With the rise of social media, it is predicted there will be over 3 billion users by 2021 (Statista, 2017). However, little is known as to how millennial consumers behave on visual social media and what they display in their accounts.

The concept of personal branding states that individuals are able to create their own brand by being their own marketer (Peters, 1997). Thus doing, they are reinventing themselves into someone they would like to publicly display, while being in total control of their branded self (Kaputa, 2005). This concept has not been looked at in the context of micro-celebrities – individuals who acquire popularity on social media through followers (Marwick, 2015). Instagram being a highly visual social media platform creates an environment that is fit for setting the scene by displaying wealth. This study explores millennials' display of experiential luxury through personal branding strategies on visual social media, looking at the case of 'Millionaires' of Instagram.

We collected data through an anonymously curated platform on Instagram called "Rich Kids of Instagram" (see Marwick, 2015). The final sample included a total of 27 users. We carried out a visual content analysis and a netnography. The content analysis included 493 Instagram posts. The netnography immersion lasted 6 months and was conducted on 810 Instagram posts.

In terms of results, we first conducted a descriptive content analysis and found that the Instagram pictures were of individualistic and unaltered nature. Instagram pictures usually portrayed only one person and were usually unfiltered, authentic pictures. Furthermore, findings showed an absence of the display of brand prominent luxury products in the posts, and the text associated did not mention brand names. These results seem to contradict previous research, suggesting that the wealthier you are, the more you are prone to signal your status by displaying brand prominent goods (Han et al., 2010). Interestingly, the preferred setting in the posts takes place in a public space rather than a private space. A majority of posts were geo-tagged. Geo-tags were typically precise, indicating exact names of the restaurant, hotel or other locations. This corroborates previous research on impression management (Goffman, 1959), showing that individuals carefully stage their everyday life in a front stage (the public space) and curate their posts in a back-stage (the private space) (Zhao et al., 2013).

The netnography findings confirmed the preferred experiential nature of posts location. Subjects posted text on specific experiences such as going on holiday, night-outs, weekend escapes and birthdays. Text was used merely to reinstate and reinforce the importance of their experience such as "#VacationMode". Moreover, followers probed account users by either enquiring on the geographical location related to the post or simply requesting more Instagram posts. Thus the content and location appeared highly appreciated and demanded by followers.

In sum, findings revealed two main aspects of the personal branding strategies adopted by wealthy micro-celebrities. First, the restrained use and lack of display of conspicuous luxury branded products. Second, an emphasis on experiential luxury through the

use of geo-tags. These findings carry theoretical implications. Contrary to more 'traditional' luxury consumption theories (Veblen 1899), findings showed that wealthy millennials put an emphasis on more unconventional and immaterial - rather than material - aspects of their luxury consumption. The experiential nature of luxury consumption was exemplified by the almost systematic use of geo-tags. Followers seemed to be especially motivated by this aspect of the luxury consumption experience, which can be seen as a truer, more authentic, form of consumption experience.

This study also contributes to the understanding of how millennials conceive luxury consumption in a broader sense. The co-construction of meaning allowed by textual and visual social media can contribute to re-creating and co-constructing the meaning of luxury. Visual social media such as Instagram allow consumers to create and express experiential luxury by bridging liquid and solid consumption. Personal branding pioneers, such as millionaire millennials known as 'rich kids' micro-celebrities on Instagram, use tactics to distinguish themselves and attract followers. Experiential luxury, rather than luxury products (Hemetsberger, von Wallpach, and Bauer 2012), appears to be the main focus of luxury consumption for this new generation of luxury consumers.

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# Analyzing the Perception of Experiential Luxury Consumption of Millennials on Instagram: A New Methodological Approach

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## EXTENDED ABSTRACT

Luxury consumption has been extensively researched, primarily looking at the consumption of material goods, but has neglected experiential luxury consumption. In fact, millennials, the new upcoming luxury consumers, seem to be more interested in the latter. Instagram, a visual social media platform, is used by millennials - 18 to 30 year olds - more so than other generations (Pew Research Center 2016). Instagram allows users to record their everyday lives through posting pictures containing features such as geolocation tags (Manikonda, Hu, and Kambhampati 2014)(Manikonda, Hu, & Kambhampati, 2014). Yet there is a gap in the literature in understanding how and to what end millennials use these features. Recently a new subgroup of wealthy millennials, called Rich Kids of Instagram (RKOI for short) emerged on the platform. RKOI are millennials, micro-celebrity pioneers (Senft 2008), heavy luxury consumers influencers that are extensively followed on Instagram. In this study, we explore (1) how these rich millennials signal their experiential luxury consumption through geo-tags on Instagram, and (2) how this type of unconventional luxury consumption is perceived by these rich millennial followers.

The research design aims at examining the perception of experiential luxury consumption of RKOI by Instagram users. Thus we focus on following attributes: (1) the perception-intensity of RKOI posts by Instagram users, measured in the number of likes and comments (in the following referred to as "social response"), (2) the location of the RKOI posts and their social response in geographic coordinates (latitude and longitude) and (3) the visual post content, categorized in distinctive settings by a qualitative content analysis (Bock 2011). The data collection is based in a data mining process, with which we crawl and extract information from the HTML structure of each RKOI post – such as number of likes and comments, hashtags, descriptions or location via coordinates. Our sample of RKOI posts consists of 700 geotagged RKOI posts by 21 European citizen users on 407 unique locations.

This study shows that rich micro-celebrities, called Rich Kids of Instagram, signal experiential luxury on visual social media, through the use of geo-tags.

Although most research has looked at tactics used by micro-celebrities and celebrities in building their brand image online (Marwick 2015; Rokka and Canniford 2016), consumer research has not been able to measure yet the social impact it has to micro-celebrities/celebrities' followers. Results have shown that followers seem to have potential interest in experiential luxury lifestyle. Moreover, this research is a step forward in confirming that millennials are not interested in consuming traditional luxury goods or services (Han et al. 2010). Followers seem to be interested in viewing content that exhibits traveling lifestyle in famous and traditional luxury capitals (Kim et al 2014).

This paper carries important methodological and managerial contributions. First, to the best of our knowledge, this is the first study that shows a multi-disciplinary methodological approach that

bridges geography with marketing. This innovative research design of examining a sample with geographical and visual attributes, and the social response numbers with geographical, statistical and qualitative methods enables new insights into the perception of social media content. Second, the research contributes to understanding how millennials engage with experiential luxury (through geo-tags) on Instagram.

In terms of managerial contributions, market researchers in city branding (Demirbag Kaplan et al. 2010) could use such data to determine millennials tourism trends and to better target that particular consumer segment accordingly.

Finally, since this methodological approach is not limited to the case example of RKOI, it is applicable to other social media research contexts. Conditions for this method to work are (1) to use data coming from a social media platform with geo-tags implemented, (2) and for geo-tags to be widely used by social media users. Future researchers could apply and analyze data with this method on other Instagram users such as social media influencers or scrutinize the spatial characteristics of posts within a specific area in detail (e.g. looking at all posts that were geo-tagged in Florence).

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# “Million Dollar Smile?” How Smile Intensity, Relationship Norm and Consumer Self-Construal Influence Ad Effectiveness

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## EXTENDED ABSTRACT

Marketers widely use the image of a smile to create a positive impression among consumers. The well-known interpersonal benefits of a smile could lead one to believe that a smile always conveys positive information and receives positive social feedback. On the contrary, Wang et al. (2016) cautioned that bigger and broader smiles sometimes generate undesirable consequences, and a slight smile is perceived more favorably when people associate it with the trait of competence. Our study contributes to the evolving research stream regarding smile intensity by examining how consumer evaluations of service advertisements are affected by the way the model smiles in the ad. Drawing from the social-functional perspective, we explore the differences—and the reasons for those differences—in consumers’ responses to two types of smiles (broad and slight), and identify boundary conditions associated with the roles of relationship norm and consumer self-construal.

Relationship norms affect compliance, and influence the decoding of the inferences consumers make regarding a consumption context (Scott, Mende, and Bolton 2013; Wan, Hu, and Wyer 2011). Two types of relationship norms have been distinguished: communal and exchange relationships (Clark and Mills 1993). The communal norm leads to an emphasis on warmth, as opposed to competence, whereas the exchange norm leads to a greater emphasis on competence than on warmth (Scott et al. 2013). A person showing a broad smile tends to evoke a perception of warmth while a person showing a slight smile is likely to be perceived as competent (Wang et al. 2016). Thus, we expect an interactive effect between relationship norm and the model’s smile intensity.

Two distinct types of self-construal (i.e., independent and interdependent) distinguish how the self is viewed in relation to others (Singelis 1994). People with an independent self-construal (“independents”) see themselves as autonomous and unique, whereas those with an interdependent self-construal (“interdependents”) see themselves as relational and interconnected with others (Markus and Kitayama 1991; Triandis 1993). People prefer advertisements that express values congruent with their self-construal (Van Baaren and Ruivenkamp 2007).

Since communal relationships raise expectations of kindness and concern for general welfare (Clark and Mills 1979), the communal norm leads to an emphasis on warmth as opposed to competence (Scott et al. 2013). Consumers whose norm is the communal relationship are thus expected to appreciate the warmth associated with the brand. In contrast to a slight smile, a model’s broad smile will enhance these inferences of warmth. Therefore, we expect that interdependents find a model’s broad smile to be more persuasive than a slight smile, and this effect will be stronger in the context of a communal relationship than in an exchange relationship.

The effect of a slight smile is expected to be stronger in an exchange relationship than in a communal relationship. An exchange relationship implies “quid pro quo” and an expectation of prompt repayment for received benefits (Clark and Mills 1979). In the context of the consumer-firm relationship, consumers are concerned with how much they receive in exchange for how much they give. This

concern motivates consumers to focus on the level to which their own self-interest is dependent on the competence of the brand. A model showing a slight smile is perceived as more powerful, competitive or competent than the same model showing a broad smile. Thus, the slight smile can enhance a brand’s image as one of competence, and is aligned with the independents’ expectations regarding an ideal brand under the exchange norm. Therefore, a model with a slight smile is expected to increase the favorability of evaluations of the brand.

We design two experiments. In Study 1, a 2 (smile intensity: broad vs. slight) x 2 (relationship norm: communal vs. exchange) x 2 (consumer self-construal: interdependent vs. independent) between-subjects design, in which self-construal was measured. The ad of travel agency was chosen as target product. Attitude toward the brand as the dependent variable. Study 2 employs a 2 (smile intensity: broad vs. slight) x 2 (relationship norm: communal vs. exchange) x 2 (consumer self-construal: interdependent vs. independent) between-subjects design, in which relationship norm was assessed via a measure of communal and exchange orientation. Purchase intentions for the gym service served as the dependent variable. In addition, we conducted moderated mediation analysis to examine whether processing fluency served as the underlying mechanism. There was no overlap of participants across the two studies. Through various manipulations and priming of the independent variables, both of two studies obtained the consistent results and suggest that for interdependents, a model’s broad smile was more persuasive than a slight smile, and the effect was stronger in the communal relationship than in the exchange relationship. In contrast, we found independents to perceive a slight smile as more persuasive than a broad smile, and the effect was stronger in the exchange relationship than in the communal relationship. Further, we did find a significant indirect effect of smile intensity, relationship norm, and consumer self-construal interaction through the processing fluency.

This research contributes to the literature regarding the effects of smile intensity on advertising persuasion. Previous research has shown that this effect is bounded by consumer-related factors (Wang et al. 2016). Our study shows that relationship norm and consumer self-construal can provide self-schemata and influence how consumers perceive a model’s broad and slight smile differently. The current work offers rich managerial implications. Marketing managers who wish to maximize the advertising value of the model’s smile must take into consideration the relationship norm that is most easily invoked by the brand and/or product being promoted. Marketers may treat self-construal as an interesting communication challenge in which consumers can be induced to think collectively or individually. Although relationship norm and self-construal, as studied here, may not be the only two ingredients missing from the extant advertising literature, they explain the situational effectiveness of a model’s smile and offer important insights into how these two variables impact the selection and usage of a model. Marketers who pay attention to such concerns are likely to stand a better chance of winning consumer hearts.

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# Thanks for Nothing: Expressing Gratitude Invites Exploitation by Competitors

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## EXTENDED ABSTRACT

Economic exchanges such as negotiations, ultimatum games, and deception games are characterized as mixed-motive interactions in which individuals must decide when to focus on their self-interested outcomes and when to focus on joint outcomes with their counterparts (Dana, Cain, and Dawes 2006; Gino and Moore 2008). Social norms of competition are salient in these economic exchanges, and people are often motivated to claim value for themselves (Larrick and Wu 2007; Loschelder et al. 2016).

Individuals typically act in accordance with their own interests because they obtain personal material gains or emotional benefits (Barasch et al. 2014; Zlatev and Miller 2016). A number of interpersonal factors has been shown to influence self-interested decisions, including trust (Lount et al. 2008), identity (Bryan et al. 2013), and - most relevant to the current work - emotion (Gino and Pierce 2009).

Considerable research has focused on the benefits of gratitude. For example, feeling gratitude has been linked with prosocial behavior (McCullough et al. 2001), trust (Dunn and Schweitzer 2005), and personal responsibility (Chow and Lowery 2010). Interestingly, no prior work has investigated the potential negative consequences of gratitude. This is a surprising omission because gratitude is commonly expressed in social interactions, and selfish preferences and behavior frequently occur in economic exchanges.

We explore whether expressions of gratitude trigger self-interested behavior. In social exchanges, individuals pay attention to social signals that communicate their counterparts' motives to cooperate or compete (Adams et al. 2015; Galinsky and Schweitzer 2015). One important social signal is emotional expression. Emotional expressions provide insight into the cognitive appraisals and motives that commonly accompany the emotional experience (Ames and Johar 2009; Barasch et al. 2016). We extend the emotions-as-social-information model (Van Kleef 2009; Van Kleef, Homan, and Cheshin 2012) and identify a strategic inference that individuals frequently make about their opponents based on their expressions of gratitude. Prior research has found that in cooperative relationships, people make inferences about the communal strength of the relationship when they interact with a partner who expresses gratitude (Lambert et al. 2010). Based on gratitude expressions, individuals infer that their partner is more caring about the welfare of others.

We advance scientific understanding of the inferences made about gratitude expressions by investigating whether individuals view grateful counterparts as particularly forgiving. Forgiveness is defined as the prosocial willingness to cancel a debt or accept a transgression in order to restore a relationship (Adams and Inesi 2016; Finkel et al. 2002; McCullough 2008). Building on existing research, we adopt an interpersonal conceptualization of forgiveness (Bies et al. 2016; McCullough et al. 1997). When people express forgiveness, they communicate a willingness to move past conflict, accept an imbalance in resources, and repair the relationship (Exline et al. 2004). However, recent research has revealed that in the absence of wrongdoing, individuals can respond negatively to expressed forgiveness (Adams et al. 2015).

We postulate that individuals are particularly likely to infer that their grateful counterparts have a tendency to forgive selfish behavior. That is, we establish a link between expressions of gratitude and

inferences about the willingness to forgive. We expect that strategic inferences of forgiveness can explain the effect of gratitude expressions on self-interested behavior.

In Study 1, we randomly assigned participants to either a Gratitude Expression or Neutral Expression condition. We manipulated expressions of gratitude by having confederates describe themselves as a grateful person or an unemotional person. We measured self-interested decision-making by having participants make offers in an ultimatum game. Next, participants completed a measure of the inferred forgiveness of their counterpart and a manipulation check. Participants in the Gratitude Expression condition rated their counterpart as expressing higher levels of gratitude than did participants in the Neutral Expression condition (Our emotional expression manipulation was successful in all of our studies). Importantly, participants in the Gratitude Expression condition made more selfish offers than participants in the Neutral Expression condition. We show that inferred forgiveness mediates the effect of gratitude expressions on selfish offers.

In Study 2, we contrasted the effect of gratitude with the effect of another positive-valence emotion, excitement. We show that participants who perceived gratitude were more likely to make selfish decisions in the ultimatum game compared to those who perceived excitement or neutral emotion.

In Study 3, we contrast the effect of gratitude in competitive interactions with cooperative interactions. We reconcile our findings with prior research demonstrating that gratitude expressions motivate prosocial behavior in cooperative interactions (McCullough et al. 2001). To explore whether the type of interaction moderates the relationship between gratitude and selfish behavior, we employed a 2 (Setting: Competition vs. Cooperation) x 2 (Emotional Expression: Gratitude vs. Neutral) between-subjects design. We manipulated expressions of gratitude by having confederates describe themselves as a grateful person or a neutral person. We used a modified version of Prisoners' Dilemma Game (Lieberman, Samuels, and Ross 2004) to manipulate the type of interaction. In the Competition condition, the game was framed as the Wall Street Game and their partner was identified as an opponent. In the Cooperation condition, the game was framed as the Community Game and their partner was identified as a teammate. As predicted, expressed gratitude increases selfish behavior in competitive settings, whereas it decreases selfish behavior in cooperative settings.

In Study 4, we extend the effect of expressing gratitude on selfish behavior to a distinct but related behavioral domain: deception (Yip and Schweitzer 2016). We show that perceivers of gratitude expressions were more likely to exploit opportunities to cheat than were perceivers of neutral expressions.

Across four studies, using different emotional expression manipulations and different measures of self-interest, we obtain a consistent pattern of results: expressing gratitude invites self-interested, exploitative behavior from perceivers.

Our work challenges the prevailing assumption that gratitude promotes prosociality. People may become accustomed to the benefits of gratitude in cooperative situations and carry their habits of saying "thank you" and expressing gratitude into competitive situations, thereby unknowingly harming their own economic outcomes. Our findings reveal a dark side of gratitude.

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# Doing Worse by Doing Good: How Corporate Social Responsibility Makes Products Less Dangerous

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## EXTENDED ABSTRACT

In recent years, much research has focused on the impact of CSR on business activity, showing that by investing in CSR companies can “do well by doing good” (Chernev & Blair, 2015; Du, Bhatlacharya, & Sen, 2007; Orlitzky, Schmidt, & Rynes, 2003). Chernev and Blair (2015), for instance, have demonstrated that CSR activities can create a “halo effect” inducing consumers to evaluate more positively the performance of products of companies involved in prosocial actions. In the specific case of controversial companies, i.e. companies producing products that could be dangerous for health, environment or the society, the literature also seems to convey a rather positive view of CSR investments (Cai, Jo, & Pan, 2012; Yoon, Gürhan-Canli, & Schwarz, 2006). However, this literature has mainly focused on the positive effect of CSR on the image or financial performance of companies without paying much attention to the potentially harmful effects on consumers. In this research, we question whether products that are explicitly presented as hazardous to health or the environment can be perceived as less dangerous because of the company’s involvement in charitable actions.

If we refer to the vast majority of research conducted in the field of impression formation (e.g. Baumeister, 2001; Skowronski & Carlston, 1989), the natural answer to this question seems rather to be no. Indeed, it has been repeatedly shown that the negative characteristics of a person or an object exert a stronger influence on its overall evaluation than his or its positive characteristics (Baumeister, 2001). However, the literature also points out that to form their impression people rely on the available informational cues that are the less ambiguous (e.g. Wyer, 1973). Based on this premise, we hypothesize that the dangerous nature of a product sold by a company can be difficult to assess and therefore perceived as relatively ambiguous by the target contrary to the prosocial actions undertaken by the organization. In sum, we expect consumers to infer that a product sold by a socially engaged company cannot really be dangerous.

The goal of study 1 was to test whether the addition of a charity logo to a product can lessen the impact of a warning informing about the hazard posed by the product. We recruited 195 MTurk participants to evaluate a new fictitious brand of deodorant. We used a two - 1 (warning sign) X 2 (logo of a charitable organization: present versus absent) - plus control group (no warning sign and no charitable logo) experimental design. After the product presentation, participants completed a short survey regarding their attitude toward the brand (Yoon et al., 2006) and the perceived danger associated with the product.

Results show that brand attitude was significantly lower in the warning only condition ( $M=3.627$ ,  $SD=1.73$ ) than in the control condition ( $M=4.65$ ,  $SD=1.31$ ,  $p < .01$ ) and the warning plus charity logo condition ( $M=4.44$ ,  $SD=1.15$ ,  $p < .01$ ). Control and warning plus charity logo condition did not differ ( $p > .10$ ).

Regarding the perceived danger, participants in the warning only condition rated the product as significantly more dangerous for health and the environment ( $M_{\text{health}} = 2.97$ ,  $SD = 1.22$  and  $M_{\text{environment}} = 3.05$ ,  $SD = 1.12$ ) than in the warning plus charity logo condition ( $M_{\text{health}} = 2.41$ ,  $SD = 1.05$  and  $M_{\text{environment}} = 2.72$ ,  $SD = 1.13$ ,  $p < .05$ ) and in the control condition ( $M_{\text{health}} = 2.21$ ,  $SD = 1.19$  and  $M_{\text{environment}} = 2.51$ ,  $SD = 1.12$ ,  $p < .05$ ). Control and warning plus charitable logo condi-

tions did not differ in terms of perceived danger of the product ( $p > .10$ ).

These results support our hypothesis. The presence of a charity logo on a product tempers the presence of a warning sign on consumers’ attitude toward the brand and perception of danger associated with the product. These findings suggest that, in presence of a charity logo, consumers may infer that the product is not really dangerous and be less affected by the presence of a warning sign in their evaluation.

The aim of study 2 was to replicate study 1 taking into consideration a crucial potential moderator: the salience of the benefits that the company derives from these CSR activities. Indeed, it has been shown that a CSR activity perceived as primarily serving the interests of a company may be ineffective or even counterproductive (Chernev and Blair, 2015; Wagner, Lutz, & Weitz, 2009; Yoon et al., 2006).

One hundred forty-eight MTurk participants were randomly assigned to three different conditions: Control (no CSR), “Self-interested CSR” and “Neutral motives CSR”. To vary the manipulation, we used a text presenting products sold by a fictitious brand of soft drinks named Galaxis. To make clear that the company sells dangerous products, we mentioned that “the overall risks of obesity and diabetes related to the consumption of its products are the highest in the whole industry”.

After reading the text, participants rated their attitude toward Galaxis and the perceived danger associated with products sold by Galaxis.

Confirming our assumption, results show that participants evaluated the brand significantly better when CSR activities were mentioned ( $M = 4.64$ ,  $SD = 1.20$ ) than when they were not ( $M = 3.89$ ,  $SD = 1.33$ ,  $p < .01$ ) but this effect was non-significant when brand self-interests were salient ( $M = 4.09$ ,  $SD = 1.47$ , NS). Finally, participants evaluated Galaxis’ soft drinks as significantly less dangerous in the “Neutral motives CSR” condition ( $M = 4.34$ ,  $SD = 1.93$ ) than in the control condition ( $M = 5.12$ ,  $SD = 1.58$ ,  $p > .05$ ) and in the “Self-interested CSR” condition ( $M = 5.08$ ,  $SD = 1.59$ ,  $p > .05$ ). There was no difference between the “Self-interested CSR” condition and the control condition (NS).

These findings have implications for understanding when and why CSR activities of controversial companies can reduce the perceived dangerousness of their products. We show that when CSR does not seem to be dictated by personal interests, the charitable activities of controversial companies can create a benevolent halo that leads consumers to classify products as less dangerous and reduces the effectiveness of hazard warnings. Further research is still needed to understand whether these effects can be generalized to all types of product-related hazards.

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# Anchors as Midpoints: It's Not the Size of the Adjustment That Counts, It's The Direction

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## EXTENDED ABSTRACT

People's estimates of unknown quantities are tethered to values they have previously considered, a phenomenon known as anchoring (Tversky & Kahneman, 1974). Previous research has attributed anchoring effects to a process of *insufficient* adjustment from anchors (e.g. Epley & Gilovich, 2006; Tversky & Kahneman). In this report, we propose an alternative explanation for anchoring effects, "anchors as midpoints", which instead focuses on the *direction* of adjustment. Specifically, people treat anchors as if they were a mental midpoint of the number line. Consequently, compared to what their unanchored estimates would suggest, people are more likely make estimates that are higher than high anchors, and lower than low anchors.

In our paper, we test this prediction, as well as three other predictions: First, the original prediction will be most evident when people's intuitions about the magnitude of the stimulus match the magnitude of the anchor. Second, anchoring effects will be stronger when people can adjust from an anchor in either direction, compared to when an arbitrary direction of adjustment is imposed. Finally, people will be less likely to adjust from arbitrary anchors in the direction of the correct answer than unanchored estimates would suggest.

In Study 1, 341 laboratory participants made 20 estimates about the percentage of American adults who met various criteria e.g. "What percentage of American adults eat meat?" We randomly assigned each of participants' estimates to one of three conditions: *high anchor* vs. *low anchor* vs. *control*. We pretested the high (low) anchors to approximate the 85<sup>th</sup> (15<sup>th</sup>) percentile of unanchored estimates for the specific question (Jacowitz & Kahneman, 1995). Consistent with the theory of anchors as midpoints, we found that participants estimated higher (lower) values than the high (low) anchor more frequently in the *high anchor* (*low anchor*) condition than in the *control* condition ( $ps < .001$ ). Moreover, we also found that our effect for high (low) anchors was greater for questions with intuitively high (low) answers ( $ps < .001$ ).

A potential alternative explanation for our findings in Study 1 is that participants thought that the anchors were informative. To rule out this possibility, we ran Study 2 with 472 online participants using transparently random anchors, generated with the last two digits of the first ten numbers in participants' contact list. Each of the 10 resulting numbers corresponded to one of the 10 estimation questions. For example, if the resulting number was below 24.5 (above 74.5), the anchor for the corresponding estimation question would be 24.5 (74.5). If the number was between 24.5 and 74.5, participants would make the corresponding estimate without considering an anchor. We designed questions about the percentage of participants in the survey who would prefer one option over another. We expected participants to have the intuition that a certain option would be generally preferred (e.g. chocolate over apples). Therefore, for each question, we randomized whether the participant estimated the percentage of survey respondents preferring the popular option over the unpopular option (*intuitively high* condition), or vice versa (*intuitively low* condition). Consistent with our theory, we found that people were more likely to estimate a value higher (lower) than 74.5 (24.5) in the *high anchor* (*low anchor*) condition compared to the *control* condition ( $ps < .001$ ), particularly for intuitively high (low) quantities ( $ps < .001$ ).

In Study 3, we recruited 778 online participants to estimate on how many of the next 100 days each of 10 cities would be hotter than Kansas City, MO, after considering anchors. We wanted to rule out the possibility of obtaining this finding because participants believed the restrictions on the direction of adjustment to be informative. The goal of this study was to test another prediction of our theory of anchors as midpoints; that anchoring effects are stronger when people can adjust from the anchor in either direction than when they are compelled to adjust away from the extremes. We manipulated both the anchor and the direction of adjustment using the first 10 numbers in participants' contact lists, to ensure that our manipulations were understood as uninformative. For example, if the number comprising the last two digits of one of these numbers was below 24.5 (74.5), participants could adjust in either direction from an anchor of 24.5 (74.5). If the number was between 24.5 and 49.5 (49.5 and 74.5), we compelled participants to estimate a value higher (lower) than the anchor of 24.5 (74.5). We truncated our dependent variable to enforce the same restriction on estimates in all conditions in our analyses, so that we treated estimates higher than 74.5 as equal to 74, and estimates lower than 24.5 as equal to 25. Even with this truncated dependent variable, and with the transparently uninformative manipulation, anchoring effects were stronger for participants who could adjust from the anchor in either direction than for participants who were compelled to adjust away from the extremes ( $p < .001$ ).

An important prediction of our theory is that people are more likely to adjust from anchors *away from the correct answer* than their unanchored estimated would suggest. To test this hypothesis, we recruited 1,994 online participants to answer estimation questions with an objectively correct answer. Specifically, participants estimated the percentage of pixels in an image that were either yellow or black. The percentage of black pixels in each of these images ranged from 2.5% to 97.5% in intervals of 5%. Within subjects, and across estimates, we randomly assigned 50% of estimation questions to a *control* condition and 50% to an *anchor* condition. We randomly assigned *all* estimates an anchor from the same distribution as the correct answers to the estimation questions. However, in the *control* condition, participants never actually saw these anchors. Consistent with our theory, we found that participants were *less* likely to adjust in the correct direction, and *more* likely to adjust towards extremes, from real anchors than from control anchors that they never considered ( $ps < .001$ ).

In summary, our studies confirm a series of novel predictions made by the theory of anchors as midpoints, which are not predicted by other theories of anchoring.

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# Consumer Responses to Premium Framing: Better to Offer the Target Product as a Free Gift?

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## EXTENDED ABSTRACT

Premium promotion, which is widely adopted by retailers, involves offering a free product or service to consumers if they purchase certain products and services (D'Astous and Jacob 2002). Previous studies examining consumer response to premium promotions mainly focused on objective factors such as premium attractiveness (Buil, de Chernatony, and Montaner 2013) and premium fitness (D'Astous and Landreville 2003) rather than framing of the premium. Past research has found that subtle variations in price framing may influence consumers' evaluation despite identical discount levels (Raghubir 2006). However, the presence of such an effect in premium framing (i.e., framing the target product vs. non-target product as a free gift) remains unknown.

On the other hand, in this digital age, e-commerce websites and search engines can easily identify consumers' target products by tracking their search history and it is possible for online stores to offer product packages with target products listed as free gifts. For instance, in Alibaba's Tmall, a Chinese e-commerce giant, consumers searching for earphones can find earphones either as a standalone product or as a premium (e.g., as a free gift when buying a shampoo). The current research explored how the different premium framings influence consumer response and its underlying mechanism.

Literature suggests that when pursuing a goal, individuals focus more on goal-related information (Huffman and Houston 1993). Therefore, we propose that consumers with a purchase goal are more sensitive to the information related to their target product, such as its price information. Based on Thaler (1985), a free gift can provide consumers with transaction utility through a deal. Moreover, consumers often overreact to zero price (Shampanier, Mazar, and Ariely 2007) due to positive affects. Thus, when consumers' target product is free, they can obtain large transaction utility through the deal and the zero price. Together, it is likely for consumers to perceive greater transaction utility when their target product (vs. non-target product) is framed as free. Additionally, transaction utility is consistently shown to enhance evaluation and purchase intention (Vaidyanathan et al. 2000). Formally, we propose that:

*Hypothesis 1* Consumers' evaluation and purchase intention of premium promotion is higher when their target product is free than when non-target product is free.

*Hypothesis 2* This effect is mediated by perceived transaction utility.

Furthermore, Chen (2009) found that people with interdependent (independent) self-construal rely on their external (internal) reference price and are more (less) sensitive to situational price information. As premium framing is one type of external price information, consumers with interdependent self-construal should be more likely to perceive an increase in transaction utility from premium framing. In contrast, consumers with independent self-construal will likely exert no different responses to specific premium framing. Formally,

*Hypothesis 3* The effect of premium framing is stronger for consumers with interdependent self-construal, but disappears for those with independent self-construal.

To test these hypotheses, we conducted three studies.

Study 1 test the main effect (H1) and had a 2 (target product: flash drive vs. earphone)  $\times$  2 (premium framing: flash drive free vs. earphone free) between-subjects design. Results revealed that consumers evaluate the premium promotion as more attractive under the target free condition than under the non-target free condition (5.99 vs. 5.01;  $t(158)=-2.69$ ,  $p=.008$ ), supporting H1.

Study 2 replicated the findings of study 1 with services (hair treatment), tested the mediator role of transaction utility and compared consumer response to premium framing with other promotion types. The experiment employed a one-factor (promotion type: target free premium vs. non-target free premium vs. bundle pricing vs. half price) between-subjects design. The last two groups are control conditions. The results revealed that participants in the target free condition (3.93) are more likely to purchase the service than those in the non-target free (2.95;  $p=.013$ ), bundle pricing (3.14;  $p=.045$ ), and half price (2.86;  $p=.008$ ) conditions. Similar effect on affective evaluation ( $F(1, 136)=5.12$ ,  $p=.002$ ) were observed. Bootstrapping analysis showed that transaction utility mediates our main effect (95% CI: .20, 1.56), supporting H2. Moreover, a posttest following study 2 which changed the "free" to "20% off" found both the main effect on purchase intention ( $p=.41$ ) and affective evaluation ( $p=.83$ ) dismissed. Together, study 2 not only replicated the documented effect but also showed that compared with other often-used promotions, consumers respond to target free promotion more positively.

Study 3 aimed to explore the moderating role of self-construal. Participants were randomly assigned to one of the 2 (self-construal: independent vs. interdependent)  $\times$  2 (premium framing: target free vs. non-target free) between-subject conditions. We manipulated self-construal by asking participants to read a story and count the pronouns (e.g., I vs. we) in it (Brewer and Gardner 1996). The results showed a significant two-way interaction ( $F(1, 204)=3.91$ ,  $p=.049$ ), under the interdependent condition, target product free (vs. non-target free) led to more positive evaluation (6.39 vs. 5.85;  $F(1, 204)=6.69$ ,  $p=.010$ ). However, under independent condition, there was no difference between target free and non-target free framing (6.12 vs. 6.17;  $F(1, 204)=.06$ ,  $p=.82$ ). Namely, this effect dismissed when consumers were primed with independent self-construal.

We examined how premium framing influences consumer response even when the net price savings remained the same. Three studies provided convergent evidence for the premium framing effect. Specifically, consumer evaluation and purchase intention of promotion is higher when their target product (vs. the non-target product) is free (Studies 1–2), owing to differential perceptions of transaction utility (Study 2). Moreover, self-construal moderates the premium framing effect (Study 3).

This research enriched the understanding of the factors influencing consumer response to premium promotions and demonstrated that different premium framing can also influence consumer response, even when the price savings are objectively identical.



Second, we contribute to the bundle price framing literature by exploring the framing effect in premium promotions instead of the discount. Finally, we advance knowledge regarding self-construal on consumers' price perceptions. Our findings also have several managerial implications for retailers to improve their promotions effectiveness through a subtle change in premium framing. For example, e-commerce websites can display a deal where consumer's target product listed as a gift.

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# Rituals Enhance Self-Brand Connection: The Role of Time Perception

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## EXTENDED ABSTRACT

“Twist, Lick, Dunk!” Although Oreo has never explicitly recognized these three special actions as a brand ritual, it does educate consumers to perform a series of fixed and sequential behaviors to consume the cookie in an inadvertent manner (Rook 1985). This paper aims to reveal the effect of this kind of a brand ritual. Since a brand ritual relies on shared meaningful activities for consumers within their own spaces, we contend that the nature of a brand ritual is individual-based. This paper adopts the notion of an individual-based ritual as a ritualistic behavior with a symbolic meaning, occurring in a fixed and episodic sequence (Vohs, Wang, Gino, and Norton 2013).

Three studies demonstrate that a brand ritual makes consumers feel time expands, i.e., feeling they have abundant time at hand, further reinforcing their connection with the brand. Self-brand connection represents the extent of how a consumer incorporates a brand into “self” (Escalas and Bettman 2003). The causal impact has been hinted in anthropology. Performing a ritual may lead consumers to be more emotional and inclined toward incorporating a brand into the “self” concept (Di and Hassenkamp 2008). Besides, a brand ritual may influence consumers’ time perception, which is linked with feelings and behaviors (Graham 1981; Rudd, Vohs, and Aaker 2012). Since a ritual is often linked with special occasions that make people feel, memorize, and immerse themselves into the special moment, consumers experiencing a brand ritual may also feel and involve themselves with the brand. Thus, we anticipate that a brand ritual expands time perception, thereby triggering a connection with the brand.

Study 1 aims to test the main effect. We introduced a fictional coffee brand “Vindu” to the participants, who were randomly assigned to the ritual or control group. The ritual group was instructed to carefully read the following: “the special requirement for Vindu is that you must perform three sequential actions before tasting each sip of coffee: closing eyes for five seconds, taking deep breaths, and stirring the coffee for a moment. Now imagine that you would be tasting three sips of Vindu coffee. Before having each sip, you perform these three actions in sequence.” In contrast, the control group was also asked to imagine performing these three actions three times but in a random manner. The participants then took the self-brand connection test (Escalas and Bettman 2003). To confirm the effectiveness of the manipulation, we asked them to rate the extent to which they feel the three actions were like a ritual or a random series of actions (Vohs et. al 2013). The ritual group presented a significantly higher level of self-brand connection than the control group.

Study 2 intends test whether there is a difference in the effect between a ritual with meaning and a ritual without meaning and to explain the mechanism. Participants were randomly assigned to three groups: the ritual group (ritual with symbolic meaning), the routine group (ritual without symbolic meaning), and the control group (no ritual). Each participant was offered two Gullon biscuits. Participants from the routine group were told that Gullon introduced a new way of eating, comprising three actions: first, break the biscuit in half; then, close the eyes and take a deep breath; last, eat the right half, and then the left. The ritual group also performed these three actions. However, in step 2, when closing their eyes, they murmured “life is half living and half reliving.” Participants from the control group

were told to eat the way they like. Then, they took the self-brand connection test. We measured time perception by asking questions such as: “how slowly do you feel the time passes when eating biscuits?” For the main effect, the routine and ritual groups were not different from each other in brand connection, and both had a significantly higher level of self-brand connection than the control group. This shows that whether a brand ritual carried a symbolic meaning did not influence the self-brand connection. After controlling for the illusion of control and other relevant variables, the perception of time was shown to mediate effect of ritual on brand connection.

We conducted Study 3, a qualitative study to investigate how consumers cope with a real brand ritual. We selected FP, a service offering monthly subscription of flowers, as our case because it educates consumers to carry out a series of sequential actions, such as trimming roots at a 45-degree angle. Monthly subscription of flowers is a new consumption mode as flowers are generally termed as festival goods rather than daily goods. If customers accept FP flowers as part of their daily lives, we can consider it as evidence that they have built a close connection with FP. We conducted exhaustive interviews with FP customers and found three themes that mold the FP consumption process: object-oriented, behavior-oriented, and ritualized-meaning. Based on the practice theory (Arsel and Bean 2013), the three themes construct a ritualization process of the “O-D-M” (object-doing-meaning) mode. Studies 2 and 3 verified time perception as a mechanism. The difference is that the lab experiment did not reveal a significantly different effect between rituals with and without meaning, while the qualitative study recognized the effect of a ritual’s meaning. This is because a brand ritual’s symbolic meaning is constructed by doings. Customers in study 3 perform an FP ritual every day, and thus they gradually share a meaning and connection with the brand.

From a theoretical perspective, our work is one of the first attempts to explore the ritual effect in the brand area. It also elaborates the relationship between a ritual’s doing and meaning from the perspective of time perception. The managerial implications are important for branding, advertising, and consumer relationship. In a real market, companies can try to create a brand ritual as an effective strategy.

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# The Impact of Childhood Exposure to Interparental Conflict on Consumer Response to Online Reviews

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## EXTENDED ABSTRACT

Online reviews often exhibit less consensus, wherein reviewers disagree on aspects of product performance. Research on the effect of review consensus exhibits mixed results (e.g., Zhu and Zhang 2010). In the current research, we focus on an important but previously unexamined moderating variable: the level of exposure to interparental conflict (IPC) during one's childhood.

Interparental conflict (IPC) refers to the extent to which a person *observed* his or her *caregivers* engaging in destructive conflict during childhood. It is typically measured via self-reports regarding the frequency and intensity of having observed parental arguing, as well as the extent to which such disputes were not constructively resolved (Grych, Seid, and Fincham 1992). Our research shows that adults who witnessed high levels of IPC as children evaluate products with low (versus high) levels of review consensus less favourably. We further show the underlying mechanism.

Across three studies, we demonstrate that high IPC individuals devalue a product with lack of review consensus and that pessimistic expectations underlie the effect.

In study 1, we manipulate review consensus by varying the extent to which product attributes are consistently evaluated positively (or negatively) by reviewers. MTurk participants were randomly assigned to a low or high review consensus condition. Self-report IPC was administered either at the beginning or at the end of the questionnaire (randomly determined), to check for order effects (there were none). Floodlight analysis (Spiller et al., 2013) shows that high IPC individuals evaluated the luggage less favorably in the low (vs. high) consensus condition. Review consensus had the opposite effect on low IPC individuals.

In study 2, we tested the proposed underlying mechanism that devaluation of product with lack of review consensus is due to pessimistic expectations. For generalizability of the effect, we use star ratings to manipulate review consensus. MTurk participants were randomly assigned to a low or high review consensus condition, and IPC was measured toward the end of the study. Floodlight analysis shows high IPC individuals evaluated the hotel less favorably in the low (vs. high) consensus condition. Lower IPC individuals exhibited no effect of reviewer consensus. We next tested the proposed underlying process (PROCESS macro, Model 15, Hayes, 2013): IPC → negative product review expectations → lower product evaluations when review consensus was low. Our results show that high IPC individuals did indeed have lower expectations about the reviews, that lower expectations reduced product evaluations. More importantly, review consensus moderated this effect, such that low consensus reduced product evaluations when review expectations were low. The indirect effect was significant.

In study 3 we directly manipulated the positivity of expectations to provide additional process evidence. We expected that enhancing expectations would offset the chronically pessimistic expectations of high IPC individuals. Mturk participants were randomly assigned to one condition in a 2 (review expectation: positive = high rank vs. neutral = no rank) x 2 (review consensus: high vs. low) full facto-

rial design. As results indicated, the interaction of expectations and review consensus was significant for high IPC individuals but not for low IPC individuals. Floodlight analysis shows high IPC individuals evaluated the hotel less favorably in the high (vs. low) consensus condition when positive expectations were created as predicted. Individuals scoring lower on IPC exhibited no interactive effect of expectation and reviewer consensus.

We document unique and long-lasting effects of childhood experience on adults' consumption. We found that individuals who report having been exposed to high levels of interparental conflict (IPC) while growing up rate products exhibiting less (versus more) review consensus less favorably. We further show this result is driven by negative review expectations, which is likely reflective of high IPC individuals' chronically higher pessimism levels. Enhancing the expectations of high IPC individuals reversed the effect. Our results are robust to family structure (i.e., parental divorce), suggesting that family communication processes may explain behaviors beyond those captured by earlier work on family structure.

This research has important theoretical contributions. By documenting the unique and long-lasting effects of destructive family communication processes in childhood on consumers' expectations and behavior, it contributes to consumer developmental psychology. Extant research on consumer developmental psychology has mainly focused on the impact of family structure (e.g. parental divorce, Rindfleisch, Burroughs, and Denton 1997), with little systematic investigation on the impact of family communication processes. It also contributes to the work on review consensus. We not only identify a novel moderator of the effect of review consensus but also illustrate the underlying process based on review expectations. The effects of IPC on consumption offer multiple avenues of exploration.

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# Remind Me of What I Have: Thinking about a Favorite Possession Mitigates the Negative Impact of Inequality on Subjective Well-being

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## EXTENDED ABSTRACT

Income inequality negatively impacts people's subjective well-being, social relationships, and health (e.g. Alesina et al. 2004; Oishi et al. 2011; Oshio and Kobayashi 2010). Different mechanisms underlie these negative effects, for example, inequality lowers trust and perceived fairness of a society, which in turn reduce happiness (Oishi et al. 2011). Many governments redistribute income with the attempts to reduce inequality (Alesina et al. 2004). While these efforts are crucial for societies, they often require changes in public policies and economic structures that are beyond individuals' reach, and their effects take time to unfold. Thus, it is important to seek out strategies that individuals can adopt to protect themselves from the impact of income inequality. To this end, we examine how *reminding* people about their possessions may play a role. The key insight of our findings is that reminding people of a single best possession, rather than a larger number of possessions, that they own can mitigate the negative impact of income inequality on subjective well-being.

Income inequality has been shown to increase conspicuous consumption because people want to reduce the gap between what they have and what others have (Christen and Morgan 2005; Jaikumar and Sarin 2015; cf. Ordabayeva and Chandon 2010). However, how these *acquired* consumptions in turn influence well-being at a given level of income inequality is unclear. On one hand, research generally finds that material possessions, compared to other resources such as time (Mogilner 2010) or experiences (Gilovich et al. 2015), have a relatively weak impact on subjective well-being and happiness. On the other hand, material possessions have also been shown to successfully compensate people from threats and aversions (Gao et al. 2009; Reimann et al. 2017). Thus, we explore *when* material possessions can be used to mitigate the negative impact of income inequality on subjective well-being.

Importantly, rather than examining acquisition of material goods, we examine the mindsets consumers can adopt when thinking about possessions they already acquired. This approach is important because while it can be costly to acquire new possessions and potentially lead to overspending (Christen and Morgan 2005), it is much easier for consumers to change the way they think about acquired possessions. In particular, we examine two mindsets. Consumers may focus on the quantity of their possessions and thereby think about *all the things* they own; alternatively, they may focus on the quality of their possessions and thereby think about the *best or favorite thing* they own. These two mindsets may have differential influence on the extent to which income inequality impacts subjective well-being.

To elaborate, economic theory posits that the products a consumer purchases reflect the maximum utility within her budget constraints (Samuelson 1938). In many product categories, such as clothing, accessories, books, consumers often own a large number of items. Thus, reminding them of all their possessions may make salient the abundance of resources, and hence buffer them from the negative impact of inequality. On the other hand, consumers' favorite possessions are often associated with personal memories and social relationships (Kleine and Baker 2004; Price et al. 2000; Wallendorf and Arnould 1988). Thus, a favorite possession is unique to the consumer and incomparable with other people's possessions. Thus,

reminding consumers of a favorite possession may reduce their attention to the comparison and potential gap between what they own and what others own. This may in turn reduce the negative impact of inequality due to social comparison. Therefore, it is plausible that either approach can be effective.

In three studies, we test the *interactive* effects of income inequality and consumers' focus on possessions (i.e. all possessions or a favorite possession) on subjective well-being. Participants in the first two studies come from the same country (United States), thus, rather than using a regional-level income inequality measure (e.g. GINI coefficient), we focus on consumers' *perceived* income inequality. Indeed, perceived inequality may not confirm with actual inequality. Thus, in the first study, we also validate whether perceived income inequality negatively impacts subjective well-being.

## Study 1: Do Reminders of Material Possessions Help?

The objective of this study is twofold. First, we test whether perceived income inequality indeed negatively impacts people's subjective well-being. Second, we test whether reminding people of their possessions, with a focus on either all possessions or a favorite possession, can mitigate this negative impact.

### Method

Participants ( $N=367$ ) completed a 3 (writing task: all possessions, favorite possession, control) by perceived inequality (continuous) study. Because it is infeasible to ask participants to recall all the possessions they own, in this and all other studies, we asked participants in the all-possession condition to write about all the possessions they purchased within a time period and a product category. Specifically, those in the all-possession [favorite-possession] condition wrote about all the shirts [the favorite shirt] they purchased in the past five months, whereas those in the control condition wrote about their morning routines. Afterward, participants reported their subjective well-being (Diener et al. 1985,  $\alpha > .80$  in all studies). Then, they completed a series of filler questions, and reported perceived inequality on a one-item scale ("To what extent do you agree or disagree with the following statement: income inequality exists in my country", 1 = "strongly disagree", 7 = "strongly agree").

### Results

Perceived inequality did not differ across writing task conditions ( $F(2,364) < 1$ , all  $ps > .6$ ). Thus, we regressed subjective well-being on the dummy coded all-possession and favorite-possession conditions (keeping control as the omitted variable), perceived inequality (standardized), all X inequality interaction, and favorite X inequality interaction. Results yielded a negative main effect of perceived inequality ( $\beta = -.31$ ,  $p = .01$ ), qualified by a favorite X inequality interaction ( $\beta = .34$ ,  $p < .07$ ), and no other significant effect. We analyzed the slope of perceived inequality in each condition. Results showed that perceived inequality had a significant negative impact on subjective well-being in the control condition ( $\beta = -.31$ ,  $p = .01$ ), consistent with the findings from prior research using national- or state-level income inequality (Alesina et al. 2004; Oishi et al. 2011). The slope of perceived inequality was also negative, but became less significant, in the all-possession condition ( $\beta = -.19$ ,  $p = .19$ ). More importantly, the slope became non-significant and positive in direc-

tion in the favorite-possession condition ( $\beta=.03, p>.8$ ), suggesting the negative impact of perceived income inequality was mitigated.

### Discussion

Results of this study provide preliminary evidence that reminding people of a favorite possession, relative to all possessions, is an effective way to mitigate the negative impact of income inequality on subjective well-being. Nonetheless, because the negative slope in the all-possession condition is only near-significant, it is unclear to what extent reminding people of all possessions may also reduce the negative impact. One possible reason for the lack of effect in the all-possession condition may be that the product category in this study (shirts) is too narrow. Thus, recalling all the shirts one has purchased in the past 5 months does not really make salient the amount of material possessions and resources one has. To address this issue and to better understand the effects of the two mindsets, we replicate the all-possession and favorite-possession conditions using a broader product category in the next study.

### Study 2: The Effect of Recalling a Favorite vs. All Possession(s)

The objective of this study is to obtain further evidence that recalling a favorite, versus all possession(s), can mitigate the negative impact of income inequality on subjective well-being. To ensure that the weak effect of recalling all possessions in the previous study is not due to the narrow product category, we use a more inclusive category, clothing items, in this study.

### Methods

Participants ( $N=182$ ) completed a 2 (writing task: all possessions, favorite possession) by perceived inequality (continuous) study. Those in the all-possession [favorite-possession] condition wrote about all the clothing items [the favorite clothing item] they purchased in the past five months. They then reported subjective well-being, completed a series of filler questions, and reported perceived inequality, using the same scales as in study 1.

### Results

Perceived income inequality did not differ across writing task conditions ( $F(1,180)<1, p>.6$ ). We regressed subjective well-being on writing task, perceived inequality (standardized), and their interaction. Results yielded a significant writing task main effect ( $\beta=.25, p=.03$ , favorite possession = 1, all possessions = -1), qualified by a writing task by inequality interaction ( $\beta=.25, p=.03$ ), and no other significant effect. Slope analyses showed that income inequality had a significant negative effect on subjective well-being in the all-possession condition ( $\beta=-.33, p=.04$ ). Thus, even with a broader product category, reminding consumers of the many possessions they own did not mitigate the negative impact of income inequality. In contrast, the slope of income inequality became non-significant and positive in direction in the favorite-possession condition ( $\beta=.16, p>.3$ ). This result replicated the effect of recalling a favorite possession observed in the previous study.

### Discussion

Taken together, studies 1 and 2 suggest that reminding people of a single favorite possession (vs. many possessions) is an effective way to mitigate the negative impact of income inequality on subjective well-being. This strategy is important given that income inequality is rising in many countries (Atkinson et al. 2011). Thus, an important next step for our research is to test the generalizability of our proposed strategy in a larger sample across countries. To this end, in the next study, we replicate our effects using a sample of consumers across eight different countries.

### Study 3: Cross-country Generalizability of Our

#### Approach

Different countries vary in their national levels of subjective well-being, income inequality, as well as materialistic values (Ger and Belk 1996). These variations raise the possibility that the observed effects of reminding people of their material possessions may not hold in a broader population. To test the robustness and generalizability of our effects, we conducted a cross-country study in eight different countries, including China, India, Pakistan, U.K., Spain, Russia, Mexico, and Chile. The selected countries vary in their geographic locations, GDPs, languages, population sizes, and national income inequality levels (measured by the GINI coefficients). We balanced the sample size in each country.

#### Method

Participants in the eight selected countries participated in an online study using the Qualtrics survey platform. The study had the same basic design as study 2 – a 2 (writing task: all possessions, favorite possession) by income inequality design. Due to language difference across countries, the survey questionnaire was translated to the main language spoken in each country by a professional translation team. Moreover, because consumers in different countries might have different shopping habits, we further broadened the criteria of possessions in the writing task. Specifically, participants in the all-possession [favorite-possession] condition wrote about all the clothing items [the favorite clothing item] they purchased in the *past one year*. Afterward, participants reported subjective well-being, completed a series of filler questions and demographic information, as in previous studies. Finally, to be consistent with the previous studies, we measured individual-level perceived income inequality using the same scale. We included only participants at the age ranged from 18 to 70 (98% of the total sample) in our analyses, resulting a sample from 1169 qualified participants from eight different countries.

#### Results

*Individual Level Analyses.* Participants in different countries varied in their baseline-level perceived income inequality ( $F(7,1161)=118.88, p<.001$ ) and subjective well-being ( $F(7,1161)=40.47, p<.001$ ). Thus, we controlled for dummy coded country variables as covariates (Mexico was the omitted country). We first tested the effect of the writing task manipulation on perceived income inequality, and the result showed null effect ( $p>.3$ ). Thus, we regressed subjective well-being on writing task (favorite-possession = 1, all-possession = -1), perceived inequality (standardized) and their interaction, controlling for country dummy variables. Results of the analyses yielded a marginal interaction effect of writing task and perceived inequality ( $\beta=.06, p=.09$ ), and no other significant effect. Slope analyses showed that perceived inequality negatively impacted subjective well-being in the all-possession condition ( $\beta=-.12, p=.05$ ). However, this effect became non-significant and positive in direction in the favorite-possession condition ( $\beta=.01, p=.9$ ). Thus, results from a sample of consumers across eight different countries replicated the effects observed in the previous studies, using participants from the United States. Reminding consumers of a favorite possession (vs. all possessions) effectively reduces the negative impact of income inequality on subjective well-being.

*National Level Analyses.* Insofar we have only tested our effects with perceived income inequality. In this study, we are also interested in testing whether our proposed strategy helps reduce the negative impact of *actual* income inequality on subjective well-being. To do so, we relied on the GINI coefficient as an indicator of the actual income inequality of a country. However, because the years and methods used to calculate the GINI coefficients varied by countries

(Oishi et al. 2011), we did not treat the GINI coefficients as a continuous variable. Instead, we categorized the eight countries in our sample into two inequality levels – high versus low – based on their GINI coefficients (high inequality countries: Russia, China, Chile, Mexico; low inequality countries: Pakistan, U.K., India, Spain).

We first tested whether participants in the high (vs. low) inequality countries varied in their subjective well-being. Indeed, those in high inequality countries ( $M=4.60$ ) had lower subjective well-being than those in low inequality countries ( $M=4.87$ ,  $p=.001$ ). Next, we conducted an ANOVA on subjective well-being using inequality level (low=-1, high=1) and writing task (all possessions=-1, favorite possession=1) as factors. Because different countries have different baseline happiness, we also controlled for country-level happiness as a covariate (adopted from the World Happiness Report 2017; results did not change without the covariate). Results yielded a significant interaction ( $F(1,1164)=4.35$ ,  $p=.04$ ). Simple effect analyses showed that participants who lived in one of the high versus low inequality countries reported lower subjective well-being if they were in the all-possessions writing task condition ( $M_{\text{high}}=4.55$ ,  $M_{\text{low}}=4.95$ ,  $p<.001$ ). However, the difference in subjective well-being became non-significant if they were in the favorite-possession condition ( $M_{\text{high}}=4.67$ ,  $M_{\text{low}}=4.73$ ,  $p>.5$ ). Thus, the difference in subjective well-being between participants in high- and low-inequality countries was mitigated after participants recalled their favorite possessions. Taken together, we observed consistent effects of our approach (i.e. reminding consumers of their favorite possessions) on the impact of both perceived (individual-level) and actual (country-level) income inequality.

## Conclusion

Our research makes several contributions. First, while prior research finds a relatively weak effect of material purchases on consumers' well-being (Gilovich et al. 2015; Mogilner 2010), we show that the way in which consumers *think about* their material possessions can influence their subjective well-being, by mitigating the negative impact of external factors, such as income inequality. Second, we identify a simple and mundane strategy that people can adopt to reduce the negative effect of income inequality. Rather than keeping up with the Jones (through conspicuous consumption), which may lead to a vicious cycle of overconsumption and debts (Christen and Morgan 2005), consumers can simply focus on the best thing they have. Third, we show generalizability of our proposed strategy using a cross-country sample from eight different countries. Prompting consumers to think about a favorite possession (vs. all possessions) mitigates the negative impact of both perceived and national-level income inequality on subjective well-being. Thus, our findings contribute to improving consumers' well-being and understanding the relationship between possessions, inequality, and well-being.

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# Doing Worse but Feeling Better: Consequences of Collective Choice

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## EXTENDED ABSTRACT

### Conceptualization

Consumer decisions are often made together with other people (Davis 1976). Nonetheless, marketing scholars typically investigate consumers as independent individuals who chose alone, leaving joint decisions under-researched (Bagozzi 2012). However, choosing with others differs substantially from choosing alone. This article compares the implications on decision outcome and emotions felt when either an individual or a group of two people chose from a set with many alternatives.

Group decision is not the averaging of its members (Zajonc Wolosin, and Wolosin 1972). When several people choose together, they frequently have different tastes and goals, which can lead them to disagreement. Despite this latent conflict, groups are typically still able to reach a decision agreement. This is possible because collective consumer decision is fundamentally cooperative in nature (Fisher, Grégoire, and Murray 2011), which implies that conflicting preferences are overcome through self-sacrifice and mutual concessions (Corfman and Lehman 1987). Therefore, knowing the consequences of cooperation and self-sacrifice on the value of the alternative selected constitutes one of the contributions of the current article.

Iyengar, Wells, and Schwartz (2006) demonstrated that individuals who do better in taxing decisions can actually feel worse. However, it is unclear whether these effects are also extended to collective choice. On one hand, research on individual decision-making suggests that engaging in a difficult selection can lead to the experience of negative emotions (Bettman, Luce, and Payne 1998). Given that group decision might imply contradictory preferences which can degenerate into affective conflict (Amason 1996), groups might experience even stronger negative emotions than individuals. Nevertheless, groups' cooperative mindset and the fact that human beings have a tendency to enjoy sharing an activity with others (Baumeister and Leary 1995; Raghunathan and Corfman 2006) could elicit positive emotions in dyadic decision. Which of these drivers has a stronger influence on dyadic emotions experienced during choice is still unknown in the consumer literature and is the other goal of the current article.

### Method

Study 1 aimed to compare the subjective value of the alternative selected by individuals and dyads, and assess the magnitude of sacrifice in collective decisions. Participants were randomly assigned to the individual or collective condition, between-subjects. They were 60 individuals (63% women) and 41 dyads (61% women; dyad members did not know each other). Every choice set had 30 alternatives of the same category (poster, chocolate, ice cream, and desk lamp; random assignment and order). Procedure: first, each participant alone had to evaluate every alternative in the choice set (-5 = "I don't like it at all" to +5 = "I like it very much"). Afterwards, participants ticked which alternatives they would consider from the choice set, followed by the selection of the favorite alternative. Finally, a short questionnaire was filled. This procedure was done three times. In the collective condition, both the consideration and the selection stages were done by dyad members together.

The goal of Study 2 was to compare the valence of the dominant emotion experienced by individuals and dyads while making a

taxing decision such as choosing from a large choice set. It had the participation of 42 individuals (36% women) and 44 dyads (dyad members knew each other; 51% women), between-subjects. Movies was the only category. Procedure: each participant alone started by evaluating every alternative on the same scale as study 1. Then, to set participants' emotions to neutrality they watched a 4-minutes documentary. Afterwards, from a choice set with 30 movies participants had to select their favorite to watch briefly in the end. This was done either individually or in dyads. Then, a short questionnaire was filled. The selection and questionnaire tasks were repeated six times. Finally, one of the movies selected as favorite was watched for 5-minutes.

Along study 2, the emotions of each participant were recorded every 35 milliseconds with an automated facial recognition software. This allowed to know the intensity (0 = minimum to 100 = maximum) of each of the six basic emotions: enjoyment, sadness, anger, disgust, fear, and surprise (Ekman 1992). This information was then aggregated in two-seconds' intervals and the emotion with the highest average intensity along the interval was considered the dominant one. Then, the dominant valence was coded as positive if the strongest emotion was enjoyment, or negative if it was anger, sadness, disgust, or fear. Surprise was out of analysis as the literature still debates its valence.

### Major Findings

Study 1 showed that dyads selected an item with an inferior value in comparison to individuals ( $M_{\text{dyad}} = 3.51$ ,  $SD_{\text{dyad}} = 1.26$ ;  $M_{\text{ind.}} = 4.50$ ,  $SD_{\text{ind.}} = 0.84$ ;  $\chi^2(1) = 63.85$ ,  $p < .0001$ ). This difference was the consequence of dyad members giving up her top-rated alternative, which implied an average sacrifice of 1.10 value points ( $SD_{\text{dyad}} = 1.01$ ). Nonetheless, dyads were not less satisfied with the option selected comparatively to individuals ( $M_{\text{dyad}} = 7.78$ ,  $SD_{\text{dyad}} = 1.76$ ;  $M_{\text{ind.}} = 7.97$ ,  $SD_{\text{ind.}} = 1.80$ ;  $\chi^2(1) = 0.27$ ,  $p = .602$ ). Moreover, 69% of the dyads behaved very cooperatively as in at least 2/3 of their selections (a) both dyad members conceded the same or (b) they engaged in sequential reciprocity ("You win now, I win next").

Besides replicating study 1 findings, study 2 revealed that whereas individuals' selection process was dominated by negative emotions (73% of the two-seconds intervals), dyadic selection, on the contrary, was dominated by positive emotion (45% of the intervals). Proportion tests confirmed the differences between individuals and dyads both for the negative ( $z = 44.85$ ,  $p < .0001$ ) and the positive ( $z = -34.22$ ,  $p < .0001$ ) dominant emotions. Moreover, study 2 showed that while choosing, dyad members experienced a level of enjoyment almost five times stronger than that of individuals ( $M_{\text{dyad members}} = 26.13$ ,  $SD_{\text{dyad members}} = 15.44$ ;  $M_{\text{ind.}} = 5.67$ ,  $SD_{\text{ind.}} = 8.34$ ;  $\chi^2(1) = 46.61$ ,  $p < .0001$ ). Level of dyad familiarity had no effect.

This article demonstrated that although dyads *do worse* in terms of selection outcome, they do not report a lower level of satisfaction. Furthermore, collective consumers *feel better* as they enjoy the selection process much more.

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# Brand Movement

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## EXTENDED ABSTRACT

For three decades, consumer research has paid a great deal of attention to the role of brands in fostering social formations such as subcultures, communities, and publics. Some of these formations manipulate elements of consumer culture for the sake of ideological and cultural changes. In this regard, consumers organize themselves in movements, namely anti-brand movements, which overtly criticize brands. Following these streams of research, this article introduces the notion of *brand movement* to conceptualize current phenomena whereby consumers-citizens turn to brands to produce a political change in society. In turn, brands have the power to channel, mobilize, and empower these consumers-citizens to gain more political legitimation and success in social territory. We define brand movement as a *brand-related platform that propels the evolution and dissemination of political views, ideas, and actions*.

Consumer-related social formations are a key phenomenon of current consumer societies (Jenkins, 2006; Kozinets, and Handelman, 2004). Studies in consumer culture show the way in which consumption nourishes subcultures, communities, tribes, collaborative networks, collectives, movements, activism, and publics of consumers (Arvidsson and Caliandro, 2016; Cova et al., 2007; Kozinets, 2001; Scaraboto and Fischer, 2013; Schouten and McAlexander, 1995; Thompson et al., 2006; Weijo et al., 2018). Brands are at the core of these sociocultural phenomena (Luedicke et al., 2010; Muniz and O'Guinn, 2001; Schau et al., 2009). More specifically, the strong connection of consumers to their brands leads to the rise of social groups of devotees turning the brand into a cult object (Belk and Tumbat, 2005; Muniz and Schau, 2005). However, consumers can also unite against a brand when they despise it (Izberk-Bilgin, 2012; Kozinets, and Handelman, 2004). While most of the research in consumer culture has focused especially on those brand-related social formations emerging in opposition to the society as a whole, as an alternative to it, or both (Kozinets, 2001; Muniz and O'Guinn, 2001; Schouten and McAlexander, 1995), we still know little about those brand-related social movements that gain momentum in their interaction with the current society.

In their pioneering study on brand-related social movements, Kozinets and Handelman (2004) provide evidence of alternative social formations in consumer societies, specifically that they more politically active than communal formations as tribes and publics (Arvidsson and Caliandro, 2016; Cova et al., 2007). However, their analysis focuses especially on anti-brand movements, telling little about those emerging around consumers' strong connection brands. As noted in social movement theory, social movements arise especially from shared common beliefs, but also from non-traditional political actions aimed at redressing the power gap between underdog individuals and powerful elites (Melucci, 1989). In cultural studies, these beliefs mostly manifest themselves in the form of a textual brand – e.g. celebrities – that consumers use to resist dominant ideologies, develop a sense of belonging among them, and gain social territory (Fiske, 1989; Jenkins, 1992; Kozinets, 2001). Drawing from this broader theoretical framework, this study aims at investigating the role that textual brands play in political social movements in today's consumer societies.

The present study explores Beppe Grillo's movement, which became later known by its current name of the Five Star Movement.

Beppe Grillo is a textual brand as he is an Italian celebrity – a humorist – with his community of fans gathered around his blog – *beppegrillo.it*. Founded officially in 2009, with the help of web strategist Gianroberto Casaleggio, around Beppe Grillo and his followers' proposals to adopt social networks (i.e. Meetup) to communicate and coordinate local meetings, Five Star Movement is today the biggest political party in Italy (election 2018), with mayors of the party in large cities such as Rome and Turin. We collected data through the netnographic method (Kozinets, 2002) by analyzing online discourses - TV shows, journal articles, press reviews, social networks, and consumer generated content. The amount of data totaled 148 hours of video and about 200 pages of visual and textual data.

Based on Melucci's theory of new social movements, we identify four main markers that constitute the empirical grounding for brand movement. These are “*challenging administrative logic on symbolic grounds*”, “*acting political, changing the social*”, “*functioning as daily socio-technical networking*” and “*consciousness of living in a global (consumer) society*”.

The conceptualization of brand movement offers an understanding of empirical phenomena under analysis in which brands allow citizens-consumer to participate in political processes; this is in order to gain more space and power in the society, instead of contrasting/resisting market logic or using/engaging with the market in order to gain socio-political power. In doing so, the article sheds new light on the entanglement between brands and consumer activism (Kozinets 2002; Kozinets & Handelman 2004). In fact, rather than emphasizing the role of consumer activism in resisting the market and/or its global brands (Kozinets & Handelman 2004; Thompson and Arsel, 2004; Thompson et al., 2006; Weijo et al., 2018), this study illustrates that brand-related activism may be used to attain real, substantial political and democratic ends. All in all, via brand movement, rather than providing consumers with support for social belonging (Muñiz & O'Guinn 2001; Schouten & McAlexander 1995), or a means of self-promotion (Arvidsson & Caliandro 2016), brands may offer consumers the power to achieve actual political goals. This is because brand movements are able to connect with, tap into, soak up and integrate values and ideologies from different worlds of worth into a novel-pragmatic configuration of political ideas in order to challenge the existing political landscape.

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# Cultivating a Network of Trust: Exploring the Trust Building Agency of Objects in Home Sharing

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## EXTENDED ABSTRACT

With trust so central to the function and success of home sharing, this research proposes that trust is best established through interplay of trust entities. However, apart from literature detailing trust in platform security (Lu, Wang, and Hayes, 2012), in the seller (Ert, Fleischer, and Magen, 2016), or in reviews (Filieri, 2016), little is understood about how trust is built in home sharing. In order to offer a more refined understanding of trust, we explore the sources of rational, affective and contextual trust and suggest the value in tracing objects as a key property of trust building in home sharing. We review this emergence through the lens of consumer culture perspectives (Arnould and Thompson, 2005) embedded in organizational trust literature (Korsgaard, Brower, and Lester, 2015) to assist in providing a vocabulary that can serve as an organizing framework. To understand how trust is built in home sharing networks (Airbnb), this study adopts interpretivist research practices. This approach enables an in-depth understanding of participants' Airbnb experiences (shared with hosts or full unit rentals) specifically relating to trust in engaging in the network. This study is based on a three-year multi-sited ethnography of Airbnb consumption experiences that includes netnographic data (Kozinets, 2010) of Airbnb online communities in New Zealand, interviews with guests and hosts and field observation.

Previous research suggests that attributions of trust are influenced by rational, affective and contextual factors (Korsgaard et al., 2015). Johnson and Grayson (2005) propose rational trust as the confidence or willingness to rely on a service producer who is competent and reliable. Rational trust has also been posed to include evaluations of satisfaction (Baxter, 2012; Ganesan, 1994), communication (Doney, Barry, and Abratt, 2007), integrity (Mayer, Davis, and Schoorman, 1995), value co-creation (Franklin and Marshall, 2016) and transparency (Eggert and Helm, 2003). Affective trust represents the non-calculative, emotional, or empathetic, element of trust within a relationship. This kind of relationship has been described as the mood felt by the parties and the strong mutual feeling, or shared values, upon which their relationship is based (Sekhon, Roy, Shergill, and Pritchard, 2013). This functions as a projection of the image that the other party will exercise benevolence toward the other if presented with an opportunity to do so (Sirdeshmukh, Singh, and Sabol, 2002). Lewicki and Bunker (1996) describe contextual trust as manifesting within relationships that are embedded in a broader context, such as organizational membership or shared community, as the actors share certain characteristics, thus signaling trust.

This study predicts that building trust in home sharing may involve processes of pre-objectification of material objects (the home) through interactions with the digital platforms (home photos, reviews and profile photos) (Ferreira and Scaraboto, 2016), thus enhancing other sources of trust.

By considering the agency of objects in building trust in home sharing (Latour, 2004), we offer a broader view of seven well-established dimensions of dyadic trust in the existing trust literature. These dimensions include competence, communication, transparency, value co-creation, shared values, integrity and benevolence.

Airbnb guests initially consider attributions of competence in their Airbnb hosts through their digital profiles prior to making contact. These include star ratings, reviews and badges such as Superhost titles. Attributions of competence continue during communica-

tion between host and guest, but are also engendered in the materials of the home such as mattress and duvet quality:

They can see our reviews. They can see what the people in Bordeaux and Saint Sebastien said about us as guests whether we're good, clean. They can say no to us if they didn't want to have us. Without positive reviews I don't think they can trust us. (Karen, guest).

Communication and transparency are important dimensions of trust building in services and are enacted by agents, or boundary spanners, during the service encounter (Anderson and Narus, 1990). Yet in home sharing, these activities are manifest even before an agreement to stay, or encounter, takes place.

To co-create is to jointly-configure a customer solution and is more than simply transactional in nature. This activity results in a more customized solution and, by extension, trusting disposition between parties. Co-created value in home sharing is realized through homely practices such as having dinner with the host:

The key to her home rather than a hotel was important. You go in and you use the key to open YOUR apartment and this is where YOU'RE living. You go in and you feel like you can do the groceries." (Karen, guest).

Shared values also contribute to trust building in home sharing. By unraveling the Airbnb network, it became apparent that shared values are realized through familiarity with the sharing economy world. Shared values may even be encoded in the home appliances or design that creates closeness with the other:

I don't need to meet the host but like to feel welcome and really it's the little extras that count... I love quirky decor and don't want to stay in someplace that lacks a soul (guest, online).

Integrity and benevolence are other dimensions of trust that are delivered through practices of unspoken rules of hospitality, respect of home and house rules and the needs of the other. Homely material objects, such as family photos on the wall, can also signify decency, sincerity and the familial care and protection by the other. Benevolence, or acts of service outside of profit motive, are discovered through the act of gift-giving and the meanings of the gifts (Sherry Jr, 1983) that adhere to hospitality culture:

"I've got two necklaces from Chinese guests and one gave me a little book and one gave us a little sculpture, like a little carving, so just really little things but it's a nice gesture." (Angie, host).

Within an increasingly networked and fluid society, where actors fluctuate between physical to digital platforms and devices, this research demonstrates that objects feature as a key agent of trust building in home sharing.

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# “Yes, I Can” or “No, I Can’t” – Effect of Extraneous Affirmation- and Negation-Evoking Contexts on Brand Recall Memory: The Role of Semantic Activations

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## EXTENDED ABSTRACT

In the real world, consumers often draw up a shopping list by recalling brand names. Lynch Jr and Srull (1982) classified such choice options as “memory-based”. If consumers cannot recall a brand, they are less likely to consider it, and therefore, purchase it. Consequently, factors that affect memory-based choices are important practically and theoretically. Our research focuses on how (i.e., the phenomenon) and why (i.e., the psychological mechanism) the recall of brands could be impacted by extraneous brand placement contexts that evoke a negation versus an affirmation (such as a “NO” versus a “YES”).

Our research is the first to show that an entirely unrelated negation (vs. affirmation) in a brand’s placement context leads to impaired brand recall memory. The principal contribution of our work is the investigation of the underlying mechanism. We demonstrate that negations spontaneously generate negation-related semantic associations, which through a spreading activation mechanism (Collins and Loftus 1975) influences brand recall memory. Specifically, we show that the nature of these negation-related semantically activated concepts, decreases consumers’ “general judgments of importance” toward discrete consumer issues, which in turn impairs brand recall memory.

Extant research has shown that negation is associated with cognitive inhibition, and latencies (Carpenter and Just 1975; Giora et al. 2007; Kaup and Zwaan 2003). A negation operator prevents the activation of the core concept or schema being negated (MacDonald and Just 1989).

Research has also shown the importance of context factors in brand placement effects (Newell, Salmon, and Chang 2006; Van Reijmersdal, Smit, and Neijens 2010). For example, there is an evidence of a spill-over effect induced by the context towards conventional advertising, as reflected through consumers’ emotions (e.g., involvement, liking, feelings) (Pavelchak, Antil, and Munch 1988; Moorman, Neijens, and Smit 2005).

We hypothesize that concepts that are coexistent with an extraneous negation are susceptible to spill-over inhibitory effects of negation. Thus,

*Hypothesis 1* Mere association of any brand-related information, with an extraneous context or episode that elicits a negated response, impairs the recall of that brand as compared to an extraneous context or episode that elicits an affirmative response.

Often “motivation” determines how people react to their environment when processing information, and formulating attitudinal/behavioural responses (Darke, Chattopadhyay, and Ashworth 2006), we hypothesize that when consumers are motivated to remember, the effect in H1 should disappear. Thus,

*Hypothesis 2* When consumers are motivated to remember, the brand recall should be almost similar under both extraneous negation and affirmation contexts.

Furthermore, evidence of brain mechanisms linking language and action, is indicative of “embodied cognition” (Niedenthal 2007). One facet of embodiment is the fact that motor actions impact sub-

jective feelings (Adelmann and Zajonc 1989; Semin and Smith 2002). Thus,

*Hypothesis 3* Mere association of any brand-related information, with an extraneous horizontal shaking of the head (embodied “No”) should impair the recall memory of that brand as compared to an extraneous vertical nodding of the head (embodied “Yes”).

Fundamentally, it is possible that the experience from a source concept increases the accessibility in memory of specific semantic concepts that such experiences exemplify. These concepts may then spread over to others, based on associative network models (“spreading semantic activation”, Collins and Loftus 1975). Consequently, we hypothesize that, negation, results in spreading of concepts semantically related to negation. Such concepts trigger exclusion of the negated and its associated entities from an individual’s immediate purview of consideration. Spreading semantic activation coupled with the aforementioned act of exclusion, reduces the importance of not only the negated entity and anything associated with it, but also induces generally lower judgments of importance in an individual’s mind. Being cognitive misers, humans disregard the unimportant, and forget under negation. Thus,

*Hypothesis 4* The accessibility of negation-related semantic concepts should mediate the effect of negation on the judgment of importance.

*Hypothesis 5* Higher judgments of importance lead to higher brand recall memory compared to lower judgments of importance.

We conducted five laboratory experiments to validate our hypotheses, all of which were supported. Experiment 1 shows that an extraneous negation (vis-à-vis an extraneous affirmation) elicited by a brand’s placement context impairs subsequent brand recall memory (H1). Experiment 2 shows that consumers’ motivation to remember moderates the effect observed in H1 (H2). Experiment 3 provides convergent evidence from an embodied cognition perspective (H3). Experiment 4 shows that accessibility of negation-related semantic concepts mediate the effects of explicit negation on the judgment of importance (H4). Finally, Experiment 5 shows that higher judgments of importance lead to higher brand recall compared to lower judgments of importance (H5).

The principal theoretical contribution of our work is in investigating the underlying mechanism leading to extraneous negation-induced forgetting. Moreover, it is possibly the first research that demonstrates, both semantically and through embodiment, that an extraneous affirmation/negation can impact memory. A fundamental practical implication for brand managers is to decide what type of programs/context they would like to use to advertise/promote their brands. Managers need to appreciate that negation-inducing contexts could potentially adversely impact the brand recall of their brands and consequently their revenues.

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# Linguistic Antecedents of Anthropomorphism

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## EXTENDED ABSTRACT

In consumer research, humanlike form has been regarded as the prerequisite for anthropomorphism (Hur, Koo, and Hofmann, 2015; Kim, Peng Chen, and Zhang, 2016). Given that activation of knowledge structures about humans and nonhumans and their application to a nonhuman target determines the extent to which humanlike qualities are attributed to the target (Epley, Waytz, and Cacioppo 2007), we argue that humanlike form is not essential for consumers to anthropomorphize nonhuman agents, because even in the absence of humanlike characteristics, people may continue to anthropomorphize, as some languages make their speakers focus on the similarities, rather than the differences, between humans and nonhumans. Recent empirical evidence also shows that whether the language of a given country has gendered pronouns or not is a strong predictor of gender equality in that country (Prewitt-Freilino, Caswell, and Laakso 2012). In English, not only are there different pronouns for male (he) and female (she), but English also separates humans (he and she) from non-humans (it).

Although most languages distinguish grammatically between humans and nonhumans, some languages (e.g., French, Turkish), do not make these distinctions. Given that language shapes thought (Whorf 1952), we propose that (1) native speakers of these languages are more likely to attribute human qualities to nonhuman agents (i.e., anthropomorphize) than those whose native language separates humans from nonhumans, and that (2) native speakers of languages lacking differential treatment implicitly consider linguistic cues as characteristics of the anthropomorphized entity.

To test our hypotheses, we first conducted a pilot study with participants ( $n = 41$ ) whose native language was either English or Turkish. We administered the individual differences in anthropomorphism questionnaire (Waytz, Cacioppo, and Epley 2010) in English in both conditions. Consistent with our expectation, native Turkish speakers anthropomorphized more than did native English speakers.

In study 1 ( $n = 225$ ), to address concerns that answering questions in a second language may affect responses (e.g., anxiety, MacIntyre and Gardner 1994), we administered the same anthropomorphism scale to either native French-speaking participants or native English-speaking participants, and also manipulated whether native French-speaking participants answered in French or English. Data from 17 participants who failed an attention check were excluded from analyses. As expected, native French speakers scored higher on the anthropomorphism scale than did English speakers independent of the language of administration. French participants who answered the survey in English did not differ from French participants who answered the survey in French.

In study 2 we addressed issues of causality by manipulating the pronoun categories of native English speakers on MTurk ( $n = 120$ ) through a learning task (Roberson, et al. 2005). Data from 13 participants who failed to follow the instructions were excluded from analyses. In the learning task, participants rewrote 60 sentences by replacing the underlined noun with a pronoun. In the control group, participants replaced the nouns with regular pronouns (he/she/it), but in the treatment we asked participants not to use "it." Instead, like French, we asked them to use either "he" or "she," depending on the arbitrary gender indicated in parentheses next to the underlined noun. Participants then completed the anthropomorphism scale. As

expected, participants in the treatment group who used pronouns like a native French speaker anthropomorphized more than did the control group who used all English third-person singular pronouns (he/she/it).

In study 3, we tested whether native speakers of languages that do not distinguish grammatically between humans and nonhumans implicitly consider linguistic cues such as the grammatical gender as characteristics of the anthropomorphized entity. In French, each noun has a specific article that indicates the grammatical gender of the noun: le (masculine) and la (feminine). To test our hypothesis, we identified a nonhuman noun (cache), which can take either the feminine or the masculine article. We manipulated the name of a fashion brand in an ad as "le cache" or "la cache," and measured brand attitudes of 242 French speakers. The expected gender  $\times$  gendered pronoun was significant. Male participants in the masculine grammatical gender condition evaluated the brand more favorably compared to male participants in the feminine grammatical gender condition. Similarly, female participants in the feminine grammatical gender condition evaluated the brand more favourably compared to female participants in the masculine grammatical gender condition, although the difference was not significant.

These results show that French speakers imbue nonhumans with human characteristics even in the absence of anthropomorphizing visual cues. When reasoning about nonhumans, in this case the brand "le/la cache," native French speakers activate knowledge about humans and apply it to nonhumans, which results in an interplay that is similar to what one can observe between humans.

Overall, we show that humanlike form is not essential for consumers to anthropomorphize nonhuman agents. Native speakers of languages that do not separate humans from nonhumans are more likely to anthropomorphize than those whose native language treats humans and nonhumans differently. We further show that native speakers of languages lacking differential treatment implicitly consider linguistic cues, such as the grammatical gender, as characteristics of the anthropomorphized entity and behave accordingly.

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# Preferences for Insight and Effort Differ across Domains and Audiences

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## EXTENDED ABSTRACT

A creative process is “*the sequence of thoughts and actions that lead to a novel, adaptive production*” (Lubart 2001, 295). Narratives of the creative process can enhance the perceived quality of a product and stimulate inferences on the creator’s ability to produce additional high-quality ideas and outputs (Baas et al. 2015; Mourgues et al. 2016), improve empathy between creators and their audiences (Davis 1983; Friestad and Wright 1994), and increase *process transparency* (Buell and Norton 2011; Buell, Kim and Tsay 2017). These narratives can emphasize either the experience of *insight* (Schooler, Fallshore, and Fiore 1995) – the sudden, dream-like, spontaneous and illuminating experience facilitating the emergence of new ideas – or the application of *effort* (Lucas and Nordgren 2015) – the methodical, planned, and rational stage in which ideas are organized and transformed into a new product.

People hold beliefs on how creative products are generated (e.g., Sternberg 1985; Runco and Bahleda 1986; O’Connor, Nemeth and Akutsu 2013), and these beliefs can influence product evaluations due to reliance on stereotypical knowledge and heuristics (Sternberg 1985; Levy, Stroessner, and Dweck 1998). We maintain that an insight-based narrative of the creative process (Rothenberg 1970; Kasof 1995) has greater fit with artistic domains, whereas an effort-based narrative of the creative process has greater fit with scientific domains (Lucas and Nordgren 2015). Because lay beliefs influence evaluations of creative products (Baas et al. 2015; Sternberg 1985), we expect artistic products to receive better evaluations when their creative process is described through insight-based narratives rather than effort-based narratives and that the opposite pattern holds for scientific products.

We also expect experts to be more analytical in processing information and less sensitive to heuristics, to own to a higher extent the meta-cognitive skills necessary to evaluate others’ level of ability (Kruger and Dunning 1999), and to be more receptive towards effort-based narratives of the creative process (Ericsson, Krampe, and Tesch-Romer 1993; Ericsson, Prietula, and Cokely 2007), thus to respond relatively more favorably to information on central and concrete – rather than ephemeral and transient – factors characterizing the creative process. Six studies support the proposed conceptual framework and the existence of optimal narratives for the promotion of artistic and scientific products to different audiences.

Study 1 verified the existence of associations between an insight-based creative process and artistic domains, and between an effort-based creative process and scientific domains. Participants read the descriptions of twelve new successful artistic works and scientific works and rated the extents to which they were the outcome of insight and effort. Each art work received higher insight ratings than effort ratings, and each science work received higher effort ratings than insight ratings. Furthermore, all art works received higher insight ratings than all science works, and all scientific works received higher effort ratings than all art works.

Studies 2A and 2B investigated whether describing a creative process using insight- vs. effort-based narratives affects evaluations of new products in artistic and scientific domains, respectively. Participants in Study 2A read an interview in which a band described the creative process leading to their last song either as insight-based or effort-based. Afterwards, they listened to a 45-second excerpt of the

song. Participants evaluated the song more favorably and were willing to pay more, when it was presented through insight-based (vs. effort-based) narratives. In study 2B we measured intentions to fund a Kickstarter project based on scientific research that was presented through insight- vs. effort-based narratives of the creative process. When it was presented through effort-based narrative, the project was considered (marginally) more likely to reach the fund-raising goal and participants allocated more funds to it than when it was presented through an insight-based narrative.

Studies 3A and 3B replicated studies 2A and 2B but also tested the proposed fit mechanism, as well as the role of expertise, in the artistic and scientific domain, respectively. Participants in Study 3A evaluated the song from Study 2A more favorably and were willing to pay more for it when they read it was the outcome of insight than effort. The perceived fit between the creative process narrative and the image of the creator mediated both effects. In addition, an insight-based creative process produced more favorable evaluations of an artistic product, but this effect was attenuated as recipients’ expertise increased. Participants in Study 3B evaluated the project from Study 2B as (marginally) more likely to reach the fund-raising goal and assigned more funds to it when it was described as effort-based than as insight-based. Also in this case, the perceived fit between the type of creative process and the work mediated both effects. In line with our prediction, expertise did not interact with the type of narrative of the creative process, as both experts and non-experts prefer effort-based narratives. However, the perceived fit between the nature of the creative process and the image of the creator only mediated the effect when participants’ expertise was low to average.

In Study 4, participants read descriptions of a new product presented as either artistic or scientific, and as the outcome of either an insight- or an effort-based creative process. When the product was described as artistic, participants evaluated it more favorably and were willing to pay more for it, if they read it was the outcome of insight rather than of effort. When the product was presented as scientific product, the opposite pattern was observed.

This research clarifies that beliefs on the nature of the creative process depend on the domain of the creative output, and that the most effective communication strategy regarding the creative process leading to a product depends critically on both the nature (scientific or artistic) of the product, and the level of expertise of the audience targeted.

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# Believing in and Reacting to Rumors: The Role of Congruity and Nature of Existing Predisposition

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## EXTENDED ABSTRACT

### Introduction

The prevalence of rumors is a common phenomenon in today's world and spreading rapidly as more and more consumers adapt to the digital world of the internet and social media. Our research investigates conditions under which consumers treat rumors (unverified information) identical to facts (the same, but verified, information). We investigate to what extent congruent/incongruent information (rumors/facts) about liked/disliked entities (both people and products) affect consumers' belief in that information and the resulting attitude change towards the focal entity.

### Theory

Research suggests that two things happen (almost automatically) when we expose a consumer to a piece of information (fact or rumor) about a focal entity. First, she automatically compares it to her baseline or prior knowledge (Higgins et al. 1977), and this process determines the compatibility or congruity of the information with what she knows and believes (e.g., to what extent the rumor fits with her pre-disposition towards a focal entity; McGuire, 1972). Second, she either accepts the information (fact or rumor) as true or rejects it as false (Allport and Lepkin 1945), and is more likely to act upon it only if she believes the information to be true (Rosnow, Yost, and Esposito 1986).

According to cognitive consistency theories, congruent information about a focal entity elicits positive feelings (Festinger, 1957) and consumers will believe such information automatically (without verification). This line of reasoning suggests that consumers will not distinguish between fact and rumor for congruent information. However, and on the contrary, Borgstede et al. argue that consumers analyze congruent information about a focal entity systematically before acting on it. This is because consumers do not wish to get their hopes up about the focal entity too much (e.g., following a positive rumor about a liked brand/person) only to see it dashed later on (rumor turns out to be false).

Incongruent information about a focal entity, on the other hand, creates surprise by evoking unexpected cognitive challenge (Alden et al. 2000) and motivates the consumer to analyze and resolve the discrepancy (Schutzwohl and Borgstedt 2005). If the information is just a rumor (e.g., negative rumors about a liked entity), then consumers should have less reasons to be tense or worried, and the desire to lessen the tensions associated with incongruity should motivate consumers to distinguish between rumor and fact and act accordingly.

Below, we report a study testing how exposure to congruent/incongruent information about liked/disliked entities may lead consumers to treat rumors as equivalent to fact (e.g. believe the rumor just as much as they believe the fact).

### Participants, Stimuli and Measures

We asked 825 M-Turk workers to think about a fast food restaurant/actor that they liked/disliked very much and indicate how much they liked/disliked the entity (9-point scale, capturing valence and magnitude of predisposition). Next, they read a positive/negative piece of news about the focal entity. The positive (negative) news

about the restaurant/actor described the restaurant using healthy (fatty) ingredients in their food/the actor receiving a prestigious, humanitarian award (arrested for disorderly conduct). We measured how good (bad) they thought the positive (negative) news to be (9-point scale capturing valence and magnitude of information). Finally, the participants in the rumor (fact) condition read that the news was a rumor, unverified by major media outlets (fact, verified by the major news outlets). Thereafter, we measured to what extent participants believe the news (9-point scale), and how their attitude towards the focal restaurant/actor (composite of affect, cognition, and behavior) has changed as a result (9-point scale, with 5.0 or mid-point indicating no change).

### Analysis and Results

We created a congruity variable (congruent/incongruent information) where the congruent (incongruent) conditions matched positive news with a liked (disliked) entity and negative information with a disliked (liked) entity. We ran two ANOVAs, the first for belief and the second for attitude change. The predictors were information exposure (fact/rumor), congruency (congruent/incongruent), and predisposition towards the focal entity (like/dislike). We controlled for (1) magnitude effects (for predisposition and information), (2) the focal entity (person/product and (3) the participant's gender, age, tolerance for inconsistency, and gullibility.

Our first ANOVA found that consumers believe (1) less in rumor than fact ( $M$ 's of 5.44 and 6.35), and (2) less in incongruent than congruent information ( $M$ 's of 5.21 and 6.57). However, a significant information by congruency interaction shows that consumers discriminate between rumor and fact somewhat less for incongruent information ( $M$ 's of 4.89 and 5.52) than congruent information ( $M$ 's of 5.98 and 7.14). The results indicate that consumers do not accept congruent information blindly (just because they fit with what they expect). They appear to carefully process the information to separate fact from rumor, and, in fact, do so more carefully relative to incongruent information.

In our second ANOVA, once we controlled for belief, we found attitude change towards the entity to be similar across rumor and fact ( $M$ 's of 5.24 and 5.41), but more positive following exposure to congruent than incongruent information ( $M$ 's of 5.52 and 5.13). We also found a three-way interaction between the type of information, congruency, and predisposition. The results indicate that, in the case of incongruent information, rumor/fact leads to identical attitude change irrespective of how consumers feel about the entity ( $M$ 's of 5.24 and 5.00 for liked entities and  $M$ 's of 4.94 and 5.35 for disliked entities). However, in the case of congruent information, attitude change for a liked entity is less positive following rumor than fact ( $M$ 's of 6.49 and 7.25) but identical for a disliked entity ( $M$ 's of 4.03 and 3.98).

From a managerial perspective, the key lesson here is to identify when consumers treat a rumor as a fact (e.g., when are they more susceptible to deceptions from the competition). The fact that attitude change following incongruent information about a liked entity is identical for rumor and fact should alert managers to the necessity of inoculating their own consumers against negative competitive messages. On the contrary, given that attitude change following congruent information for a disliked entity is sensitive to the fact/rumor distinction suggests that the company has to be sure about the facts before maligning a competitor's brand to its own audience.



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# Priming & Privacy: How Subtle Trust Cues Online Affect Consumer Disclosure and Purchase Intentions

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## EXTENDED ABSTRACT

Consumers are quick to say that maintaining privacy in an increasingly digital world is more and more difficult (Pilot). Yet recent research (Mourey) suggests that consumers are more sensitive to subtle cues when they experience a choice as “feeling difficult.” The purpose of the current project is to explore whether the increased feelings of difficulty in maintaining privacy online counterintuitively makes consumers *more* likely to disclose personal information when exposed to subtle cues that prime “trust.” Five studies show that individuals are more likely to disclose highly personal information based on subtle cues of trust including verbal trust primes (Study 1), social network size (Study 2), friends’ online engagement (Study 3), and the verbal and visual fluency of a website’s privacy policy (Study 4), all without their conscious awareness.

## Literature Review

A growing body of research has shown that privacy disclosure decisions are strongly influenced by contextual factors. Consider, for example, observing others sharing private information makes individuals more likely to share, an online “herding effect” (Acquisti et al., 2012; John et al., 2011). These prior projects found that individuals engage in comparative behavior based on the signals of others and suggests that such signals—e.g., social network size, the engagement of others online—implicitly influence behavior.

However, recent research also suggests that the influence of subtle cues (a.k.a. primes) is rarely as straightforward as once thought. Indeed, the same studies involving subtle cues and priming (Schnall, Benton, and Harvey, 2008) have been replicated (Arbesfeld et al., 2014), not replicated, or replicated with results in the *opposite* direction (Johnson et al., 2014). To address these inconsistencies, recent research (Mourey, forthcoming) proposed a two-part model to explain both *when* primes are likely to exert a stronger influence and in *which direction* those primes are likely to influence behavior. First, he proposes that individuals are more likely to employ contextual cues when tasks “feel difficult.” Second, when difficulty is interpreted to mean a task is “impossible” and individuals “give up” mentally (i.e., not waste cognitive effort on an impossible task), a prime exerts a prime-consistent effect. Alternatively, when difficulty is interpreted to mean a task is “important,” individuals process more deliberately and, in doing so, exhibit prime-reactance (Ferguson and Bargh, 2004).

For the current project, participants should be *more* sensitive to trust/distrust primes when engaging in a difficult task online (e.g., maintaining privacy, assessing an unknown company), and the direction of that influence depends on what they interpret that difficulty to mean.

## Pilot

The purpose of the pilot was to show that participants do, in fact, experience difficulty with respect to maintaining privacy in online contexts. Participants ( $N = 107$ ) found maintaining privacy difficult online in general ( $M = 4.31$ ,  $SD = 1.60$ ;  $t(106) = 1.99$ ,  $p < .05$ ), on social networks ( $M = 4.41$ ,  $SD = 1.70$ ;  $t(106) = 2.50$ ,  $p < .01$ ), and in the real world ( $M = 4.42$ ,  $SD = 1.55$ ;  $t(106) = 2.81$ ,  $p < .01$ ), and that maintaining privacy was becoming *more* difficult ( $M = 5.56$ ,  $SD = 1.18$ ;  $t(106) = 13.74$ ,  $p < .001$ ). This first study provided support for

the studies that each rely on maintaining privacy in online contexts as a difficult scenario.

## Study 1

Study 1 relies on verbal priming to cue trust, distrust, or nothing (control). Participants ( $N = 122$ ) completed word descrambling tasks containing trust cue words, distrust cue words, or neutral words. Participants then drafted a post for their preferred social network and asked to indicate which information from a list of twenty personal they would be willing to disclose. Participants also indicated how much they trusted the site and completed the 12-question Interpretation of Difficulty (IoD) scale regarding their perceptions of difficulty doing the task. Results revealed that trust primes led to more trust and distrust primes to more distrust for people who interpreted difficulty to mean “impossible,” (the opposite was true for participants who interpreted difficulty to mean “important”). Thus, we obtain initial support for our hypothesis.

## Study 2

Study 2 relies on social network size and prior theorizing on “herding effects” in which social network size is a cue of trust (larger = more trust). The study design was the same as Study 1 with the verbal primes replaced by participants’ attention being drawn to the size of their social network. Results revealed that participants ( $N = 203$ ) were willing to disclose more private information the larger their network if difficulty was interpreted as impossible, with trust mediating the effect.

## Study 3

Study 3 also looked at a practical application of this subtle cue online influence by using a feature common to most social networks: number of likes on an item. Greater engagement from friends has been shown to cue more engagement from individuals. Here, the priming stimuli was an ad liked by 24 (or 2) friends, and the dependent measure of interest was how likely participants indicated they were to try the made-up restaurant featured in the ad. Trust was also measured. Results showed that participants ( $N = 197$ ) randomly assigned to the “many friends” ad condition were more likely to try the restaurant if they interpreted the difficulty of the task as “impossible.” Effects, again, were mediated via trust, as friend engagement influenced trust, which, in turn, influenced willingness to try an unknown restaurant.

## Study 4

The final study used privacy policy as the contextual stimulus, varying both the perceptual fluency (figure/ground contrast) and the verbal fluency (complexity of language). Participants ( $N = 214$ ) first reviewed the privacy policy, then indicated the same disclosure decisions as done in the prior studies, as well as measures of difficulty and trust. Results showed that easy-to-read (difficult-to-read) privacy policies increased (diminished) trust which, in turn, increased (decreased) disclosure of private information.

## General Discussion

Five studies support that 1) consumers find maintaining privacy increasingly difficult, and 2) in these difficult situations, subtle cues

of trust/distrust exert greater influence on disclosing personal information. Counterintuitively, increasing difficulty maintaining privacy online makes people more sensitive to cues that encourage more disclosure.

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# A Salience Theory of Three Exposure Effects

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## EXTENDED ABSTRACT

We propose and support a salience theory of exposure effects which posits that repeated exposure influences evaluations by increasing salience, the relative quality of standing out in relation to other stimuli in the environment. Across four experiments, we demonstrate that exposure effects previously attributed to absolute (mere) exposure are actually explained by heightened relative salience. Additionally, we demonstrate that exposure, in addition to increasing liking (Zajonc 1968), increases affective intensity and makes evaluations more extreme.

In Experiments 1-2, we replicated the procedure used in most mere exposure research. In Experiment 1, 116 American adults who were recruited from Amazon Mechanical Turk participated in exchange for \$1.25. Sixteen dropped out of the study prior to completing the key measures (resulting  $N = 100$ , 50 female,  $M_{\text{age}} = 36.39$ ). Participants viewed eight stimuli, presented in a slideshow with exposure manipulated: Two stimuli were presented 9 times, two were presented 3 times, two were presented 1 time, and two were not presented (1.0 second per presentation). Following the slideshow, liking was measured as in previous research: "How much do you like each image" (-3 = *dislike*, 0 = *neutral*, 3 = *like*), and we assessed affect intensity (1 = *not at all intense*; 9 = *extremely intense*). We also measured self-reported salience, fluency, and apprehension to test our hypothesis that salience accounts for the exposure effect, whereas fluency and apprehension account for less if any of the exposure effect. Prevailing theories of mere exposure posit that increased fluency (Bornstein and D'Agostino 1994; Reber, Winkielman, and Schwarz 1998) or reduced apprehension (Harrison 1977; Zajonc 1968) account for the exposure effect. Because salience increases evaluative extremity (Downing, Judd, and Brauer, 1992; Sadler and Tesser 1973), we also hypothesized that exposure would increase extremity (measured as distance from the neutral midpoint of the liking scale; Downing et al., 1992). This procedure was repeated for three stimulus sets commonly-used in mere exposure experiments (Chinese characters, paintings, and Turkish words).

We used linear mixed effects models to test each prediction. Each model treated Participant and Stimulus as random effects to properly model variance associated with participants and stimuli (Judd, Westfall, and Kenny 2012).

As predicted, exposure increased salience,  $t(83.60) = 7.14$ ,  $b = 0.76$ ,  $p < .001$ . Exposure also increased liking,  $t(70.08) = 6.50$ ,  $b = 0.26$ ,  $p < .001$ , replicating previous research (Zajonc 1968). Additionally, exposure made evaluations more extreme,  $t(24.85) = 3.42$ ,  $b = 0.09$ ,  $p = .002$ . Exposure also increased affective intensity,  $t(34.54) = 4.48$ ,  $b = 0.39$ ,  $p < .001$ .

We also conducted multiple mediation analyses (Preacher and Hayes 2008) to test the hypothesis that salience accounted for the effects of exposure on liking, evaluative extremity, and affective intensity. These analyses revealed that there was an indirect effect of relative exposure on liking through salience as a mediator ( $ab = 0.10$ , 95% CI [0.08, 0.13]). Mediation analyses were also consistent with our hypotheses that salience accounted for the effects of exposure on evaluative extremity and affective intensity. Fluency and apprehension accounted for smaller proportions of each effect (if any), contrary to prevailing theories that these variables account for exposure effects.

Experiment 2 was a replication of Experiment 1. American adults who were recruited from Amazon Mechanical Turk ( $N = 109$ ) participated online in exchange for \$1.00. Four participants dropped out of the study prior to viewing all three slideshows and were thus removed prior to analyses (resulting  $N = 105$ ; 54 female,  $M_{\text{age}} = 34.12$ ). Repeated exposure again increased salience,  $t(30.45) = 5.64$ ,  $b = 0.44$ ,  $p < .001$ , affective intensity,  $t(32.10) = 4.88$ ,  $b = 0.20$ ,  $p < .001$ , and evaluative extremity,  $t(34.40) = 2.09$ ,  $b = 0.03$ ,  $p = .044$ . Unlike in Experiment 1, repeated exposure did not appreciably increase liking,  $t(37.10) = 1.19$ ,  $b = 0.03$ ,  $p = .243$ . A multiple mediation model suggested that the effects of repeated exposure on evaluative extremity and affective intensity were partially accounted for by salience, whereas fluency and apprehension did not account for these effects.

In Experiment 3, we directly manipulated salience to complete a causal chain in which exposure increases salience (Experiments 1-2) and salience increases evaluative extremity and affective intensity (Experiment 3). Undergraduates ( $N = 71$ , 45 female,  $M_{\text{age}} = 19.34$ ) participated for course credit. We directly manipulated salience by presenting 12 stimuli on a screen simultaneously, with 1 oriented differently from the others (1 horizontal and 11 diagonal or 1 diagonal and 11 horizontal). This manipulates salience while equating exposure duration and inherent differences between horizontally-oriented and diagonally-oriented stimuli. Salience increased evaluative extremity,  $t(43.84) = 4.70$ ,  $b = 0.43$ ,  $p < .001$  and affective intensity,  $t(40.08) = 4.73$ ,  $b = 0.91$ ,  $p < .001$ , supporting our proposed causal chain.

Because salience is a relative quality of standing out in relation to other objects, we hypothesized in Experiment 4 that relative exposure influences evaluations more than absolute exposure. Participants ( $N = 400$  from Mechanical Turk) were assigned to either the within-subjects condition (similar to Experiments 1-2) or one of three between-subjects conditions in which they viewed stimuli presented at one level of exposure (i.e., 9 times, 3 times, or 1 time). This was designed to isolate exposure from relative salience; we hypothesized that exposure would increase liking and extremity when confounded with relative salience (i.e., within-subjects condition) but not when exposure was isolated from salience (i.e., between-subjects conditions). As predicted, relative exposure increased liking and evaluative extremity. In contrast, absolute exposure (between-subjects) did not. A difference-in-differences analysis revealed that the relative exposure effect was significantly larger than the absolute exposure effect.

These results cohere with previous findings that relative comparisons are more impactful than absolute states (e.g., Shafir, Diamond, and Tversky 1997). They also build on the emerging evidence that salience may account for several judgment and decision making phenomena (Bordalo, Gennaioli, and Shleifer 2012; Mrkva and Van Boven 2017; Yechiam and Hochman 2013). The findings have important theoretical implications as well, suggesting that effects previously attributed to absolute (mere) exposure and fluency are actually explained by heightened relative salience.

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# Non-Normative Influence of Self-Decided Prices on Product-Related Inferences

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## EXTENDED ABSTRACT

### Introduction and Theoretical Background

Price is a key factor in consumer decision making (Adaval and Monroe, 2002; De Langhe et al., 2014). From a purely economic perspective, consumers should be willing to buy a product if the value that they expect from the product is higher than the product price – implying that consumers should determine the value of a product independent of the price. However, ample research shows that consumers often use the marketer-provided prices to make product inferences (Zeithaml, 1988; Parasuraman et al., 1988; Brucks et al., 2000). This is rational assuming that marketers decide product-prices based on the market dynamics of supply and demand, which would lead a product price to be closely aligned to its inherent value (i.e. quality and usefulness).

While, inferring product value from marketer-provided prices may be rational, this is not the case when consumers themselves generate or decide on product prices as in pay-as-you-wish/pay-what-you-want pricing schemes (Kim et al., 2009), auctions (Greenleaf, 2004) and price negotiations (Srivastava et al., 2000). Normatively, product value should influence self-decided prices rather than the reverse. Still, we argue that consumers may infer value from the price they decide to pay; this may lead to biased inferences when self-decided prices are affected by irrelevant contextual factors. We argue that due to sheer habit of inferring value from marketer-provided prices (Plassmann et al., 2007, 2008; Rao and Monroe, 1989; Scitovszky, 1944), consumers will over apply the price-quality heuristic in the case of self-decided prices too. That is, higher the self-decided price, the more favorable would be the inferred product value.

### Study 1

Study 1 tests the idea that an undue influence on self-decided prices affects subsequent judgments of product usefulness. To influence self-generated prices, we had participants indicate for a range of prices if they would consider buying a product at that price. Prices were presented from low to high or from high to low; based on the phenomenon of anchoring (Kamins, Dreze, and Folkes, 2004; Ariely and Simonson, 2003), we expected a higher willingness-to-pay in the latter condition, causing higher judgments of product usefulness.

### Design and Procedure

This study implemented a dichotomous-choice willingness-to-pay procedure in which respondents (111 undergraduate students, 67% female,  $M_{age} = 20.74$ ) were provided with multiple prices for the same product (Bluetooth speaker) and were asked to indicate whether they would be willing to buy the product at each of the presented prices. The prices (ranging from \$10 to \$100) were either systematically increasing (ascending price order condition) or decreasing (descending price order condition). The final (vs. first) price that respondents were willing to buy the product at was calculated as their willingness-to-pay price in the ascending (vs. descending) price order condition. The willingness-to-pay price is conceptually identical to the self-decided price (Kim, Natter, and Spann 2009). Having obtained the self-decided price, the experimental procedure next required respondents to indicate how useful they thought the product would be.

### Results

Excluding 10 participants who exhibited response reversal/response inconsistency (willingness to buy the product at a higher price but not at a lower price), a one-way ANOVA showed that self-decided prices were lower (vs. higher) in the case of ascending (vs. descending) price presentation order ( $M_{ascending} = \$19.26$ ,  $SD = 14.39$ ;  $M_{descending} = \$35$ ,  $SD = 25.85$ ;  $F(1, 100) = 14.86$ ;  $p < 0.0001$ ;  $d = 0.75$ ). More importantly, as hypothesized, a one-way ANOVA results reveal that the ascending (vs. descending) price presentation resulted in less favorable perceived product usefulness ( $M_{ascending} = 3.54$ ,  $SD = 1.65$ ;  $M_{descending} = 4.18$ ,  $SD = 1.65$ ;  $F(1, 110) = 4.24$ ;  $p = 0.042$ ;  $d = 0.38$ ). Further, it was found that the effect of price presentation order on product-related inference (perceived usefulness) was mediated through self-decided prices (10000 sample 95% C.I.: (-0.27, -0.07)). Interestingly, the inverse direction of the indirect effect, the normatively expected influence of product-related inferences on self-provided prices, was not significant (10000 bootstrap 95% CI (-1.86, 0.43)).

### Study 2

This study tested the robustness of the results obtained in the previous study and showed that the underlying effect was caused not by difference in the starting prices between ascending and descending price order conditions, but rather by differences in self-decided prices.

### Design and Procedure

Using 170 (49% female;  $M_{age} = 20.91$ ) undergraduate students, this study utilized a 2 (Price presentation order: ascending vs. descending) x 2 (Price steps: \$10 vs. \$20) between-subject factorial design. This study differed from the previous study in three ways. First, prices ranged from \$100 to \$200. Second, price step was also manipulated by varying the prices in the self-decided price elicitation procedure either in steps of \$10 (\$10 price step condition) or \$20 (\$20 price step condition). We anticipated that because the number of different prices being presented is larger (vs. smaller) in the price step \$10 (10 different prices) (vs. price step \$20 (5 different prices)), the self-decided prices will differ more between ascending and descending price presentation orders more when the price step is \$10 as compared to when the price step is \$20. Further, as the starting price was the same for both price step \$10 and price step \$20, any systematic differences between the effect of price presentation order on product-related inferences for price step \$10 vs. price step \$20 conditions would indicate that the underlying effect of price presentation order on product-related inferences is due to self-decided prices and not due to the starting price itself. Third, the product-related inferences was operationalized through measuring anticipated product satisfaction.

### Results

For self-decided prices, we found a significant interaction between price presentation order and price step ( $F(1, 156) = 4.55$ ,  $p = 0.034$ ) such that ascending (vs. descending) price presentation order resulted in lower self-decided prices only when price step is \$10 ( $M_{ascending} = \$43.9$ ,  $SD = 63.75$ ;  $M_{descending} = \$94.15$ ,  $SD = 80.65$ ;  $F(1, 156) = 10.57$ ;  $p = 0.001$ ;  $d = 0.69$ ), and not when price step is \$20 ( $M_{ascending} = \$50.24$ ,  $SD = 61.34$ ;  $M_{descending} = \$53.24$ ,  $SD = 72.73$ ;  $F(1, 156) = 0.036$ ;  $p > 0.5$ ).

We also found a significant interaction between price presentation order and price step for anticipated product satisfaction ( $F(1, 156) = 4.19, p = 0.042$ ), such that while ascending (vs. descending) price presentation order resulted in lower anticipated product satisfaction only in the price step \$10 condition ( $M_{ascending} = 3.87, SD = 1.11; M_{descending} = 4.42, SD = 1.01; F(1, 156) = 3.4; p = 0.067; d = 0.52$ ), and not in the price step \$20 condition ( $M_{ascending} = 4.01, SD = 1.69; M_{descending} = 3.7, SD = 1.45; F(1, 156) = 1.1; p = 0.3$ ).

Finally, we ran a moderated mediation model (Preacher and Hayes (2008) PROCESS model 7) to test whether price step moderates the indirect effect of price presentation order on anticipated product satisfaction through self-decided prices. A 95% C.I. (-0.53, -0.02) for a 10000 bootstrap sample indeed reveals that the index for moderated mediation (Index = -0.25, SE (boot) = 0.13) does not contain 0. While the 95% C.I. for a 10000 bootstrap sample for the indirect effect of price presentation order on anticipated product satisfaction did not contain 0 for the \$10 price step (-0.47, -0.10), it did contain 0 for the \$20 price step (-0.18, 0.15). This suggests price steps indeed does moderate the mediating influence of self-decided prices on the relationship between price presentation order and anticipated product satisfaction. More importantly, it provides further evidence that people infer product value from self-decided prices.

### Study 3

Study 3 aims to replicate the previous findings using a different paradigm to influence self-decided prices. In addition, the present study attempts to rule out cognitive dissonance (Festinger, 1962; Elliot and Devine, 1994) and self-perception (Bem, 1972; Calder and Staw, 1975) as rival explanations.

#### Design and Procedure

MTurk panel members ( $N = 318$ ; 55% female;  $M_{age} = 36.14$ ) were randomly assigned to one cell of a 2 (bid amount: low vs. high) x 2 (perspective: self vs. other) between-subject factorial design. This study utilized an interactive gameplay scenario to influence prices. Respondents were either required to take part in an online interactive simulated game titled "Wheel of Fortune". Respondents were asked to imagine that they were taking part in the last stage of a multistage game during which, at each stage, they were required to bid a certain amount of money in order to win a product. Respondents were required to bid the amount before knowing what product they could win – thus ensuring that the bid amount was completely unconnected to the inherent product characteristics. Upon putting in their bid amounts, respondents were informed about the product that they had won (the same product, sunglasses, for all respondents), and were asked to indicate the expected product quality.

In order to manipulate the bid amount, respondents were told that they either had \$20 left or \$100 left to bid for the last round, and that this amount could not be converted into cash or credit and would go to waste unless used for bidding on the product. Other than manipulating the bid amount, this was also useful in ruling out the potential alternative explanation of cognitive dissonance (arising from potentially indicating a low expected quality after having bid a high amount), by providing respondents a clear justification of their bid amount. Further, gameplay perspective (self vs. other) was manipulated: Half of the participants had to imagine playing themselves, whereas the other half had to imagine watching someone else participating. If similar results are obtained when participants imagine observing others as when they imagine playing themselves, these effects cannot be attributed to self-perception processes (nor cognitive dissonance). They would nevertheless support the idea that people infer product value, even when prices are clearly not reflective of the value the market assigns to the product.

### Results

As expected, the amount bid in the low bid amount condition was lower than that in the high bid amount condition ( $M_{bid\ amount\ low} = \$18.25, SD = 4.19; M_{bid\ amount\ high} = \$88.56, SD = 22.6; F(1, 316) = 1495.92, p < 0.0001, d = 4.33$ ). A general linear model, which included the main effects of bid amount (low vs. high), perspective (self vs. other), and their interaction, revealed that while the main effect of bid amount on expected product quality was significant ( $M_{bid\ amount\ low} = 4.53, SD = 1.44; M_{bid\ amount\ high} = 4.87, SD = 1.34; F(1, 314) = 4.82, p = 0.029, d = 0.24$ ), the main effect of perspective (self vs. other) ( $p = 0.2$ ) and the interaction between bid amount and perspective ( $p = 0.33$ ) was not significant.

### Study 4

#### Design and Procedure

Undergraduate students ( $N = 119; M_{age} = 20.87$ , 53% female) were randomly assigned to one cell of a 2 (bid amount: low vs. high) between-subject design. We used the game show paradigm as in study 3. In addition, this study also included a price-quality schema measure to test if the effect is stronger for those with stronger price-quality schema; this would indicate that the over-application of a price-quality heuristic explains the observed effect.

### Results

As expected, the amount bid in the low bid amount condition was lower than that in the high bid amount condition ( $M_{bid\ amount\ low} = \$17.55, SD = 5.16; M_{bid\ amount\ high} = \$89.05, SD = 21.62; F(1, 117) = 620.51, p < 0.0001, d = 4.55$ ). More importantly, the expected product quality was higher in the high bid amount condition as compared to the low bid amount condition ( $M_{bid\ amount\ low} = 3.41, SD = 1.61; M_{bid\ amount\ high} = 4.06, SD = 1.55; F(1, 117) = 5.06, p = 0.026, d = 0.41$ ). Further, there was a significant interaction ( $F(1, 115) = 17.32, p = 0.0001$ ) between experimental condition and price-quality schema in predicting expected product-quality, such that while the effect was significant for those with strong price-quality schema ( $p < 0.0001$ ) but not for those with weak price-quality schema ( $p = 0.22$ ).

### Study 5

#### Design and Procedure

Undergraduate students ( $N = 239; M_{age} = 38.13$ , 64% female) were randomly assigned to one cell of a 2 (amount left: \$20 vs. \$100) x 2 (reminder about random nature of bid amount: present vs. absent) between-subjects design. We used the same paradigm as in Study 3 and 4. In addition to manipulating bid amount, we also manipulated whether participants were reminded that the bid amount was just the outcome of a random process, that is, just the amount they happened to have left on the last round of gameplay. Half of the respondents were asked to indicate if the amount was indeed random, whereas the other half did not get that cue. We expected that the over-application of a price-quality heuristic is a mindless process. If so, any cue that makes people more mindful about the nature of the self-decided price should attenuate or even eliminate the effect of bid amount of perceived product value. Finally, we also measured individual differences in price-quality beliefs to replicate the moderation of the previous study.

### Results

As before, bid amount was significantly higher in the \$100 left condition as compared to the \$20 left condition ( $M_{bid\ amount\ low} = \$17.98, SD = 4.03; M_{bid\ amount\ high} = \$82.68, SD = 27.48; F(1, 237) = 640.58, p < 0.0001, d = 3.29$ ). More importantly, a general linear model analysis, with bid amount and reminder intervention as the

fixed factors showed a significant interaction ( $F(1, 235) = 9.44, p = 0.002$ ) between bid amount (low vs. high) and reminder intervention (present vs. absent) on expected quality. The expected product quality was significantly higher in the high bid amount condition as compared to the low bid amount condition ( $M_{bid\ amount\ low} = 3.95, SD = 1.46; M_{bid\ amount\ high} = 5, SD = 1.21; F(1, 235) = 17.16, p < 0.0001, d = 0.78$ ) when reminder intervention was absent, but not when the reminder intervention was present ( $F(1, 235) = 0.033, p > 0.5$ ). Further, showing the robustness of the finding from the previous study, there was a significant interaction ( $F(1, 114) = 7.63, p = 0.0067$ ) in the expected direction between price quality schema and bid amount in the conditions without reminder intervention.

### General Discussion, Theoretical Contributions, and Managerial Implications

The present research provides evidence for the non-normative influence of self-decided prices on product-related inferences, and contributes to marketing literature in several important ways. First, it contributes to the existing price-quality relationship literature by showing that consumers infer product value not only from marketer-provided prices but also from self-decided prices. Second, it contributes to the existing literature on price presentation order by showing that ascending and descending price presentation orders can differ in terms of their downstream influence on product-related inferences. Given that price presentation order is an important commonplace contextual factor that is relevant to a variety of marketer-customer interactions, such as auctions, negotiations, salesperson-customer interactions, amongst others, the findings from this research thus provide both substantial theoretical and substantive contributions.

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# The “Upper Limit Framing” Effect: Upper Limit Framing of a Cost Estimate Influences Consumption Choices

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## EXTENDED ABSTRACT

### Introduction and Theoretical Background

Consumers often make consumption choices on the basis of estimates, rather than actual temporal or monetary costs. Frequently, marketers interchangeably use “less than” vs. “not more than” frame to present consumers with an estimated upper limit of the underlying cost. For example, an Uber driver may tell you that he will arrive in “less than 20 minutes,” or “not more than 20 minutes.” Although these frames are equivalent and interchangeably used, we show that these frames result in differential consumption choices – what we term the *upper limit framing* effect. We show that less than (vs. not more than) framing of the upper limit of a temporal or monetary cost estimate can result in different consumer expectations regarding the underlying cost involved, and systematically influence subsequent consumption choices.

We draw our hypotheses from research on negation theory. Negation theory literature suggests that verbal inferences that involve negations are more effortful to process than equivalent affirmations (Dale and Duran, 2011; Nordemeyer and Frank, 2014; Khemlani, Orenes, and Johnson-Laird, 2012; 2014), although under certain circumstances they can be equally fluent to process (Johnson-Laird, 1970; Clark, 1974). In turn, the less fluent processing associated with negations leads individuals to neglect the negation. For example, someone deemed “innocent” will appear more free of guilt than someone deemed “not guilty.” Indeed, for cost estimates involving small amounts, our findings are consistent with this model: framing the upper limit as “less than” leads to contracted cost perceptions (vs. “not more than” framing).

Interestingly, we are the first to our knowledge to find conditions under which a negation frame is actually more fluent than an affirmation frame—when negation frames involve large cost estimates. Extant research has shown that large numbers require abstract construal to process (Hansen, Kutzner, and Wanke, 2012; Stanescu-Cosson et al., 2000; Dehaene, et al., 2003), which matches with the abstract nature of negation framed assertions (Gilead, Liberman, and Maril, 2012). Consequently, the abstract mindset required to process large numbers matches the abstract nature of negations, leading to more fluent processing (Lee and Aaker, 2004; Labroo, Dhar, and Schwarz, 2007). Thus, for cost estimates involving large amounts, the well-established effect of negations being more difficult to process should reverse due to a greater match between the mindset primed by large amounts and negation-framed assertions. Consequently, for large estimates, framing the estimate as *not more than* results in contracted cost perceptions (vs. *less than* framing).

### Methods and Results

Study 1 utilized a single factor (upper limit framing: less than vs. not more than) between-subjects experimental design. Specifically, respondents were presented with a real choice context – choosing to take part in a survey about the business school. Respondents in the *less than* (vs. *not more than*) condition were told that the survey will take less than (vs. not more than) 10 minutes. It was found that respondents in the *less than* condition were significantly more likely to choose to take part in the survey (vs. those in the *not more than* condition).

Studies 2 and 3 utilized single factor (upper limit framing: less than vs. not more than) experimental designs involving hypothetical

choice scenarios (study 2: restaurant wait time; study 3: Uber wait time). In both studies, respondents were asked to imagine that they had to wait for a period of time, and were presented with wait time estimates either using *less than* or *not more than* framing. The wait time estimates provided in study 2 (study 3) were: less than 30 minutes and not more than 30 minutes (less than 20 minutes and not more than 19 minutes). The wait times in study 3 were chosen to rule out the alternative explanation for the upper limit framing effect – potential non-equivalence of the two frames. Results from both studies showed that *less than* (vs. *not more than*) framing resulted in lower perceived wait time and higher likelihood to wait. Further, perceived wait time mediated the influence of upper limit frame on likelihood to wait.

Study 4 tested the influence of upper limit framing on estimated monetary cost (getting a car repaired by a mechanic; less than \$475 vs. not more than \$475). It was found that *less than* (vs. *not more than*) framing resulted in lower perceived cost of repairs, which mediated the likelihood of getting the car repaired by the mechanic.

Studies 5 (house price: less than \$200,000 vs. not more than \$200,000) and 6 (plumbing repair cost: less than \$7,500 vs. not more than \$7,500) show that the upper limit framing effect reverses when the underlying cost is large—*not more than* framing results in lower perceived costs versus *less than* framing.

Finally, study 7 showed that there is a significant interaction between upper limit frame (less than vs. not more than) and estimate amount (car repair cost: \$250 vs. \$2500) in predicting perceived cost and likelihood to incur cost. Specifically, for the small estimated repair cost (\$250), the *less than* (vs. *not more than*) frame resulted in significantly lower perceived repair cost and higher likelihood to get the car repaired. However, the reverse was true for large estimated repair cost (\$2500). Furthermore, fluency of processing the cost estimate was higher (lower) for *less than* (vs. *not more than*) frame for small (large) amount, and mediated the interactive effect of frame and amount on cost perception.

### Contribution

This research makes a number of substantial contributions. First, we contribute to the negation literature by being the first to demonstrate situations in which negation frames are actually easier to process and have stronger meaning than affirmation frames (e.g., someone deemed “not guilty” can appear more free of guilt than someone deemed “innocent”). Additionally, we contribute to consumer research by showing how framing of cost estimates influence consumption choices and that equivalent frames for a cost estimate can result in distinct consumption choices. We also contribute to the literature on temporal and monetary costs by showing how *less than* versus *not more than* framings can influence cost expectations. Further, this research contributes to the semantic framing literature by finding a new semantic framing effect that involving negation based inference making.

Our research also presents substantial managerial implications. Given that marketers interchangeably use *less than* and *not more than* framing to express the upper limit of an estimate, we provide an important insight that the framing of the upper limit can influence perception of the underlying cost, and that this effect depends on the estimated amount.

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# Approach and Loss Aversion: Consumer Responses to Approaching and Receding Stimuli in Advertising

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## EXTENDED ABSTRACT

Consumers are increasingly confronted with dynamically moving stimuli in commercials, video games and virtual reality. Although the effect of physical (near vs. far) and psychological (concrete vs. abstract) *distance* of stimuli has been broadly investigated (Codispoti and De Cesarei 2007; De Cesarei and Codispoti 2006; Loftus and Harley 2005), much less is known about the effect of *movement* (approaching vs. receding) on advertising appeals and consumer decisions. Designing effective dynamic marketing campaigns requires better understanding of consumers' reactions to stimuli either moving away from or toward them. Building on the approach and loss aversion biases, we predict that people would show more negative (positive) emotions and attitudes on advertising effectiveness toward approaching (receding) stimuli.

People have an innate tendency of approach aversion, because approaching stimuli can be potentially more harmful and dangerous than receding stimuli. Approach aversion means that people feel more negatively toward a stimulus that is approaching rather than receding or static. This overgeneralized bias arises for a priori negative, nonnegative and ambivalent stimuli, and for stimuli moving in space, time, or probability (Davis et al. 2011; Hsee et al. 2014; Mühlberger et al. 2008). For instance, Hsee et al. (2014) reported more negative feelings toward neutral, negative and positive approaching stimuli than toward non-approaching stimuli. In line with these studies, we hypothesize that people will express more negative feelings toward approaching neutral stimuli versus non-approaching neutral stimuli (H1a).

However, it is still unclear whether there would be a parallel effect for *receding* stimuli, in the sense that these stimuli would evoke more positive feelings than approaching stimuli (Hsee et al. 2014). Specifically, loss aversion can manifest itself in people's reactions toward moving stimuli, because receding stimuli could induce a sense of loss. Loss aversion means that losses and disadvantages have greater impact on people's preferences than gains and advantages (Tversky and Kahneman 1991). Since people find it worse to lose something than to gain something, and thus attach more value to losses than gains, receding stimuli could evoke more positive feelings because the perceived value seems to increase (Hsee et al. 2014). As such, we predict that people will express more positive feelings toward receding neutral stimuli versus non-receding neutral stimuli (H1b).

Moreover, as emotions affect advertisements' evaluations (Poels & Dewitte, 2006), we hypothesize that people will evaluate an advertisement more negatively when the ad contains approaching neutral stimuli versus non-approaching neutral stimuli (H2a). Contrastingly, people will evaluate an advertisement more positively when the ad contains receding neutral stimuli versus non-receding neutral stimuli (H2b).

In Study 1, testing H1a-b, participants (MTurk;  $N = 242$ ,  $M_{\text{age}} = 37.45$ , 49% men) were randomly assigned to 1 of 5 conditions (approaching, receding, static-middle, static-near, or static-far stimuli) in a between-subjects design. Twelve neutral objects served as experimental stimuli, for which five videos were created. Stimulus movement was manipulated by a change in size. Participants indicated their feelings toward each object, on 9-point Self-Assessment

Manikin (SAM) scales measuring valence and arousal. Three control measures were randomly assessed: the Behavior Identification Form (BIF; Vallacher and Wegner 1989;  $\alpha = .90$ ), the Behavioral Inhibition and Behavioral Activation System Scales (BIS/BAS; Carver and White 1994;  $\alpha = .83$ ), and the Fight Flight Freeze Questionnaire (FFFQ; Maack et al. 2015;  $\alpha = .91$ ).

Multilevel analyses, controlling for the covariates, showed a (marginally) significant effect of condition on valence ( $F(4, 229) = 2.40$ ,  $p = .051$ ). Participants indicated more negative valence toward approaching neutral stimuli compared to static-middle neutral stimuli, partly confirming H1a. However, there was no significant effect of condition on arousal ( $F(4, 229) = .11$ ,  $p = .978$ ). H1b could not be confirmed, as receding neutral stimuli did not evoke significantly more positive feelings than non-receding neutral stimuli.

In Study 2, testing H1a-b and H2a-b, participants (MTurk;  $N = 123$ ,  $M_{\text{age}} = 38.24$ , 60% men) were randomly assigned to 1 of 5 conditions (similar to study 1) in a between-subjects design. One object from study 1 served as stimulus for a fictive advertisement on second-hand products. Stimulus movement was manipulated as in study 1. Attitude toward the ad (Aad), attitude toward the brand (Ab), and purchase intention (PI), were used as measures of advertising effectiveness. Participants indicated their feelings toward the product, on SAM scales measuring valence and arousal. Aad and Ab were measured on three-item, 7-point semantic differential scales (MacKenzie and Lutz 1989;  $\alpha_{\text{Aad}} = .97$ ,  $\alpha_{\text{Ab}} = .97$ ). PI was measured on a three-item, 7-point semantic differential scale (Pornpitakpan 2004;  $\alpha = .96$ ). Three control variables were randomly measured: the BIF ( $\alpha = .92$ ), the BIS/BAS scales ( $\alpha = .82$ ), and the GREEN scale, measuring environmentally friendly consumption values (Haws et al. 2014;  $\alpha = .95$ ).

ANCOVA analyses firstly showed a significant effect of condition on valence ( $F(4, 112) = 3.40$ ,  $p = .012$ ). Participants indicated more negative valence toward approaching neutral stimuli compared to non-approaching neutral stimuli, confirming H1a. Contrastingly, participants indicated more positive valence toward receding neutral stimuli than toward approaching neutral stimuli, partly confirming H1b. Secondly, condition could not significantly predict arousal ( $F(4, 112) = .64$ ,  $p = .633$ ). Thirdly, there were (marginally) significant effects of condition on Aad ( $F(4, 112) = 2.93$ ,  $p = .024$ ), Ab ( $F(4, 112) = 3.15$ ,  $p = .017$ ), and PI ( $F(4, 112) = 2.25$ ,  $p = .068$ ). Participants expressed more negative Aad, Ab, and PI toward approaching neutral stimuli than toward non-approaching stimuli, confirming H2a. In contrast, participants expressed more positive Aad, Ab, and PI toward receding neutral stimuli than toward approaching stimuli, partly confirming H2b.

This research revealed that consumers react more negatively to approaching stimuli, supporting approach aversion, and more positively to receding stimuli, providing preliminary evidence for loss aversion as underlying mechanism. Moreover, advertisements using approaching products decrease ad evaluations, while advertisements using receding products increase ad evaluations. This study is the first to demonstrate the importance of understanding how consumers react to approaching and receding stimuli in advertising. Using the right kind of movement can strengthen consumers' attitudes toward the products being advertised.

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# More than Just a Number: The Negative Effect of 100% Claims

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## EXTENDED ABSTRACT

Many product labels include numerical claims. Consumers interpret these claims in different ways, beyond their numerical value. Non-round numbers, for example, are considered more informative and scientific than round numbers (Guang-Xie and Kronrod 2012). Correspondingly, evaluations of products associated with non-round numbers are based more on cognitions, whereas evaluations of products associated with round numbers lean more on feelings (Wadhwa and Zhang 2015). Round numbers, on the other hand, symbolize completion, and consumers are therefore more willing to accept offers with round prices (Yan and Pena-Marín 2017).

In the current research we focus on a common yet underexplored numerical claim, a 100% claim (e.g., “100% natural”). More than any other round number, 100% mathematically denotes completeness, and accordingly, in everyday language, the term “100%” stands for completeness, fullness or perfection (Lee 2014). Thus, it is not surprising that marketers intuitively believe that a 100% claim can make products more appealing, an intuition reflected in their extensive use of such claims. Indeed, Canadian consumers perceive a “100% Canadian milk” claim on milk and ice cream as an indication of product quality (Forbes-Brown et al. 2016).

We suggest that this intuition may backfire when the 100% claim is pseudo-informative, namely, does not convey meaningful information regarding the associated product—for example, a claim stating that a drink contains “100% juice”, which does not specify percentages of fruit content or other similar information. In these cases, consumers may rely less on the numerical information conveyed by the claim, and refer more to its symbolism. In addition, because the perfection symbolized by the term “100%” might be perceived as “cheap talk” that cannot actually be measured, consumer’s product evaluations decrease.

Four experiments show that participants evaluate products less favorably when those products carry a pseudo-informative 100% claim, as compared with a 99%, non-numerical, and even 101% claim (that serves as a symbol). We further show that the effect of a pseudo-informative 100% claim is triggered by perceptions of low measurability of the information embedded in the claim, suggesting an enhanced focus on 100% as a symbol.

Study 1 tested the effect of a pseudo-informative 100% claim on evaluations. Participants ( $n=99$ ) reviewed a picture of a beverage with a label that contained either a “100% juice” or a “99% juice” claim. They provided product evaluations by indicating on 7-point scales how appealing, tasty, healthy, fresh, natural, good versus bad, of high versus low quality, and close to perfection this product seemed to them (Cronbach’s  $\alpha=.89$ ). Participants also reported their perceptions of the product’s consumers: how successful, powerful, and high versus low in status they perceived them to be (Cronbach’s  $\alpha=.89$ ). As expected, when the label contained a 100% claim, product evaluations were lower ( $M=4.36$ ,  $SD=1.17$ ) than when the label contained a 99% claim ( $M=4.81$ ,  $SD=1.07$ ;  $F(1, 97)=3.86$ ,  $p=.05$ ), and perceptions of the product’s consumers were less favorable ( $M=3.76$ ,  $SD=1.16$  vs.  $M=4.19$ ,  $SD=.97$ ;  $F(1, 97)=3.93$ ,  $p=.05$ ). Thus, a product label containing a 100% claim can sometimes harm product evaluations.

Study 2 ( $n=153$ ) compared the effect of a 100% claim not only to that of a 99% claim, but also to that of a non-numeric claim. To make sure the (uninformative) numbers on the label triggers our ef-

fect, we used a foreign product—a Russian jam, such that participants could only understand the numbers, but not the text, written on the label. Put differently, the text on the label was exaggeratedly uninformative for participants. A MANOVA revealed significant differences in product evaluations ( $F(2, 150)=4.30$ ,  $p=.015$ ) and perceptions of the product’s consumers ( $F(2, 150)=4.77$ ,  $p=.01$ ). Product evaluations were lower with a 100% claim ( $M=3.42$ ,  $SD=1.16$ ) than with either a 99% claim ( $M=4.06$ ,  $SD=1.26$ ,  $p=.02$ ) or a non-numeric (non-understandable) claim ( $M=3.89$ ,  $SD=.97$ ,  $p=.11$ ). Perceptions of the jam’s consumers were also less favorable with a 100% claim ( $M=3.02$ ,  $SD=1.06$ ) than with either a 99% claim ( $M=3.51$ ,  $SD=1.16$ ,  $p=.06$ ) or a non-numeric claim ( $M=3.62$ ,  $SD=.93$ ,  $p=.01$ ).

If the effect of a pseudo-informative 100% claim is indeed triggered by decreased consideration of the numerical value of 100%, and enhanced consideration of its symbolism, then our effect should emerge also when a 100% claim is compared to other, superior, claims involving percentages that are symbolic rather than numerically informative. Thus, Study 3 used a 101%-satisfaction claim. Note that while 101% has no numerical logic, a 101%-satisfaction claim may imply extra effort to satisfy consumers, which consumers may find more convincing. Participants ( $n=81$ ) reviewed a hotel picture that contained either a 100% or 101% “satisfaction guarantee” claim. As expected, evaluations of the hotel were lower with a 100% claim ( $M=4.94$ ,  $SD=0.91$ ) than with a 101% claim ( $M=5.36$ ,  $SD=0.84$ ;  $F(1,79)=4.53$ ,  $p=.04$ ), and perceptions of the hotel’s consumers were less favorable ( $M=3.92$ ,  $SD=1.10$  vs.  $M=4.46$ ,  $SD=1.17$ ,  $F(1,79)=4.61$ ,  $p=.035$ ).

Study 4 aimed to provide more direct evidence for our hypothesis that consumers rely more heavily on the symbolism, rather than the numerical value, of a pseudo-informative 100% claim. Thus, Study 4 tested whether measurability perceptions mediate the claim effect on behavioral intentions (the mean of willingness to taste and willingness to buy the product, Cronbach’s  $\alpha=.75$ ). Participants ( $n=200$ ) reviewed a picture of ice-bars that included one of three uninformative claims: “Made with [100%/99%/no number mentioned] juice blend and other added ingredients.” The results of a mediation analysis (PROCESS Model 4, multicategorical, with 5000 resamples; Hayes 2013) show that both the 99% claim and the non-numeric claim were perceived as more measurable than the 100% claim ( $B=.63$ ,  $SE=.28$ ,  $p=.03$ , 95% CI [.07,1.18] and  $B=.63$ ,  $SE=.27$ ,  $p=.025$ , 95% CI [.08,1.18], respectively). Importantly, the relative indirect effects of the difference between the 100% claim and both the 99% claim and the non-numeric claim on behavioral intentions through measurability were significant ( $B=.13$ ,  $SE(boot)=.07$ , 95% CI [.02, .31] and  $B=.13$ ,  $SE(boot)=.07$ , 95% CI [.02,.30], respectively), suggesting that the negative effect of a 100% claim on willingness to adopt the product ensues from perceptions of lower measurability of that claim.

Our results suggest that using 100% claims for products may sometimes have unintuitive effects on consumers, which may yield negative effects.

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# Spreading of Alternatives Without a Perception of Choice

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## EXTENDED ABSTRACT

Choosing a product changes a consumer's attitudes toward it. Brehm (1956) classically demonstrated this by asking consumers to first rate several products, and then choose between two they had rated about equally. He found that attitudes toward chosen products improved and rejected products declined upon subsequent measurement. He explained this "post-choice spreading of alternatives" (Brehm, 1956) by cognitive dissonance (Festinger, 1957). Specifically, the negative features of the chosen option became inconsistent with the knowledge of having chosen them. The resulting unpleasant feeling of dissonance motivated choosers to downplay the importance of those features, allowing them to be happier with their choice (Simon, Greenberg, & Brehm, 1995).

Researchers took Brehm's "free-choice paradigm" (1956) as evidence that choosing causally changes attitudes (Festinger, 1957, 1964). Recently however, Chen and Risen (2010) argued that the paradigm contains a methodological flaw. To demonstrate that choice causally affects attitudes, they argued that one would need to ensure the choice outcome could not be driven by existing preference (2010; Risen & Chen, 2010).

In response, several researchers demonstrated post-choice spreading while randomly assigning outcomes rather than allowing participants to make actual choices (Egan, Bloom, & Santos, 2010; Johansson, Hall, Tarning, Sikstrom, & Chater, 2014; Sharot, Velasquez, & Dolan, 2010). For example, Sharot et al. asked participants to make a choice based on information ostensibly presented subliminally. The "choice" outcome was actually randomly assigned. When participants believed they had made a choice, their attitudes toward chosen options improved, but when they believed a computer had chosen, there was no change in attitude (Sharot et al., 2010). The authors concluded that a "sense of agency" was critical to observing spreading. Similarly, following a procedure involving altering choices by sleight of hand, others have concluded that "it is not the choice per se that drives the preference change but rather the belief that a certain choice has been made" (Johansson et al., 2014, p. 288). These authors interpreted their results as consistent with self-perception theory (Bem, 1972), where people infer their own preferences from the choices they have made.

In contrast, we argue that neither choice nor the self-perception of having made a choice is required to observe spreading of alternatives. Instead, spreading occurs whenever a consumer *accepts an outcome*. Consumers normally accept the outcomes of their own choices, but they can also accept outcomes without believing they chose them personally. For example, when assigned to sell a product (study 1), people must accept that single course of action in order to act effectively (Harmon-Jones, Harmon-Jones, & Levy, 2015). Consumers may also accept outcomes when they use a decision process that does not allow agency over the final outcome (study 2) or when they accept an employer's prerogative to assign them a product for use in their work (study 3). We show that, consistent with the process presumed for post-choice spreading, consumers trivialize the importance of the negative features of the assigned outcomes (studies 2 and 3). These changes in importance mediate changes in attitude (study 3). Finally, individual levels of acceptance moderate the intensity of spreading (study 3).

*Study 1* demonstrated spreading (attitude improvement) favoring an assigned outcome. Participants ( $N=48$ ) were randomly

assigned to advocate for one brand versus a competitor in a role-playing "sales game." At time 1, we measured attitudes toward various retailer brands. At time 2 two weeks later, we randomly selected two brands each participant had rated equally, and then randomly assigned one as "assigned" and the other as "competitor." Participants believed they were to enter a chat room to attempt to convince another participant to shop at their assigned retail brand. They would be in competition against a third participant trying to sell the competitor brand. The chat room never occurred. Participants never actually advocated for their assigned brand, nor was any additional information provided about the brands. Immediately after assignment to condition, we re-measured attitudes toward the retailers. As predicted, we observed a significant interaction  $F(1,47)=5.7, p=.021$ . Attitudes toward assigned brands improved ( $M=2.3, SD=2.1$  from  $M=1.3, SD=2.5$ ),  $F(1,47)=6.7, p=.013$ , but attitudes toward competitors did not ( $M=1.1, SD=2.6$  from  $M=1.2, SD=2.5$ ),  $F<1$ .

*Study 2* demonstrated that outcome assignment led to changes in feature importance. Modeled after hotwire.com, participants ( $N=175$ ) in a longitudinal experiment booked a hypothetical hotel room through a web site where they chose only the neighborhood of the hotel; the web site assigned them a specific hotel in that neighborhood without further input. At time 1, we measured baseline hotel feature importance. At time 2 we manipulated whether an assigned hotel performed well on two secondary features: service and amenities. We expected that self-reports of the importance of the manipulated features should reflect the level assigned. As predicted, on a 100-point bipolar tradeoff scale we observed significant spreading in relative feature importance to match hotel assignments  $F(1,173)=7.97, p=.005$ . On independent 7-point scales, poorly performing features were trivialized  $F(1,173)=7.22, p=.008$ . Specifically, poorly performing attributes decreased in importance ( $p's<.05$ ) but well-performing attributes remained unchanged (*n.s.*).

*Study 3* showed moderated mediation. Two weeks after measuring baseline attitudes and feature importance, participants ( $N=410$ ) were told their employer had booked a hotel room for them for a business trip. Replicating study 1, attitudes spread to favor assigned hotels  $F(1,408)=17.67, p<.001$ . Replicating study 2, on a 100-point bipolar tradeoff scale we observed significant spreading in relative feature importance to match hotel assignments  $F(1,408)=23.80, p<.001$ . On independent 7-point scales poorly performing features were trivialized  $F(1,408)=52.61, p<.001$ , also replicating study 2. We additionally measured acceptance of the outcome by agreement with four measures. Acceptance moderated the amount of spreading in feature importance  $F(1,406)=14.11, p<.001$ , such that spreading was more pronounced as acceptance rose. Changes in importance mediated changes in attitude, a significant moderated mediation 95 CI: [-.60, -.14].

Across three studies, we found that spreading of alternatives does not require a self-perception of choice. Rather, spreading depends on accepting an outcome. Consistent with the logic of post-choice spreading, changes in feature importance mediated changes in attitude. Mere acceptance seems to yield the same attitude reappraisals currently attributed to choice.

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# When Novices have more Influence than Experts: Empirical Evidence from Online Peer Reviews

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## EXTENDED ABSTRACT

Over the past decade, online peer review platforms have played a major role in shaping consumer choice. Eliciting and displaying online reviews has become a priority for many firms as part of their marketing efforts to influence consumer decisions and stimulate firm sales. Just as firms have been interacting with expert professionals (Biswas, Biswas, and Das 2006; Wang 2005), firms are now also engaging with expert, or elite, *users* on peer review platforms (Chae et al. 2016; Stone 2014). Businesses invite expert users to try their products/services, with the objective of having expert users create and share high-quality reviews. Given the increasing engagement between businesses and elite users, we are interested in the relationship between user expertise and influence of user-generated reviews on consumers.

To get a more descriptive sense of how consumers are influenced by online peer review platforms, let's consider a situation where a consumer accesses a review website to make a choice on a service provider. Perhaps the consumer is at a conference in a new city, and decides to use a peer review website, such as tripadvisor.com, to find a restaurant for the evening. Consider the navigation process from accessing the user-generated review website to selecting a restaurant for the evening. She might begin by first narrowing down the options with a number of filters, including price range (cheap eats, mid-range, fine dining), meal type (breakfast, lunch, brunch, dinner), and regions in the city which are located nearby. Even after the initial filters, she is likely presented with tens, if not, hundreds of restaurants. In order to narrow the list of restaurants for her consideration set, she might use aggregate-level measures, such as the volume of reviews and the user rating average; considering only restaurants that have lots of reviews and are highly rated. Finally, from the handful of restaurants left in consideration, the consumer may read several reviews of each in order to help finalize a choice of restaurant for the evening.

This vignette highlights an important feature – a multi-stage filtering approach, from aggregate-level to individual – in the consumer decision-making journey (Boatwright and Nunes 2001). This filtering approach explains why, although there are hundreds of thousands, if not millions, of peer reviews on a review platform for restaurants within a given city, consumers do not read even a modest portion of them all. Aggregate level measures, such as the number of recent reviews and their average valence, affect the upstream ranking algorithm (Ghose, Ipeiritis, and Li 2012), which determines the rank of each service provider and the page on which they appear. Aggregate level measures are also used by consumers (Dai et al. 2017; Fisher, Newman, and Dhar 2018), which can narrow down their consideration set. Finally, a handful of reviews from each of the considered service providers are read to finalize consumer choice.

Extant research on the impact of online reviews has primarily only considered reviews at either the aggregate (Babić Rosario et al. 2016; Chevalier and Mayzlin 2006; Duan, Gu, and Whinston 2008) or the individual levels (Moore 2015; Mudambi and Schuff 2010; Packard and Berger 2017). In this research, we examine online peer reviews in terms of reviewer influence on consumers at the aggregate and the individual levels, and investigate the relationship between reviewer expertise and influence of reviews on consumers at

both levels. Is it simply the case that expert reviewers always have greater influence on consumers than their novice counterparts? If not, in what case might this not be true, or perhaps even reversed? Why?

## Hypotheses

Consistent with extant research on expertise (Alba and Hutchinson 1987), because of their abundant practice in generating prior reviews, expert reviewers are more skillful than their novice counterparts (Solomon 1990). Therefore, we expect that at the individual level of reviews, reviews by expert users will be more influential, as judged by readers, than reviews by novice users (H1).

However, at the aggregate level of reviews (volume and valence), we suspect the opposite to be true, where novice users have more influence than their expert counterparts. With regard to the volume measure, because of the Pareto distribution (Arnold 2015), where there are substantially more novice users than expert users, we predict that for any given service provider, under any (recent) time frame, there will be more reviews generated by novice users than by expert users. This would suggest that novice users are the main drivers of increasing the volume measure (H2).

In the case of the valence measure, because people tend to simplify complex information in a categorical/dichotomous manner (e.g., good versus bad; Billig and Tajfel 1973; Gutman 1982) and experiences tend to lead to a more nuanced perspective (Galinsky and Moskowitz 2000), we hypothesize that for any given experience, novice users assign more polarizing ratings (i.e., ratings that are more distant from the midpoint of the rating scale) than expert users (H4). As a result, we expect that novice users will have a greater tendency in shifting the existing average valence, especially when the average valence is close to the midpoint of the rating scale (H3).

- Hypothesis 1* At the individual level of reviews, reviews by expert (vs. novice) users are more influential on consumers.
- Hypothesis 2* Novice (vs. expert) users play a greater role in driving up the volume measure.
- Hypothesis 3* Novice (vs. expert) users play a greater role in shifting the valence measure up/down.
- Hypothesis 4* Novice (expert) users adopt a more polarizing (gradient) rating approach relative to their counterparts.
- Hypothesis 5* For service providers that generally provide moderately high [moderately low] quality service, novices assign significantly higher [lower] ratings than experts.

### Study 1: Qunar (Field Data)

The purpose of Study 1 is to test whether expert or novice reviewers are more influential on consumers at the individual and aggregate levels of online peer reviews. We scraped and analyzed over 130,000 reviews on 60 hotels, spanning 4 cities from Qunar.com, a major Chinese-based reputation platform.

Our main independent variable of interest is *user expertise*, which is defined as the number of reviews the user has generated on the platform prior to posting the current review. Our dependent variable of influence at the *individual* level is *review favorability*. Our dependent variables of influence at the aggregate levels are *review volume* and *rating-average distance*. We also assess differences in rating pattern with the *rating polarity* measure. For the operational definitions of the dependent variables.

To test the relationship between user expertise and the different dependent variables, we conducted an analysis of covariance (ANCOVA) for each. Across our tests, we include a number of control variables, including hotel identification, purpose of travel, and how long ago the review was posted from the date the review data was scraped.

We first find that, consistent with H1, users with more review-writing experience generate reviews that readers find more favorable ( $M_{Experts} = 0.40$  vs.  $M_{Novices} = 0.32$  average 'like' votes per review;  $F(1, 132\ 979) = 14.76, p < .001$ ). Next, we find that there is a significant negative relationship between user expertise and volume of reviews posted within the most recent six months ( $\beta = -846.7, t = -2.32, p < .05$ ). Results are robust for reviews posted within most recent one month, two months, and one year (all  $p$ 's  $< .05$ ). Novices do indeed drive the volume of reviews (H2). Consistent with H3, we find that users with less review-writing experience on average assign ratings that are further from the average, for hotels with moderate user rating averages ( $M_{Novices} = 0.88$  vs.  $M_{Experts} = 0.82$  units from existing average valence;  $F(1, 22\ 819) = 29.85, p < .001$ ). Finally, as per H4, we find that novice users assign more polarizing ratings than their expert counterparts ( $M_{Novices} = 1.64$  vs.  $M_{Experts} = 1.55$  average units from the midpoint of a five-point scale;  $F(1, 132\ 979) = 772.69, p < .001$ ).

### Conclusions

In Study 1, using Qunar hotel review data, we demonstrate that at the individual review level, expert (vs. novice) users have greater influence, as judged by reader assessment. However, at the aggregate level, we find that opposite effect, novice (vs. expert) users have greater influence, in terms of driving up the volume of reviews and shifting the average valence. We demonstrate that the shifting of the average valence can be explained by novice users' tendency to assign more polarizing ratings relative to their expert counterparts.

### Study 2: Priming Experienced Raters (Experiment)

The purpose of Study 2 to test the effects of user expertise on patterns of assigned star ratings in an experiment, by priming participants as either expert or novice raters. User expertise (expert vs. novice) was manipulated by having participants recall and evaluate memories of experiences either related or unrelated to the focal service, prior to assigning a rating to the focal experience. The design of the experiment is a 2 rating expertise (high vs. low) x 2 description valence (positive vs. negative) between-subjects design. The outcome measure in the experiment is the assigned star rating, along a 5-point scale from 1-*Terrible* to 5-*Excellent*.

Online participants ( $N = 190$ , %female = 56.3%,  $M_{Age} = 35.0$ ,  $SD_{Age} = 11.1$ ) on Amazon Mechanical Turk were randomly assigned to the beginner or veteran contributor level. Participants assigned to the expert (novice) condition were asked to think about restaurants

they have visited [electronic products they have purchased] over the past year (note that the dependent measure is specific to restaurants). Participants were then presented with a description of a moderately positive or moderately negative experience at a restaurant and then asked to assign a star rating for the experience.

A two-way analysis of variance revealed a significant interaction between contributor level and experience valence on assigned star rating ( $F(2, 187) = 5.68; p < .05$ ). For the moderately positive experience description, participants primed as expert raters assigned marginally lower ratings ( $M = 4.35, SD = 0.64$ ) than those primed as novice raters ( $M = 4.57, SD = 0.50; t(1, 94) = 1.89, p = .06$ ). For the moderately negative experience description, there was no significant difference in ratings between expert and novice raters ( $M_{Novice} = 1.61, SD = 0.57$  vs.  $M_{Expert} = 1.84, SD = 0.75; p = .13$ ). Most importantly, consistent with H4, we find that participants primed as expert raters assign ratings that were less polarizing ( $M = 1.29$  average units from the midpoint of a five-point scale,  $SD = 0.62$ ) than those primed as novice raters ( $M = 1.47, SD = 0.54, t = 2.12, p < .05$ ).

### Conclusion

Using an experiment, we showed that priming rating expertise, specifically, rating familiarity with a focal domain, reduces the extremity of ratings. This reflects the more gradient rating approach favored by users with high rating expertise in the earlier field data. The parallel findings between our field data in Study 1 and our experiment data in Study 2 allows us confidently draw the causal relationship between more extensive rating experiences and less polarizing ratings, as well as rule out unobserved reviewer characteristics as possible confounds of the effect.

### Study 3: TripAdvisor (Field Data)

The purpose of Study 3 is twofold. First, we test whether our findings from Study 1 from the Chinese-based platform Qunar.com replicate in a North American-based platform, TripAdvisor.com. Second, we test whether the more polarizing rating approach by novice users is systematic, such that for certain service providers, novice reviewers systematically assign higher and lower ratings than expert reviewers. We scraped and analyzed over 100,000 reviews on 60 hotels, spanning 6 cities, on tripadvisor.com, a major online North-American-based travel review platform. The same variables are collected as those in Study 1.

First, for replication of findings from Study 1. Second, we test whether, for certain service providers, novice reviewers systematically assign higher and lower ratings than expert reviewers. We find that for hotels that generally provide moderately high quality service (average valence of 4.4-4.6), novice users systematically assigned *higher* ratings ( $M = 4.53$ ) than expert users ( $M = 4.43; \beta = -0.056, t = -7.16, p < .001$ ), and therefore are systematically pushing up the average valence. However, for hotels that generally provide moderately low quality service (average valence of 3.5-3.7), novice users systematically assigned *lower* ratings ( $M = 3.27$ ) than expert users ( $M = 3.40; \beta = 0.060, t = 2.50, p = .01$ ), and therefore are systematically pulling down the average valence.

### Conclusions

In Study 3, using hotel review data from a North American-based review platform, TripAdvisor.com, we replicate the main results from Studies 1 and 2. More importantly, we show that the more polarizing rating approach by novice users is not random, but systematic, such that for service providers that generally provide moderately high [moderately low] quality service, novice users assign significantly higher [lower] ratings than expert users, and therefore,

are systematically pushing up [pulling down] the user rating averages.

### General Discussion

In our research, we examined the influence of expert and novice users on online peer review platforms at the individual and aggregate review levels. In Study 1 (Qunar), we show that at the individual review level, expert users have greater influence, as judged by readers' assessments.

However at the aggregate review level, novice users have greater influence, in terms of driving the volume of reviews and shifting the average valence. Further, we demonstrate that novice users' shifting of the average valence can in part be explained by their more polarizing rating approach relative to their expert counterparts. In Study 2, testing the idea that novice users adopt a more polarizing approach, we validate the causal relationship between lack of rating experience and rating polarity, and rule out unobserved reviewer characteristics as possible confounds. In Study 3 (TripAdvisor), we replicate the findings from Study 1. Also, we show that for moderately high [moderately low] service providers, novice users assign higher [lower] ratings than experts.

Although it is generally thought that experts play a more dominant role in shaping consumer opinion (Alba & Hutchinson 1987), the present research demonstrates this is not always the case. With the flourishing of user-generated content, consumers are less likely to access all the available content. Instead, they rely more and more on aggregate level measures that summarize the abundance of content to guide their consumption choice (Dai et al. 2017; Fisher et al. 2018). Our results show that novices have more impact at the aggregate level measures in terms of driving the volume of reviews and shifting the average valence. Our results suggest that firms should be cautious, and perhaps even hesitant, when focusing on having expert users generate reviews about their product/service. Further, firms that generally provide *moderately high* quality service may consider completely avoiding expert users, as experts assign significantly lower ratings than novices, and therefore, relative to their novices, are systematically pulling down the average valence.

To conclude, this research provides evidence, in the context of user-generated content platforms, for when and how novices have greater influence on consumers and the systematically different rating approaches adopted by expert and novice users. The findings from our study are important to service providers, particularly as consumers move away from traditional offline media and towards online digital media where user-generated content plays an increasingly larger role in shaping consumer choice.

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# Does It Pay to Be Virtuous? Examining Whether and Why Firms Benefit From Their CSR Initiatives

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## EXTENDED ABSTRACT

Formally defined as discretionary business practices and contributions of corporate resources intended to improve societal well-being (Korschun, Bhattacharya, and Swain 2014); corporate social responsibility (CSR) is increasingly present in consumer consciousness. In fact, we often see consumers seeking out and supporting brands that they perceive as contributing to the greater societal good, incentivizing brands to engage in CSR (Hughes 2016).

While CSR is increasingly important to brand strategy, specific guidance on the nature of activities that a brand should undertake, and a documentation of the ensuing returns, are lacking. Detecting potential differences in consumer response to CSR activities might have been challenging in prior research for three important reasons. First, prior work has typically not distinguished between particular types of CSR investment (Jayachandran, Kalaignanam, and Eilert 2013). Second, research has centered around financial performance measures such as firm market value and stock response - which are more separated from direct consumer involvement (Luo and Bhattacharya 2006; Mishra and Modi 2016). Third, other work has focused on documenting the influence of CSR campaigns by looking at measures of consumers' intentions and attitudes (Chernev and Blair 2015). To our knowledge, our paper forms the first attempt at leveraging field data to offer direct empirical support for the existence of benefits to firms from engaging in different types of CSR, because of direct consumer response.

We propose a new framework for managing CSR that is rooted in the perspective of consumer-brand relationships, by drawing on the concepts of forgiveness in relationships. We distinguish between three types of CSR engagement: correcting for the negative societal impact of a brand's business operations, compensating for the negative societal impact of a brand's business operations without making changes to operations, and cultivating consumer goodwill through prosocial acts unrelated to the negative societal impact of a brand's business operations. Conceptualizing CSR in this manner can be advantageous for brand managers, due to its direct focus on the influence of CSR on consumer actions. We argue that the three different types of CSR engagement can potentially engender different consumer attributions of sincerity in a brand's CSR efforts, and that these differences can be important for understanding any potentially heterogeneous impact that each type of engagement may have on brand sales.

We take a mixed methods approach to understand these relationships. We first leverage observational data to examine the existence of a causal impact of firms' CSR announcements on brand sales. We then examine the underlying psychological mechanisms that may be influencing changes in consumer purchase behavior in a controlled experimental setting.

To investigate the effect of CSR announcements on brand sales, we collect CSR press releases from prominent CPG (consumer packaged goods) brands as well as detailed brand sales data. Our analysis dataset contains 33 brands that announced CSR initiatives and 100 brands that did not, spanning 15 CPG product categories. We compare differences in brand sales before and after CSR announcements for brands that announced CSR initiatives ("treated" brands) and compare the analogous difference in brand sales for a closely comparable set of brands ("control" brands) within the focal brand's prod-

uct category that did not announce CSR initiatives. We thus use the synthetic control method to examine this effect (Abadie, Diamond, and Hainmueller 2010). The intuition behind this approach is that it creates a "synthetic control unit," computed as a weighted combination of all control units, to compare against the treated unit.

We find that, on average, corrective and compensating CSR actions are associated with a sales increase, whereas cultivating CSR actions are associated with a sales decrease. We show that this effect differs according to consumers' prior knowledge of the brand, measured as brand reputation. The results suggest that, for brands with lower reputations, corrective CSR leads to an overall increase in brand sales. The pattern of increases in brand sales is similar for lower reputation brands that undertake compensating CSR. In contrast, both higher and lower reputation brands experience sales decreases after engaging in cultivating CSR.

We explore the mechanism behind these sales effects in a controlled laboratory setting. An ANOVA ( $N=148$ ) examining the impact of the CSR on brand attitudes using brand reputation (higher vs. lower) and CSR type (corrective, compensating, or cultivating), shows that the significance of the impact of a CSR activity depends on the *a priori* reputation of the brand involved. Consistent with the model, the most positive consumer response was for "corrective" actions undertaken by a lower reputation brand, a response that was significantly higher than an identical corrective action undertaken by a higher reputation brand ( $M_{\text{lower/corrective}} = 1.52$ ,  $M_{\text{higher/corrective}} = .474$ ;  $F(1,142) = 14.53$ ,  $p < .001$ ). This was also true for compensating actions ( $M_{\text{lower/compensating}} = 1.30$ ,  $M_{\text{higher/compensating}} = .464$ ;  $F(1,142) = 8.63$ ,  $p = .004$ ). There was no such difference between lower and higher reputation brands for "cultivating" CSR actions ( $M_{\text{lower/cultivating}} = .827$ ,  $M_{\text{higher/cultivating}} = .617$ ;  $F(1,142) = .494$ ,  $p = .483$ ).

We used a bootstrap analysis to test for the mediating effect of consumers' perceptions of the sincerity of brands' CSR actions. An ANOVA with CSR type and brand reputation predicting perceived sincerity had a marginal interaction ( $F(2, 146) = 2.68$ ,  $p = .072$ ), and significant main effects of CSR type ( $F(1, 147) = 6.75$ ,  $p = .002$ ) and brand reputation ( $F(1, 147) = 50.37$ ,  $p < .0001$ ). Overall, perceived sincerity significantly mediated the moderated effect of CSR type on brand attitudes for both corrective-type actions (corrective:  $a_1 \times b_1 = -.1989$ , 95% C.I. =  $-.5322$  to  $-.0333$ ,  $p < .05$ ), and compensating CSR actions (compensating:  $a_2 \times b_1 = -.1988$ , 95% C.I. =  $-.5355$  to  $-.0183$ ,  $p < .05$ ). These results reveal that consumer perceptions of brand sincerity significantly mediate the relationship between CSR type and brand attitude.

These results show that the payoffs from CSR vary depending on the type of CSR engagement and that this effect can be materially significant. These findings contribute to the literature by investigating CSR as a multidimensional construct and by empirically demonstrating how firms' CSR initiatives affect consumer responsiveness.

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# All We Need is Love: Examining Differences in Time and Money Donations between Dyads and Individuals

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## EXTENDED ABSTRACT

Donations of both time and money are critical for societal well-being: in 2013, the dollar estimate of the annual volunteered time in the U.S. was \$167 billion and the total monetary donations were \$335 billion. Time and money donations have important benefits for consumers' personal well-being as well: consumers who donate monetary/time resources are happier, have higher life satisfaction, self-esteem, better physical and mental health (Thoits & Hewitt, 2001).

In the present research, we focus on the joint pro-social behavior of pairs of consumers (dyads) and compare it to that of individual consumers. Specifically, we examine whether there are differences between dyads and individuals in their donations of time and money – two fundamental resources in consumers' lives (Liu & Aaker, 2008).

We propose that while dyads and individuals will make similar monetary donations, dyads will donate less time than individuals. We base this prediction in the functionalist model of donations proposed by Clary and colleagues (1998, 1999), who argue that donating time serves six personal/social functions: *ego protection* (cope with life difficulties), *value expression* (express altruistic values), *career growth* (improve career prospects), *knowledge* (gain knowledge/skills), *self-enhancement* (enhance self-growth), and, most importantly, *social motives* (develop/strengthen social ties). To the extent that these needs are active and unmet, people will be more likely to donate time

On the other hand, donating money serves a more limited set of personal (not social) goals. Specifically, money donations have been most strongly linked to value expression, self-enhancement or identity-related motives (Aaker & Akutsu, 2009; Meier, 2007). Unlike donating time, donating money cannot serve any social functions such as building social ties.

Thus, we argue that time donation decisions are rooted in the degree to which social needs are salient at the time of the choice. Importantly, when individuals are making decisions in dyads, this joint decision context itself offers a proximal means of satisfying the social needs (Nikolova et al., 2018) that time donations may otherwise fulfill. In other words, in joint decision-making contexts dyads should be more likely to perceive that their needs for social connections are satisfied. As a result, the dyadic context temporarily lowers the importance of using the time donation decision to satisfy social needs. We predict that this should lead to lower time donations of dyads relative to individuals. However, the goals fulfilled by money donations, being less social, do not change when individuals decide alone or in dyads: individuals always desire to express their values and enhance the self, whether or not they are in a pair (Ariely et al., 2009). Thus, we do not anticipate any differences in the monetary donations of dyads and individuals. We test these predictions in four studies.

In Study 1, participants (n=248) were either paired to make joint decisions (n=98 pairs) or made the same decisions individually (n=52). Pairs/individuals imagined that they were shopping together/alone when they noticed a donation campaign for helping premature babies. They indicated the amount of money (\$)/time (hours) they were willing to donate to the campaign together/alone. Dyads (M=1.49 hours, SD=1.69) were willing to donate less time than individuals (M=2.65 hours, SD=2.58),  $F(1, 144)=10.66, p=.001, \eta_p^2=.07$ .

There was no difference in the monetary donations of dyads and individuals,  $p=.36$ .

Study 2 replicated these findings using real monetary and time donations. Participants (n=135) completed the study for \$6 and were assigned either to the individuals (n=55) or dyads condition (n=40 pairs). Participants read information about a charity called The World Needs More Love Letters ([www.moreloveletters.com](http://www.moreloveletters.com)). Participants were asked to write an encouragement letter to a couple Jon and Jasmine, who were both battling cancer. The number of words in the letters participants wrote represented the time donation measure. Finally, participants were given their compensation and a donation envelope in which they could donate some of it to Jon and Jasmin. Results showed that dyads (M=35.38, SD=29.76) wrote encouragement letters that contained less words than those of individuals (M=48.22, SD=51.67),  $F(1, 90)=6.82, p=.01, \eta_p^2=.03$ , controlling for amount of time spent on the task ( $b=.37, t(90)=12.76, p<.0001$ ). There was no difference in the monetary donations of dyads and individuals,  $p=.22$ .

In Study 3 (n=119), dyads (M=1.70 hours, SD=.96) were willing to donate less hours to help an organization called HopeLab with a fundraising event than individuals (M=2.43 hours, SD=1.85),  $F(1, 74)=4.90, p=.03, \eta_p^2=.06$ . There was no difference in the monetary donations of dyads and individuals,  $p=.42$ . Importantly, we find that dyads (M=4.27, SD=1.46) perceived lower happiness of giving time than individuals (M=4.76, SD=1.42),  $F(1, 117)=2.99, p=.09$ . This finding suggests that dyads might have a proximal satisfaction of their social needs (the other person), which reduces the value of outside opportunities for social utility.

In Study 4, we provide direct evidence of this mechanism using married couples. Participants (n=307) were recruited on MTurk and asked to indicate their relationship status. Participants who were single (n=131) represented the group of individuals and reported how many hours/what percent of income they donated each month. Participants who were married (n=176) represented the group of dyads; they reported the amount of time/money they donated jointly as a couple each month. All participants indicated the extent to which they felt that their needs for social connections were satisfied. To account for excess number of zeros on the time donation DV (78.4%), a Zero-Inflated Poisson regression was run: couples donated less time each month than single participants ( $b=-.28, \text{Wald } \chi^2(1)=10.79, p=.001$ ). There was no difference in the percent of income donated by couples and individuals,  $p=.87$ . Importantly, couples (M=4.81, SD=1.47) believed that their social connection needs were satisfied to a larger extent than single participants (M=4.27, SD=1.81),  $F(1, 287)=7.98, p=.005$ , and the satisfaction of social connection needs mediated the effect of decision-maker on time donation ( $b=.21, SE=.12, 95\%CI: .050, .555$ ).

Taken together, this research contributes to the pro-social behavior literature by being the first to compare the joint pro-social decisions of dyads and individuals, as well as offers important implications for organizations which rely heavily on volunteering couples (e.g., schools counting on parents' time donations).

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# The Psychology of Fun: Inquiry into Consumers' Fun Experiences

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## EXTENDED ABSTRACT

One prominent pleasure construct that plays a vital role in people's consumption is fun. The experience of "having fun" is ubiquitous among today's consumers, who spend considerable amounts of time and money on fun activities such as a week-long cruise. Moreover, firms frequently promote "fun" as an attractive promise in their advertising messages and strategically position themselves (e.g., Virgin Airlines) as fun brands.

Despite its growing presence as a unique concept in real-world circles, fun has yet to receive adequate academic attention as a psychological construct on its own right. Most of what is considered research on "fun," has utilized the word as a proxy of experiential utility (Babin et al., 1994) with little regard for its psychological contents (Alba & Williams, 2013; Pham 2013). Thus, the main goal of this paper is to propose a theoretical framework on the psychology of "having fun" in consumers' lives, and present fun as a unique construct, differentiated from related concepts such as happiness.

To reach this objective, we adopt a multi-method approach with an inductive focus, based on data consisting of 21 depth interviews, 335 narrative experiences, and 1,600 selfies.

## METHODOLOGY

To capture the full range of the phenomenon, we conducted three types of studies in different modalities (oral, written, and pictorial), broadening the scope of our understanding of fun in multiple contexts.

**Depth Interviews.** 21 interviews were conducted in the phenomenological tradition (Thompson et al. 1989). Participants ranged from ages 18 to 73, were balanced in gender, and came from diverse socioeconomic backgrounds (e.g., homeless to retired).

**Narrative Experiences.** We recruited participants from an online panel and randomly assigned them to three conditions: Fun, Happy, and Personally Interesting. After participants wrote about their respective experiences, they filled out various process measures that were expected to be more or less representative of fun.

**Prompted Selfies.** We partnered with a mobile market research company that specializes in collecting selfie data. Through its app, we recruited participants and randomly assigned them to one of four conditions (Fun, Happy, Proud, and Relaxed) to upload a selfie regarding that particular moment.

In the following sections, we present (1) a psychological framework of consumer fun, and (2) how fun is distinct from related positive constructs.

## EMERGING FRAMEWORK OF CONSUMER FUN

As shown in Figure 1, the cross-data analyses reveal six major psychological underpinnings of fun: (a) Novelty, (b) Spontaneity, (c) Connectedness, (d) Boundedness, (e) Engagement, (f) Liberation, and two affective layers (not shown in Figure): (g) Increasing Positive Arousal and (h) Decreasing Negative Arousal. In particular, among the six psychological concepts that contribute to fun, we find that "Liberation" is the most crucial element in defining the fun construct. This feeling of liberation is central to both the motivational and experiential aspects of fun- that is, consumers were unwilling to spend their resources on fun consumption if current circumstances were too restrictive (e.g., lack of money, exam week) or if the prod-

uct offerings or situational properties were unfavorable to "let loose" of oneself.

Given the importance of liberation as a major determinant in the fun construct and due to space limitations, we present a more detailed analysis only for this dimension below.

## Liberation

The concept of liberation can be found similarly in the Epicurean ideology of "ataraxia" which represents freedom from mental discomfort as the highest order of pleasure (O'Keefe 2010). While meaningful consumption (i.e. "eudaimonia") plays a significant role in people's lives, we argue that fun as a modern day epithet of *ataraxia* is also critical to understanding well-being in consumer psychology. In particular, we identify three sub-categories of liberation as (1) Freedom from worries, (2) Carefree mentality, and (3) Release from tension. For instance, a 27 year old teaching assistant narrates about her family trip on the Disney Cruise as, "Disney- I feel like it's not just for kids... but just to see adults sing Frozen songs, and just be... Carefree! Just to see people carefree, not caring what anybody thinks, singing all the songs, getting on all these rides, I find that fun."

## FUN AS A DISTINCT PLEASURE CONSTRUCT

We primarily focus on the differences between fun and happiness, as these two constructs are closely related, and have substantial implications to consumption experiences (e.g., Nicolao et al. 2009). The results below are primarily from the narrative experiences data and we leave out results from selfies due to space limitations.

## Results

Participants in the happy condition reported the highest level of meaningfulness ( $p < .01$ ). People in the fun condition reported that time progressed faster and was more fun than the happy condition (all  $ps < .05$ ). More importantly, participants in the fun condition reported significantly higher feelings of liberation ( $p < .001$ ) and connectedness ( $p = .08$ ) than the happy condition. LIWC analysis showed that between conditions, "friends" was higher in the fun condition ( $p = .06$ ) and "family" was higher in the happy condition ( $p < .01$ ).

## Discussion

We find evidence that consumers distinguish fun experiences as more fun, less meaningful, and progressing faster than happy experiences. These results suggest that consumers readily differentiate the two constructs. Interestingly, people felt happier with their family and more fun with their friends, implying that the content of connectedness matter, over and beyond social intimacy or belongingness.

## DISCUSSION

This research presents a novel framework of fun, as a unique construct. We also show that consumers readily distinguish fun as a unique construct, different from related concepts as happiness.

Based on these findings, we define fun as an affective pleasure construct identified by a strong sense of engaged liberation, which often arises from bounded, novel experiences that involve moments of spontaneity and connectedness with others.

Our framework and investigation contributes to the growing literature on hedonic consumption by providing a content-rich insight into a highly relevant pleasure construct. Moreover, the multi-meth-



od approach expands the epistemological lens traditionally used in consumer research. Future studies could operationalize and manipulate the underlying mechanisms to further validate the framework, and distinguish from other related concepts as humor and play.

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# Do Altruistic Individuals “Share” More Contents on Social Media?

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## EXTENDED ABSTRACT

The power of video contents to “go viral” has sparked much interest in managerial and academic circles. Despite the prevalence of the “Share” function in almost all online social network services and its important implications in viral marketing, the psychological processes and motivational factors underlying the behavior of “sharing” contents on social media have been understudied.

Word-of-mouth literature shows that altruism is a viable predictor of sharing information in consumer contexts (Sundaram et al. 1998), but it is unclear whether altruistic individuals would share more contents on social media. Purely altruistic acts typically incur a significant “cost” to the benefactor, but sharing on social media requires minimal costs while exposing the self to the scrutiny of many others. Thus, even if altruism increases sharing on social media as in other word-of-mouth contexts, the primary motive is more likely to be self-oriented (Berger 2014) than other-focused (Dichter 1966). Indeed, Baumeister (1982) theorizes that the self-presentational motive of gaining favorable evaluations from others often accounts for altruism and that heightening such concern will promote prosocial behaviors. Yet, this relationship has not been directly tested.

In this research, we examine the relationship between altruism and self-presentation motives in the context of sharing contents on social media. We propose that self-presentation concerns lead altruistic individuals to share more contents on social media, because they view sharing as a means to gain favorable evaluation from others. As suggested by Baumeister (1982), we expect that altruistic individuals will be motivated to gain favorable evaluations from others, and share contents to reap positive rewards of feeling good about the self.

Through a series of 4 studies, we provide novel evidence that indeed altruistic people are more likely to share contents on social media because of self-presentational concerns and rewards of positive feelings about the self. Interestingly, low altruistic individuals will also share more video contents when self-motivational cues are triggered, and this concern for others’ evaluations is dormant for such individuals in neutral states on social media. The findings contribute to our understanding of the relationship between self-oriented motives and altruism, and offer insight into the psychology of sharing video contents on social media, an important and pervasive phenomenon that underlies viral marketing.

## PILOT STUDY

In this study, we test whether individuals with high altruism are more likely to have (1) higher self-presentational concerns and (2) belief that others are judging them, especially in social media.

We recruit 233 people and measure the extent of self-presentational concerns when thinking about sharing video contents on Facebook. Additionally, participants imagine that they had just shared a video, and report their belief on others’ judging them on social media. Altruism was positively correlated with self-presentational concerns ( $p < .01$ ). When participants were grouped by levels of altruism, only the high altruistic individuals showed a significantly greater sensitivity to judgment by others on social media. Furthermore, self-presentational motives mediated the positive relationship between altruism and belief of others’ judgment when sharing on Facebook.

Thus, a stronger belief of others’ judgment on the self was present in high altruistic individuals, who in turn were more motivated

to present themselves favorably and accurately by “sharing” video contents on social media.

## STUDY 1

We investigate how altruism specifically relates to sharing on social media by measuring people’s actual behaviors on Facebook.

We recruited 267 online participants to login to their Facebook accounts and browse their “Activity Log” to report the number of activities (e.g., “Like”) conducted during the previous month. We also measured altruism (Philippe Rushton et al. 1981), self-monitoring (Snyder 1974), and cooperativeness (Cloninger et al. 1993). Only altruism positively predicted “sharing” on Facebook ( $p < .05$ ), while other traits showed negative or null effects.

The results of study 1 is particularly reliable given that we establish an effect by measuring actual past behaviors.

## STUDY 2 & 3

If self-presentational concerns motivate altruistic individuals to “Share,” we posit that triggering sensitivity to others’ judgments on the self should also increase likelihood of sharing on social media for non-altruistic individuals, and cancel out the positive correlation of altruism on sharing. In contrast, if self-presentational motives are the main mechanism, priming other-focused motives (i.e., for the enjoyment of others) should not moderate the positive relationship between altruism and sharing online. In the following studies, we test this hypothesis by directly manipulating the sensitivity to others’ judgment, and also measure positive feelings of the self (e.g., proud) as a mediator.

All participants engaged in a hypothetical task of watching a 15 second video (pretested for moderate likability) and were asked to imagine sharing the video on Facebook. We primed individuals to think about others’ passing judgment on them in one condition or to think about how others would enjoy the video (study 3), while no additional instructions were given in the control condition (study 2). In study 3, we measured positive feelings to test whether self-oriented rewards were mediating sharing contents on social media.

As expected, the main effect of altruism was positive and significant in all studies ( $p < .01$ ). More importantly, the interactions between altruism and the judgment manipulation were significant in both studies. The conditional effects of the judgment manipulation increased the likelihood of sharing for the low altruistic people, but had no effect in the high altruistic individuals. Furthermore, positive feelings showed mediated moderation patterns ( $p < .05$ ).

## CONCLUSION

Through a series of five studies, we present a robust finding that altruistic individuals are more likely to share contents on social media. We find support that self-presentational motivations – gaining a favorable evaluation from others – account for this peculiar relationship. Our evidence shows that altruistic individuals are more sensitive to others’ judgments on social media, and that positive self-oriented feelings mediate their intention to share contents online.

One limitation of the current research is that only one type of contents (video) is used, limiting the generalizability of the findings. Although we show a positive relationship between sharing and altruism with actual past Facebook activities data, future research should address this issue by testing additional types of contents.

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# An Idea Opposed to Another Idea is Always the Same Idea: Reconsidering the Materialistic Aspects of Voluntary Simplicity

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## EXTENDED ABSTRACT

In consumer research literature, voluntary simplicity is generally understood as a non-materialistic or an anti-materialistic lifestyle. Our study of Polish simplifiers stands in contrast to this view as it reveals the importance that possessions can have in the lives of our participants. The participants' relations to objects reveal a form of materialism that we describe as negative (vs. positive) and that emphasizes non-accumulation while leaving possessions a central place in the lives of consumers.

Voluntary simplicity can be defined as “the choice out of free will [...] to limit expenditures on consumer goods and services, and to cultivate non-materialistic sources of satisfaction and meaning” (Etzioni 1998, 620). It implies regaining control over one's own life and searching for meaning while avoiding mass consumption and accumulation (Elgin 1981; Zavestoski 2002). Voluntary simplicity is often associated with environmental values, ethical practices, material simplicity, distance from money, freedom, self-sufficiency, self-knowledge, and the spiritual world (Cherrier 2009; Cherrier and Murray 2007; Elgin and Mitchell 1977; Etzioni 1998; Gregg 1936; Huneke 2005; Leonard-Barton 1981; Moisander and Pesonen 2002; Shama 1981, 1985; Shaw and Newholm 2002). With such a conception of voluntary simplicity, it is not surprising to find close links between voluntary simplicity and materialism—or, specifically, its rejection—in academic works and other discourses on simplifiers (Etzioni 1998; Craig-Lees and Hill 2002; Nepomuceno and Laroche 2015, 2017). Unfortunately, this emphasis on a negative correlation between voluntary simplicity and materialism leads to a wrong assumption, namely that voluntary simplicity separates consumers from the material world. And yet, it would not be counterintuitive to think that the fewer possessions we have, the more we care about them and develop special relationships with them (Hill and Stamey 1990). Belk (1988) also points out that possessions are not mere objects but imbued with meanings that extend the self. Even the absence or refusal of objects can constitute a way of shaping the self (Lastovicka and Fernandez 2005; Hogg, Banister, and Stephenson 2009).

The results of a two-year ethnography of Polish simplifiers highlight materialistic aspects of voluntary simplicity that had not previously been underlined or had been emphasized very little. As in previous studies, we have observed that participants are motivated to live with fewer possessions without necessarily spending less (material simplicity), to take control of their lives (self-determination), and to better explore their inner lives (personal growth). It is interesting to note that the vast majority of participants pay little attention to ecological concerns or ethical principles, even though other studies have identified these concerns as motivating factors for simplifiers (Leonard-Barton 1981; Alexander and Ussher 2012; Shaw and Newholm 2002). One possible explanation for these differences may come from Poland's socialist past, which is more conducive to the development of a less ideological and mainly self-oriented version of voluntary simplicity. This would coincide with the results that Kala, Galčanová, and Pelikán (2017) obtained in the Czech Republic, another formerly socialist country. Last but not least, the results show how participants can attach great importance to their possessions and show relationships with objects that are very similar to those developed by materialistic consumers.

While voluntary simplicity is generally associated with a rejection of or indifference to materialism, the widely accepted definitions of materialism by Belk (1984), Richins and Dawson (1992), Richins and Rudmin (1994), and Shrum et al. (2013) confirm that our participants are materialistic and that there is, consequently, a form of voluntary simplicity that is materialistic. While the Polish simplifiers we observed and questioned proclaim themselves to be anti-materialists, they unknowingly reinforce the materialistic consumer culture by continuing to attach great importance to what they possess and reject. These results support Shaw and Newholm (2002) as well as Shaw and Moraes (2009), with the idea that voluntary simplicity occurs within, not outside, a consumerist market system. These results also reinforce the observations by Nepomuceno and Laroche (2015) that materialists themselves can sometimes resist consumption.

Finally, this research is an opportunity to rethink materialism. The results emphasize the critical role that possessions play in the lives of participants, but by their absence or scarcity and without the simplifiers intending to accumulate more. Therefore, we encourage researchers in our field to move away from the idea of a materialism that would only or mainly be reduced to the accumulation of goods. Instead, we propose to differentiate between positive materialism, which encourages accumulation, and negative materialism, which favors non-accumulation while leaving possessions a central place in the lives of consumers. We end this extended abstract by saying that negative materialism is potentially a durable solution and could respond to Scott, Martin and Schouten's (2014) call for new relationships with materiality.

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# When Sharing Isn't Caring: The Influence of Seeking the Best on Sharing Favorable Word of Mouth about Unsatisfactory Purchases

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## EXTENDED ABSTRACT

Past word of mouth (WOM) research typically finds that, if consumers share WOM with others, it tends to be consistent with actual perceptions (Berger 2014). Thus, a negative consumption experience, such as an unsatisfactory purchase, tends to elicit negative (vs. positive) WOM. In our work, we consider when the opposite may be true. Specifically, we examine the possibility that a goal of attaining the best, or maximizing, enhances consumers' tendency to share *favorable* WOM about unsatisfactory purchases.

Prior research demonstrates that when consumers have a goal of attaining the best, they are concerned with not only getting the best, but also being best relative to others (Weaver et al. 2015). When those seeking the best, or maximizers, make an unsatisfying purchase, it signals that they have failed to attain an objectively optimal outcome, which elicits strong negative feelings (e.g., regret; Schwartz et al. 2002). However, their objectively poor decision can still be relatively good if others make the same poor decision, which can be encouraged by speaking favorably about the bad purchase (Berger 2014). Extending this notion, we propose that maximizers (vs. non-maximizers) will be more likely to share favorable WOM about their unsatisfactory purchase, because they want others to make the same poor decision to enhance the relative standing of and subsequent feelings toward their own outcome.

We further posit that maximizers will only exhibit this behavior when sharing WOM with interpersonally close (vs. distant) others, as close others are a more consequential source of comparison (Festinger 1954), making their outcomes especially important in determining the relative standing of consumers' own choices. Finally, we consider the downstream consequences of maximizers' conduct, proposing that when they successfully persuade others to make their same poor purchase, they will feel better about their own purchase, but will also experience heightened feelings of guilt because of their deceptive behavior (Hoffman 1982). We tested and found support for our predictions in five studies.

In **study 1**, participants recalled a past unsatisfactory purchase, then listed either a close friend (close other) or acquaintance (distant other). All participants then reported their likelihood of recommending their purchase (sharing favorable WOM) to the other. They also indicated how much better they expected to feel about their own purchase if the other made the same purchase. Finally, after a filler task, participants reported chronic maximizing tendencies (Diab et al. 2008).

Supporting our predictions, maximizing had no effect on word of mouth in the distant other condition ( $\beta = .06, t = .53, p = \text{NS}$ ). However, in the close other condition, it enhanced the tendency to share favorable word of mouth about unsatisfying purchases ( $\beta = .34, t = 2.83, p < .01$ ). Moreover, this effect was mediated by maximizers' heightened expectations that they would feel better about their own purchase if close (but not if distant) others made the same purchase (95% CI = .0087 to .0649).

**Study 2** manipulated maximizing via an essay task, then asked participants to imagine three scenarios in which an unsatisfactory purchase was either completed or merely considered. After imagining each scenario, participants listed a close other and reported their likelihood of recommending and saying good things about their purchase (favorable WOM) to that other (7-pt scales). Consistent with

expectations, when the purchases were completed, participants in the maximizing condition were more likely to share favorable WOM ( $M = 4.36$ ) than those in the non-maximizing condition ( $M = 3.68; p < .05$ ). However, this effect was unexpectedly reversed when the purchases were merely considered, as participants in the maximizing condition were marginally *less* likely to share favorable WOM ( $M = 3.04$ ) than those in the non-maximizing condition ( $M = 3.71; p = .07$ ).

**Study 3** was similar to study 1, but after listing a close other and indicating their likelihood of saying good things and encouraging the other to make their same unsatisfying purchase (favorable WOM), they also reported their concern with enhancing the relative standing of their purchase, and how much better they expected to feel about their own purchase if the other made the same purchase. As predicted, maximizing promoted the tendency to share favorable WOM about unsatisfying purchases ( $\beta = .11, t = 1.94, p < .05$ ), and this effect was mediated by maximizers' heightened concern with enhanced relative standing, which led them to believe they would feel better about their purchase if a close other made the same purchase (indirect effect = .019, 95% CI = .0015 to .0436).

**Study 4** replicated past studies in an actual choice context, and considered the downstream consequences of maximizers' behavior. Participants (students) reported chronic maximizing tendencies, then completed a pen task in which they chose a pen from two options, learned their chosen pen was supposedly inferior (unsatisfying), and then anonymously shared WOM (how favorable their own pen was) with a purported fellow student, who would later choose from the same assortment, and whose choice would be revealed. Participants also indicated their expected decision regret if the fellow student chose the same pen. Supporting predictions, maximizing enhanced the tendency to share favorable WOM ( $\beta = .33, t = 2.52, p < .05$ ), because maximizers expected their decision regret would be reduced if the fellow student chose their pen (indirect effect = .095, 95% CI = .0026 to .2830). Following a 10-minute delay, participants learned the fellow student had supposedly chosen their pen, and they indicated their actual choice regret, as well as current feelings of guilt. While maximizers' choice regret was diminished following this information ( $\beta = -.36, t = -2.75, p < .01$ ), their guilt was enhanced ( $\beta = .28, t = 2.07, p < .05$ ).

**Study 5** was identical to study 4, except it manipulated whether the purported fellow student would choose between participants' pen and a superior or an inferior alternative. In the former condition, maximizing's positive effect on WOM was replicated ( $\beta = .37, t = 3.06, p < .01$ ), but in the latter condition, it was attenuated ( $\beta = .007, t = .05, p = \text{NS}$ ).

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# How Awe Might Be Awesome: The Role of Awe in Consumers' Food Consumption and Perceptions of Misshapen Produce

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## EXTENDED ABSTRACT

Consumers face numerous food choices that impact the well-being of themselves, the environment, and society. One such issue which is starting to receive greater attention is that of food waste. Nearly one-third of food produced is wasted globally in developed countries (Loebnitz et al 2015). Thus, understanding how consumer choices and perceptions contribute to food waste and identifying interventions that reduce waste have numerous benefits. In this research, we explore the role of awe in consumers' food consumption. Awe is a "moral, spiritual, and aesthetic" emotion (Keltner and Haidt 2003, p.297) that has been found to play a role in consumers' prosocial behavior (Piff et al 2015). Further, it has a number of features that suggest it may influence consumer food choices relevant to food waste.

Two factors that contribute to food waste are leftovers (Dewey 2017), particularly of vices which are more likely than virtues to be wasted (Kim and Kim 2016), and misshapen produce (Loebnitz et al 2015). In regards to leftovers, engaging in virtue food consumption is regarded as normal (Rook 1987) whereas engaging in vices elicits guilt (Ramanathan and Williams 2007). Recent research suggests that since consumers feel guiltier when they consume vices, they are more likely to leave leftover vices than leftover virtues (Kim and Kim 2016) which contributes to food waste. Related to misshapen produce, each year, 30-40% of produce is discarded, regardless of whether it is healthy to eat (USDA 2016). Thus, this situation also contributes to food waste (Loebnitz et al 2015).

In this research, we show that awe influences both consumers' consumption of virtuous foods and their perceptions of misshapen produce. Awe has been shown to shift one's focus from the self to others resulting in a diminished self (small self) and to make people feel more connected to nature and other people around them (Keltner and Haidt 2003; Shiota et al 2007). Accordingly, this feature might increase consumers' desire to be healthy and live longer by engaging in virtuous food consumption (H1). Additionally, feelings of small self have been shown to increase consumers' well-being and life satisfaction (Rudd et al. 2012; Piff et al. 2015). Thus, we propose that awe's influence on small self may increase consumers' desire for virtuous foods (H2). Further, feelings of awe can elicit perceptions of aesthetics and beauty (Keltner and Haidt 2003). Therefore, awe's ability to shift perceptions towards beauty and to enable a greater desire for nature (Piff et al 2015) could increase consumers' purchase intentions (H3a) and perceptions (organic/natural) towards misshapen produce (H3b). However, such effects may be affected by the importance consumers place on appearance. Previous research shows that perceptions of beauty impact consumers' behaviors (e.g. Eagly et al 1991; Lee et al 2015) which is referred as consumer vanity (Netemeyer et al 1995). Building on that, we define food vanity as the importance an individual attaches to the physical appearance of food. We propose that awe's effects on purchase intentions and perceptions of misshapen produce will be strongest for those who care about how their food looks (high level of food vanity; H4a-b).

Study 1 shows that awe increases participants' desires towards virtuous foods. Participants from Amazon Mechanical Turk (N=137) were randomly assigned to view an emotion-inducing video (awe, neutral). Results confirmed the effectiveness of the manipulation ( $M_{awe}=4.8$ ,  $M_{neutral}=3.69$ ,  $p<.002$ ). While the awe and neutral condi-

tions also differed with respect to happiness and peace ( $p's<.05$ ), these emotions did not predict the DVs when we included them as covariates in the main model ( $p>.4$ ). Participants indicated their likelihood of choosing virtuous and vice food options (a healthy (virtue-framed) chocolate, tasty (vice-framed) chocolate, and six snack options (3 virtues, 3 vices)). Consistent with H1, participants in the awe condition were marginally more likely than those in the neutral condition to prefer the virtue-framed chocolate ( $M_{awe}=4.91$ ,  $M_{neutral}=4.37$ ;  $F(1,136)=3.03$ ,  $p=.08$ ) and the virtue food options ( $M_{awe}=4.51$ ,  $M_{neutral}=4.25$ ;  $F(1,136)=2.92$ ,  $p=.09$ ). A bootstrap analysis revealed a significant mediation by small self (95% CI lower-bound=.11, Clupper-bound=.64), supporting H<sub>2</sub>.

Study 2 shows that awe increases participants' positive perceptions and purchase intentions towards misshapen produce. Participants (N=504 mTurkers) watched either an awe-eliciting or neutral video (Kaplan-Oz and Miller 2017). Results confirmed the effectiveness of the manipulation ( $M_{awe}=4.92$ ,  $M_{neutral}=3.53$ ,  $p<.001$ ). The awe and neutral conditions also differed with respect to happiness and peace ( $p's<.05$ ) but when we included them as covariates in the model, neither predicted the DVs ( $p>.5$ ). Participants rated their perceptions (organic/natural) and likelihood of purchase for three different foods (apple, carrot, eggplant; Loebnitz et al 2015) of varying abnormality. Finally, participants completed food vanity measures. A repeated measures analysis tested the impact of food shape abnormality, emotion and food vanity on buying intentions for the three food items and revealed a significant main effect for food abnormality ( $F(2, 492)=105.575$ ,  $p<0.001$ ). Participants were much less likely to purchase the extremely abnormal foods ( $M=2.95$ ) compared to normal ( $M=5.23$ ,  $p<.001$ ) and moderately abnormal foods ( $M=4.36$ ,  $p<.001$ ). The main effect for emotion was not significant ( $p > .4$ ), even though the means were in the expected direction ( $M_{awe}=4.21$ ;  $M_{neutral}=4.14$ ).

As expected, the results revealed a significant food vanity x abnormality interaction ( $F(2,492)=16.887$ ,  $p<.001$ ), with those high in food vanity less likely than those low in food vanity to purchase moderately ( $M_{high}=4.05$ ,  $M_{low}=4.67$ ) and extremely abnormal produce ( $M_{high}=2.09$ ,  $M_{low}=3.80$ ). However, as predicted in H4, this interaction was qualified by a marginally significant emotion x abnormality x food vanity interaction ( $F(2,492)=2.49$ ,  $p=.08$ ). The negative effects of food vanity on purchase intentions of misshapen produce were reversed for those in the awe condition for extremely abnormal produce ( $M_{awe-highV}=2.28$ ,  $M_{neutral-highV}=1.90$ ).

Similar results were obtained for perceptions of the food as organic/natural. Participants were less likely to perceive extremely abnormal produce as organic/natural ( $M=4.23$ ) compared to normal ( $M=5.23$ ,  $p<.001$ ) and moderately abnormal foods ( $M=5.07$ ,  $p<.001$ ;  $F(2,492)=23.708$ ,  $p<.001$ ). The main effect of emotion was not significant ( $p>.4$ ). There was a significant food vanity x abnormality interaction ( $F(2,492)=9.871$ ,  $p<.001$ ), with those high in food vanity less likely than those low in food vanity to purchase moderately ( $M_{high}=4.85$ ,  $M_{low}=5.31$ ) and extremely abnormal produce ( $M_{high}=3.64$ ,  $M_{low}=4.82$ ). However, the 3-way interaction with emotion failed to reach significance ( $p=.2$ ), although the means followed the same pattern as for purchase intentions.

Thus, across two studies, we find that awe influences consumers' food purchasing behavior and perceptions. Awe increased con-



sumers' preferences for virtue foods and increased their perceptions and likelihood of purchasing misshapen produce (for those high in food vanity). These findings have implications for alleviating food waste.

Food waste is a major concern of our society. While some research has explored the effect of negative emotions (e.g., shame, regret, guilt; Sirieix et al 2017) on consumers' attitudes and behaviors related to leftovers, the role of positive emotions (such as awe) has not been studied nor has the impact of emotion on perceptions of abnormally shaped food. Our research highlights the impact of awe as a potential intervention for reducing food waste caused by leftovers and misshapen produce. This research contributes to an increased understanding of the role of awe in consumer behavior. Additionally, this research contributes to consumers' food consumption literature by presenting the positive role of a unique emotion in increasing consumers' healthy food consumption which accordingly contributes to their wellbeing.

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# With or Without You: How Second Person Pronouns Engage Listeners

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## EXTENDED ABSTRACT

What makes cultural products popular? Could products that literally speak to “you” be more engaging? Academics have long been interested in whether the use of second person pronouns (e.g., you, your, and yours) shapes audience involvement (Pennebaker 2011). While some have argued that this small category of words seems to enhance engagement (e.g., increasing likes of online posts, Cruz et al. 2017), other work has found little impact of second person pronouns on listeners (Packard et al. 2018).

We predict that “you” pronouns do enhance engagement with listeners. Importantly, however, rather than being narratively transported (Escalas 2007) as the driver of a story or by making them the focal subject or actor (e.g., “You’re driving down the street...”) as described in research on self-referencing (Burnkrant and Unnava 1995; Meyers-Levy and Peracchio 1996), we propose that “you” pronouns engage audiences by inducing a feeling of social attachment (Hazan and Shaver 1990). In short, “you” pronouns could work by evoking a “you” other than the listener: a person to whom the listener could imagine singing or speaking the words. We examine this proposition—that *other-referencing* underlies the positive impact of “you” pronouns—in three ways.

First, from a linguistic perspective, other-referencing “you” use should typically occur when this pronoun is presented as the object of a protagonist’s thoughts or actions (“I love *you*”) rather than as a self-referencing protagonist (“*You* love me”).

Second, if other-referencing drives the engagement benefit of “you” pronouns, this relationship will be mediated by second person pronouns’ ability to evoke an other to whom the listener is socially attached (Hazan and Shaver 1990).

Third, we expect that the effect of “you” use should be enhanced when second person pronoun references appear in a positively valenced manner. People are motivated to hold positive perceptions of the self, and these perceptions are maintained in part through the belief that others regard them in a positive light (Baumeister 1982, 1998; Leary 1996).

Three studies using field data and lab participants test these predictions.

Study 1 collected a dataset of 4,200 song rankings from the Billboard charts across 1,879 unique songs. We then captured each song’s lyrics and a variety of covariates (e.g., artist name, radio airplay). The lyrics were processed to identify all instances of second person pronouns. Independent judges coded whether each “you” appeared in an other-referencing or self-referencing role, as well as the valence of each “you” usage.

Results indicate that the more “you” pronouns that appear in a song, the more successful that song is (reverse-coded chart rank  $B = .19, t = 3.35, p < .001$ , model 1). This result was robust to a variety of controls (model 2).

Songs were more successful the more they mentioned “you” as the focus of someone’s attention (other-referencing;  $B = .1, t = 3.08, p = .002$ ). The number of “you” pronouns that invoked the audience as the actor themselves (self-referencing) or that were unassigned, however, had no effect ( $t_s < 1.48, p_s > .14$ ; models 3 and 4). Songs were also more successful if the “you” uses were judged to be more positive ( $B = .58, t = 2.73, p = .006$ ).

Study 2 asked 200 participants to report any song they had heard, and their attitude towards it. We then measured other-referenc-

ing (e.g., “Do the lyrics make you think about someone you know?”). Lastly, we collected measures for alternative explanations. We obtained the lyrics for each of the participant-reported songs to generate “you” pronoun statistics for each song. Independent judges coded each “you” use as more consistent with self- or other-referencing.

Regression analysis revealed that “you” pronouns increase song liking ( $B = .05, t = 2.56, p = .01$ ). This relationship was mediated by the song’s ability to evoke another person in the participant’s own life (indirect effect = .02, 95% CI [.008, .046]). Neither a perceived connection with the singer nor seeing into the singer’s personal life mediated the relationship, casting doubt on these alternatives.

Replicating the field data results, the impact of “you” pronouns was driven by the number of use cases judged to be other-referencing ( $B = .03, t = 2.50, p = .01$ ), but not by those judged as self-referencing ( $B = -.01, t = -1.02, p = .31$ ).

Study 3 sought to replicate the main effect of “you” pronouns by manipulating pronoun use in experimenter-controlled lyrics, and test for moderation of the effect by the extent to which the song’s content evokes a salient other.

Participants ( $N = 226$ ) who were currently involved in a romantic relationship were primed to think about their partner using a thought listing exercise, and then indicated their attitude towards this person. Participants were then presented with one of three versions of a positively valenced love song featuring one of either “you,” “s/he” or “it/that” pronouns (e.g. “Nothing can take [your, her (or his), its] place”).

Corroborating prior results, the version of the song with “you” pronouns was liked significantly more than the “s/he” version ( $B = .43, t = 3.40, p < .001$ ) and the “it/that” version ( $B = .31, t = 2.34, p = .02$ ). Consistent with the notion that the song was connecting them to others in their own life, the positive effect of “you” pronouns on attitudes towards the positive love song was stronger among people who had more positive attitudes towards their relationship partner (+1SD,  $B = -.53, t = -.377, p < .001$ ), but had a weaker effect among people who had less positive attitudes towards that partner (-1SD;  $B = .11, t = .56, p = .58$ ).

This research demonstrates that “you” pronouns have a significant impact on audience engagement. Textual analysis of thousands of songs and two lab studies suggest that second person pronouns engage the listener by evoking a personal other. This work deepens our understanding of when and why second person pronouns may succeed (or fail) in engaging the listener, offering new insights for both consumer and linguistic psychologists

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# The Neutral Face of Blue: How Color Can Make Consumers Stay Sensitive

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## EXTENDED ABSTRACT

According to *The Largest U.S. Charities*, released by Forbes (Forbes 2017), more than half of the top 50 charities in the US use red, blue, or both in their logos. Despite this widespread use of red and blue, limited research has investigated the use of these colors in donation appeals. A logo's color, especially its hue, is known to influence marketing outcomes such as perceived benefits or brand personality (Bottomley and Doyle 2006; Labrecque and Milne 2012). The color of a logo may also be associated with meaningful concepts and even unrelated consumer inferences about the entity that the color represents (e.g. ethicality of a practice; Sundar and Kellaris 2017). Past research on color and donation appeals studied how background colors used in donation appeals influenced donation (Choi, Singh, and Rangan 2011; Mehta et al. 2011). However, the influence of logo color, and hues in particular, on prosocial intentions is less understood.

The current research investigates how the color of a charity logo influences consumers' sensitivity to the charitable cause and to donation. One aspect of this is sensitivity to the number of victims. As charitable causes often respond to natural disaster or disease and the number of donation recipients can be massive, examining sensitivity to victim numbers can be crucial. Another important criteria when interpreting the charitable cause is the social distance between donor and victims. Past research has shown that people indicate a greater willingness to help when the social distance between donor and victim is close (Loewenstein and Small 2007; Small and Simonsohn 2007). Given that many global charities ask donors to give to victims in other countries, the question of whether peripheral cues such as color can change the perception of victims is important.

Studies have shown that blue and red have distinct effects on psychological functioning and human behavior. Mehta and Zhu (2009) showed that red versus blue induces different types of motivation (i.e., avoidance vs. approach) in cognitive tasks. In the domain of advertising, Puzakova et al. (2016) showed that blue (vs. red) can broaden cognitive scope and make individuals more diagnostic in overall evaluation of information. Based on previous research on color, we examine whether the hue of a charity's logo influences potential donors' sensitivity to important objective dimensions of charitable causes (e.g., number of victims, social distance to victims). Specifically, we tested the prediction that, as blue can make donors more diagnostic about the objective information presented in an appeal, potential donors' willingness to donate will show greater sensitivity to the number of victims and the social distance to victims if the charity's logo color is blue rather than red.

In Study 1, we tested whether consumers' donation intention was more sensitive to the number of victims when a blue (vs. red) logo was presented. Participants (N=141) were recruited online to take part in a 2 (victim number: low vs. high) 2 (logo color: blue vs. red) between-subject experiment. Participants were asked to read the donation appeal of a fictitious charity supporting a rare disease and indicate their donation intention. Victim number (30 vs. 3000) and logo color (blue vs. red) were manipulated. A 2 2 ANOVA controlling for participants' gender, age, and income yielded a marginally significant interaction ( $F(1, 134) = 3.56, p = .06$ ). The results show that, when the blue logo was presented, participants indicated a significantly higher donation intention when the number of victims was

high versus low ( $F(1, 134) = 4.59, p < .05$ ). When the red logo was presented, the difference was not significant (*n.s.*).

In Study 2, we used a different charitable cause (child abuse) and added a black logo as a control. Participants were recruited online (N=263) to take part in a 2 (victim number: low vs. high) 3 (logo color: blue vs. red vs. black) between-subject experiment. A 2 3 ANOVA controlling for participants' demographics yielded a significant victim-number logo-color interaction ( $F(2, 254) = 3.60, p < .05$ ). As in Study 1, only when the blue logo was presented, donation intention was significantly higher when the number of victims was high vs. low ( $F(1, 254) = 7.60, p < .01$ ). The difference between victim-number conditions was not significant when a red or black logo was presented (*n.s.*).

In Study 3, we examined how logo color influences prospective donors' sensitivity to victims' social distance (e.g., nationality). We tested the prediction that consumers would donate more money to help socially close victims than to help socially distant victims if the logo of a charitable organization was blue vs. other colors. Participants (N=510) living in the US were randomly assigned to one of six conditions in a 3 (logo color: blue, red, green) 2 (victim nationality: US vs. Africa) between-subject experiment. They were told that children in the US (vs. Africa) were suffering from a rare disease and asked to indicate how much money on a sliding scale (\$0–\$30) they would be willing to donate to the charity. A 3 2 ANOVA yielded a significant logo-color victim-nationality two-way interaction ( $F(2, 504) = 3.30, p = .038$ ). Consistent with our prediction, when the blue logo was presented, participants donated significantly more money when the victims were in the US than when they were in Africa ( $F(1, 504) = 10.02, p = .002$ ). By contrast, when the red ( $F(1, 504) = .00, n.s.$ ) or green ( $F(1, 504) = .01, n.s.$ ) logo was presented, participants donated a similar amount of money, regardless of the victims' nationality.

Overall, our studies show that the hue used in a charity logo of a donation appeal influences consumers' sensitivity to victim numbers and to the social distance to victims, which in turn impacts consumers' donation. Considering the choice of hues in charity logos, our findings have practical implications. Furthermore, our studies contribute to the literature on color and donation by demonstrating that proper use of color can promote sensitivity to the charitable cause and can increase donation with regard to victim numbers and social distance.

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# When Disadvantage is an Advantage: Benevolent Partiality in Consumer Donations

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## EXTENDED ABSTRACT

How should an altruistic consumer choose whom to help? The classical utilitarian answer, championed by the Effective Altruism movement, urges people to choose the charitable alternatives that produce the greatest welfare benefits (e.g., MacAskill 2015, Singer 2015), maximizing the *size* of the benefit and the *number* of recipients who benefit irrespective of their characteristics (Pellegrino 2017). The *size* criterion posits that one should give towards the causes that bring more benefit, which typically and aptly prescribes that, all else being equal, people should help the most disadvantaged. Because of the diminishing marginal returns of wealth, one should, for instance, donate \$100 to a poorer family rather than to a slightly less poor family, because \$100 produces a more sizable benefit for the former (MacAskill 2015, Singer 2015).

The effectiveness of donating to the disadvantaged, however, is contingent on donations directly alleviating the disadvantage; when economic disadvantage (or any other form of disadvantage) is unaffected by one's donation, it does not increase the size of the potential benefit and it is therefore irrelevant for one's donation decision. For instance, although economic disadvantage is more severe in Chad than in Nigeria, one should donate polio vaccines to hospitals in Nigeria (where polio has not been eradicated yet) rather than in Chad (where polio has been eradicated). When disadvantage is orthogonal to the cause, therefore, utilitarianism prescribes that donors should only attend to the *number* criterion: because "everybody to count for one, nobody for more than one" (Bentham 1789/1983), people should give towards the causes that allows benefiting more people as opposed to fewer.

In contrast to utilitarian prescriptions, we document a phenomenon that we call *benevolent partiality*. Across seven hypothetical donation studies, we find that many consumers weigh the well-being of members of disadvantaged groups more than what the disadvantage implies from a utilitarian standpoint, choosing to save the lives of members of more disadvantaged groups even if the same donation allows saving more lives.

In Study 1, participants decided whether to give \$10 towards shipping polio vaccines to a country or mosquito nets to another country—both being fictional third-world countries with a poor socioeconomic outlook. In a between-participants design, we manipulated orthogonally the relative number of beneficiaries across projects and the relative socioeconomic disadvantage of the two countries (e.g., average income, literacy rate). Participants responded much more strongly to the socioeconomic disadvantage in the recipients' country than to the number of people who would benefit from the donation.

In studies 2A-2B-2C, we provide individual-level evidence of benevolent partiality by eliciting participants' direct preferences for saving more people vs. saving people of more disadvantaged groups. Importantly, we took several precautions to make economic disadvantage irrelevant from a utilitarian standpoint: Donations impacted lives saved but not quality of life (i.e., donations do not alleviate disadvantage), and were described as the only means of help available to recipients (i.e., disadvantage cannot be used as a proxy for the inaccessibility of other solutions). We also repeatedly emphasized the restrictedness aspect of the donations, and analyzed our data with and without participants who failed to report in a comprehension check that money would be exclusively used to save lives. We found

that a sizable number of participants (about 40% in our studies) give money to the project in the most disadvantaged country rather than to the one allowing to save more lives (Study 2A), a result that cannot be explained by beliefs that either project will be underfunded (Study 2B), and that replicate when people can allocate their donation across projects (Study 2C).

Further studies addressed several predictors of benevolent partiality. In Study 3, we manipulated whether or not participants were asked to weigh the importance of the choice criteria prior to making a choice, mimicking a typically recommended step in prescriptive models of decision-making. We found that this intervention significantly reduced benevolent partiality, making participants more likely to choose the project saving more lives. In Study 4, we found that donors are particularly sensitive to disadvantage when this is caused by uncontrollable factors (e.g., natural soil type) compared to controllable factors (e.g., overharvesting). Finally, consistent with our moral framework, we found that benevolent partiality is less prevalent among people who have more permissive attitudes towards instrumental harm, a core dimension of utilitarian thinking which captures people's beliefs that sacrifices are acceptable if they produce a larger benefit (Kahane et al. 2017).

Altogether, our findings join recent research documenting how donation decisions are often sensitive to factors other than effectiveness (e.g., Berman et al. 2018; Cryder et al. 2017; Evangelidis and Van den Bergh 2013; Fetherstonhaugh et al. 1997; Small, Loewenstein, and Slovic 2007). Importantly, whereas this literature has typically documented instances of "heuristic ineffectiveness" that is often corrected when people jointly evaluate differently effective charitable options (e.g., Kogut and Ritov 2005), we documented benevolent partiality under the most conservative conditions—with donors evaluating options jointly and deliberately choosing to save fewer lives. Practically, this suggests that highlighting the socioeconomic disadvantage of donation recipients may increase prosocial behavior, even within the context of donations that address needs that are unaffected by disadvantage and do not affect disadvantage.

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# How Passive Form Messages in CSR Advertisement Improve Consumer Reaction to the Campaign

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## EXTENDED ABSTRACT

Corporate Social Responsibility (CSR) literature has documented that running a pro-social campaign provides indirect benefits to companies such as higher purchase likelihood and better perceived product performance (Sen and Bhattacharya 2001; Chernev and Blair 2015). However, these positive benefits are observed only when consumers believe that the company has sincere motive for engaging in pro-social campaign (Drumwright 1996; Ellen, Webb, and Mohr 2006).

One factor that affects perceptions of company's sincere motive for running CSR is company-cause congruence. Company-cause congruence refers to the extent to which the supporting company's core business is associated with the supported charity (Simmons and Becker-Olsen 2006). Some work in CSR and in sponsorship domains has shown that a high congruent campaign is more favored by consumers as it fulfills people's expectations (Pracejus and Olsen 2004; Rifon et al. 2004). By contrast, when there is a low company-cause congruence, consumers are more likely to elaborate on the campaign due to its unexpectedness and often end up with having more negative thoughts about it (Simmons and Becker-Olsen 2006; Koschate-Fischer, Huber, and Hoyer 2016).

Yet another line of research has suggested that high company-cause congruence can signal a greater self-benefit salience (Forehand and Grier 2003; Yoon, Gürhan-Canli, and Schwarz 2006). For example, Yoon et al. (2006) showed that consumers reported high self-benefit salience when a tobacco company was supporting cancer research than when it was supporting environmental charity. Similarly, Forehand and Grier (2003), find that consumers see higher self-benefit salience when a computer software company supports a fight against computer illiteracy versus general illiteracy among adults. When consumers infer that a company runs its campaign with an ulterior motive, their reaction to the company and CSR campaign is generally less favorable (Ellen et al. 2006). Therefore, when a high congruence campaign implies more of a self-centered benefit, positive effect of high congruence campaign will be attenuated.

Linguistics literature has documented that semantically same content can be perceived differently depending on whether it is described in an active or passive form (Turner and Rommetveit 1968; Johnson-Laird 1968; Tannenbaum and Williams 1968). For example, pro-social behavior of a company can be described either in an active form (e.g., Company A supports charity B) or a passive form message (Charity B is supported by company A). Tannenbaum and Williams (1968) documented that sentence form has a functional difference in focus, with active sentence having a more conceptual focus on the actor agent, whereas passive form places more attention on the acted-upon agent. For example, after reading active vs. passive form sentences, participants recalled actor agents more correctly for active sentences, whereas acted-upon agents were recalled better from the passive sentences (Turner and Rommetveit 1968). Difference in conceptual focus also impacts readers' attitudes toward the behavioral agent of an event. Using context of negative events, recent research has shown that people blame the behavioral agent more when the situation is described in active sentences compared to passive sentences (Fausey and Boroditsky 2010).

Extending the prior research on active and passive form sentences to the context of CSR advertising, we examine how consumers react to a pro-social campaign depending on the sentence form of advertising messages and congruence between CSR campaign and the company. Specifically, we argue that active sentence form in a CSR advertisement will focus consumers more on the agent (the company running CSR campaign) highlighting congruency between the company and the cause. By contrast, passive form sentences should de-emphasize the role of the agent (the company running CSR campaign) attenuating the impact that company-cause congruence has on CSR evaluation.

As a consequence, we expect that, when high congruence signals self-benefit, consumer reaction to such CSR campaign will be improved when messages in advertisement are written in passive (e.g., People in need are helped by Company A) as opposed to active (e.g., Company A helps people in need) form. This happens because, by shifting focus from the agent (company) to the acted-upon agent (CSR campaign), passive form CSR messages increase the company's perceived commitment to the campaign. However, since the relationship between congruence and self-benefit does not hold for low congruence, we should not observe these effects.

We test our propositions in four studies. Study 1a and 1b offer evidence of the impact of sentence form on company's evaluation through two different measures of consumer reaction. Study 2 focuses on the impact of sentence form on commitment to the campaign, while study 3 reports the complete path through a significant moderated mediation.

Study 1a employed a 2 (congruence: low vs. high) by 2 (sentence form: active vs. passive) between-subject design. Undergraduate participants ( $n = 173$ ) read about a description of petroleum company, whose core business is responsible for greenhouse effect. Next, participants were asked to examine the company's CSR campaign advertisement. For the high congruence condition, the campaign was about supporting a charity to conserve the natural environment. For the low congruence condition, the campaign was about supporting cancer research. In addition, we manipulated sentence form. For the high congruence condition, active form read "Exxon supports the World Wide Fund for Nature," while the passive form read "The World Wild Fund for Nature is supported by Exxon." For the low congruence condition, the active form read "Exxon supports the National Cancer Institute," while the passive form read "The National Cancer Institute is supported by Exxon." After reading one of four CSR advertisements depending on experimental condition, participants evaluated the company using two seven-point scales (1 = Very negative, 7 = Very positive; 1 = Very bad, 7 = Very good). The two items were averaged to form a composite index ( $r = .95$ ). An ANOVA revealed a significant interaction between congruence and sentence form on evaluation of the company ( $F(1, 169) = 5.19, p = .024$ ). As expected, for high congruence campaign, participants rated the company more favorably when the CSR advertisement used passive than active form messages ( $M = 4.37, SD = 3.73; F(1, 169) = 6.11, p = .014$ ). No difference was revealed for the low congruence condition ( $M = 4.03, SD = 4.23; F(1, 169) = .57, n.s.$ ).

A 2 (congruence: low vs. high) by 2 (sentence form: active vs. passive) between-subject study was conducted with online panel



participants ( $n = 171$ ). The target company was a car manufacturer, which was recently involved in a scandal about environmental pollution. Similar to study 1a, participants read about the target company, and then were exposed to either one of four CSR advertisements depending on experimental condition. The CSR campaign was either supporting natural environment protection (high congruence) or supporting art and culture education (low congruence). Sentence form was manipulated as in study 1a. For the high congruence condition, active form read “Volkswagen supports protection of the natural environment around the world,” while the passive form read “The natural environment protection around the world is supported by Volkswagen.” For the low congruence condition, the active form read “Volkswagen supports art and culture education,” while the passive form read “Art and culture education is supported by Volkswagen.” After reading the advertisement, participants reported intention to participate in CSR campaign on two seven-point scale items. One item was about intention to share the advertisement with their friends on social media (1 = Definitely not share the ad, 7 = Definitely share the ad), and the other one was to report their willingness to participate in the campaign by donating money (1 = Not at all, 7 = Very much). The two items were averaged to form a composite index ( $= .80$ ). Replicating the results of study 1a, an ANOVA revealed a significant interaction between congruence and sentence form on participation intentions index ( $F(1, 167) = 6.39, p = .012$ ). In the high congruence condition, participants expressed higher participation intention with the passive (vs. active) form message ( $= 3.31, = 2.39; F(1, 167) = 4.86, p = .029$ ). No difference was observed for the low congruence condition ( $= 2.41, = 2.98; F(1, 167) = 1.85, n.s.$ ).

First two studies demonstrated the predicted effect of sentence form on improving evaluation of CSR and the company running it, when the pro-social campaign is highly congruent with the company's core business. One potential limitation of previous studies is that the company was also involved in negative consequences related to its core business. To address this limitation, in study 2, participants were directly exposed to a CSR advertisement without reading company's information first to verify that the passive form effect still holds without any prior knowledge about the company.

Further, study 2 measured whether passive form sentence improves perceived company commitment for a high congruent CRS campaign. Given that the passive (vs. active) form shifts focus from the company to the CSR campaign, we expect that it will highlight how committed the company is to its CSR campaign. But this effect will only emerge when the campaign is highly congruent with the cause. This is because consumers attribute self-centric benefit to the company solely when level of company-cause congruence is high. No such attribution occurs when the congruency level is low.

Online panel participants ( $n = 162$ ) read a CSR advertisement of a chocolate company. The target campaign for high congruence condition was helping hungry people in need, whereas supporting building houses for homeless was the campaign in the low congruence condition. After reading the advertisement, participants reported the extent to which they agreed with a statement that the company is truly committed to its CSR campaign on a seven-point scale (1=Strongly disagree, 7=Strongly agree). An ANOVA revealed a significant congruence by sentence interaction on perceived commitment ( $F(1, 158) = 3.70, p = .056$ ). As expected, for the high congruence condition, participants in the passive form condition (vs. active) reported that the company was more committed to its campaign ( $= 4.90, = 4.22; F(1, 158) = 4.10, p = .045$ ), whereas no difference was observed for the low congruence condition ( $= 4.40, = 4.63; F(1, 158) = .49, n.s.$ ).

Study 3 directly manipulated consumer skepticism to examine the relationship between suspicion of self-centered benefit, commitment to CSR and company's evaluation. Prior work demonstrates that suspicion of an ulterior motive decreases evaluation of the agent (Campbell and Kirmani 2000). Holding the campaign constant, we manipulated the level of skepticism toward advertisement in general, and examined whether passive CSR messages improve consumer reaction through greater perceived commitment.

A 2 (skepticism: low vs. high) by 2 (sentence form: active vs. passive) between-subject design study was conducted with online panel participants ( $n = 136$ ). Skepticism toward advertisement was manipulated by asking participants to evaluate an irrelevant product advertisement before main stimuli. In the high skepticism condition, the target product was claimed to be better based on the company's own research, whereas the research was done by independent organization in the low skepticism condition. Next, all participants read the same CSR advertisement of a chocolate company that helps homeless people, as in study 2 low congruence condition. Then they rated perceived commitment of the company to CRS campaign with two items ( $= .89$ ). Finally, the participants evaluated the company with two items as in study 1a ( $= .94$ ). Replicating study 2 effect, an ANOVA revealed a significant interaction between skepticism and sentence form on perceived commitment ( $F(1, 132) = 3.94, p = .049$ ), such that the company seemed more committed with passive (vs. active) messages in high skepticism condition ( $= 4.84, = 4.19; F(1, 132) = 3.35, p = .07$ ), but not in low skepticism condition ( $= 4.46, = 4.80; F(1, 132) = .95, n.s.$ ). Replicating studies 1a and 1b effect, ANOVA showed a marginally significant interaction on company evaluation ( $F(1, 132) = 3.45, p = .066$ ), such that the company was favored more with passive (vs. active) messages in high skepticism condition ( $= 4.77, = 4.14; F(1, 132) = 2.89, p = .091$ ), but not in low skepticism condition ( $= 4.82, = 5.15; F(1, 132) = .85, n.s.$ ). A moderated mediation analysis (model 7, 5000 bootstraps) demonstrated that perceived commitment mediated the interaction effect on company evaluation only for the high skepticism condition (.422, 90% CI: .015, .855).

With four studies, we show that passive form messages in a CSR advertisement improve consumer reaction to the company and its CSR campaign when there is high congruence between the campaign and its core business. We argue that this happens because passive CSR messages reduce suspicion about self-centered benefits from the campaign by shifting focus from the agent (company) to the acted-upon agent (CSR campaign).

This research contributes to a CSR literature by extending prior findings about company-cause congruence. By showing how passive CSR messages improve high congruent campaign evaluation, we highlight a new way to enhance the success of high fit CSR campaign. We also demonstrate the positive effect of high congruence can be improved by signaling the company's commitment. In addition, our findings provide evidence that sentence form influences agent evaluation in the context of CSR campaigns. For managers, this research suggests an easy-to-implement tool that maximizes the positive effect of high fit CSR campaign. Compared to other factors such as length of campaign or donation amount, changing sentence structure is a cost efficient way for companies to improve evaluation and success of their CSR campaigns.

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# To Touch or Not to Touch?: How Touch Influences Decision Confidence

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## EXTENDED ABSTRACT

An unfortunate reality of online shopping is that people do not have the opportunity to touch the actual products. When choosing between different options online, people often wish that they could touch the options in person and believe that doing so would result in an easier choice (Childers, Carr, Peck, and Carson 2001; Zhou, Dai, and Zhang 2007). In most cases, touching provides useful information by allowing people to examine the haptic characteristics of a target including texture and shape, which in turn widely affect attitudes and behaviors (see Krishna 2012 for a review). However, little is known for cases where touching does not provide any useful information. Do people still desire the opportunity to touch and expect touching to be helpful? For instance, do people naïvely believe that being able to touch a bottle of wine would help, even though touching the bottle itself offers no informative advantage? If so, does touching in those cases actually help?

## Theoretical Background

Building on the primordial nature of touch and the ubiquitous use of haptic information, we first posit that people rely heavily on touch. Touch is indeed the very first sense humans develop (Atkinson and Braddick, 1982; Bernhardt 1987), and is also the most fundamental way we explore and interact with the world (Gallace and Spence 2009; Lederman and Klatzky 1987). Touching is ever-more important in consumption contexts as it not only provides important information about the product (Peck and Childers 2003), but also because doing so itself may induce positive affect (Peck and Wiggins 2006). Previous research has further shown that people also tend to incorporate non-diagnostic, irrelevant haptic cues into judgment and decision making (e.g., Ackerman, Nocera, and Bargh 2010; Kirshna and Morrin 2008).

Given the fruitful evidence, we propose that people have long been accustomed to gathering information through touch, and thus expect that touching would invariably prove to be useful. Similar to how internalized habits and heuristics continue to function in situations where they serve no purpose (Arkes and Ayton 1999; Baron 2000; Amir and Arieli 2007), we contend that people overgeneralize their belief in effectiveness of touch-for-information so as to predict that touching would aid their decisions even in situations where it explicitly provides no informative value. Our conceptualization is in line with the recent stream of research showing that people overgeneralize various kinds of beliefs. (Hsee, Yang, and Ruan 2015; Pyskovich and Rand 2015).

While people overgeneralize and expect that touching a target would help their decision even in cases where it shouldn't, we show that touching decreases decision confidence when people are actually given the opportunity to touch and realize that it gives them no valid information. That is, when touching fails to acquire useful information, expectation disconfirmation and thwarted information search effort renders individuals frustrated (Diehl and Poynor 2010; Raghubir and Krishna 1999; Strebels, O'Donnell, and Myers 2004; Sun and Spears, 2012) and less confident in their decision (Berkowitz 1989; Roseman 1984). Tinted by the inherent penchant towards touch, however, people fail to anticipate the dismay; only after they experience the frustration do they realize it.

In sum, we propose that consumers hold an overgeneralized naïve belief that touching would somehow help their decision even for

situations where touching noticeably provides no information. However, because touching actually provides no useful information in such cases, the positive expectation is shattered when given the opportunity to touch, and it thus ironically leads to decreased decision confidence. We further demonstrate the downstream consequences of diminished confidence including lower willingness-to-pay (e.g., Chaxel 2016) and lower choice satisfaction (e.g., Iyengar and Lepper 2000; Roster and Richins 2009). The proposed effect of touch is first shown in a controlled, non-product context for a cleaner test, and later generalized to product choice contexts.

## Studies 1A & 1B

Study 1A first establishes that people generally mispredict that nondiagnostic haptic information would enhance one's decision confidence. Participants were asked to imagine two people, A and B, participating in a lucky draw for a free chocolate bar individually. Participants were given an image of two identical opaque envelopes. They were told that each person had to pick from two envelopes where one has a winning card with the letter X on it, and the other has a non-winning card with the letter Y on it. They were further informed that the instructor had person A touch both envelopes before making a decision and had person B make a choice by pointing to one of the envelopes without touching. Without learning about the outcome, participants were asked to predict each person's decision confidence and the likelihood that they picked the winning envelope. Despite the fact that merely touching the two identical envelopes does not provide any useful information, participants predicted that doing so would increase confidence for the decision maker. The pattern favoring those who touched was replicated when the scenario was administered between-subjects (i.e., description of person A provided in one condition, and of person B provided in the other), and when scenario was altered to adopt a first-person perspective (i.e., asking participants in which case they would feel more confident, rather than making judgments about person A or B).

The results were reversed in Study 1B where we had participants actually go through the lucky draw procedure described in Study 1A. As in Study 1A, participants were told that one envelope had the winning card X while the other had non-winning card Y inside, and that they would win a free chocolate bar if they pick the envelope with the winning card. In the no-touch condition, the instructor held up both envelopes and participants made their choice by pointing to one envelope. In the touch condition, the instructor handed the two envelopes to participants so that they could touch the envelopes and make their decision. Participants' confidence and perceived likelihood of having picked the winning card was measured before the results were revealed. Counter to people's prediction, when given an opportunity to touch, experiencers felt less confident about their decision, and responded that they were less likely to have picked the envelope with the winning card.

## Studies 2A & 2B

We replicate this pair of results with an altered design to rule out an alternative explanation: touching increases attachment to both envelopes and makes it harder to forgo either option (Carmon and Wertenbroch 2003; Peck and Shu 2009), causing decreased confidence. Only one envelope was involved in the modified procedure. People were told that there were 20 envelopes in total of which 10

had a card with letter X and the other 10 had a card with letter Y written on it. The instructor would randomly pick one envelope and the lucky draw entrant's job was to guess which letter was inside the envelope. Participants in Study 2A (the predictors) expected the person with the opportunity to touch the envelope to have a higher confidence. However, participants in Study 2B (the experiencers) felt less confident when they actually touched the envelope compared to those who did not touch the envelope. We also measured involvement and ownership, but there were no differences between touch vs. no touch conditions in Study 2B.

### Studies 3A and 3B

Studies 3A (the predictors) and 3B (the experiencers) generalize the effect to product choice contexts. The predictors were asked to imagine two people, person A and person B trying to choose between two bottles of wine separately. Participants were shown two bottles of wines (both 2014 Napa Valley Cabernet Sauvignons) of equal price which they could enlarge to read the information on the labels. They were further told that one of the wines received a higher rating, and that each person was trying to choose the wine that received the higher rating (the two wines actually received similar ratings in reality). In the scenario, it was explicitly stated that both person A and person B were fully informed about the descriptions provided on the label of each wine, but they were not informed of the ratings. Note that we used wines as touching the two identical bottles does not provide any useful information. In line with the previous results, the predictors judged the person who had the opportunity to touch to be more likely to have picked the better wine.

For experiencers (Study 3B), we actually showed the two bottles of wine mentioned above and provided information about the two wines as in Study 3A (i.e., origin and price). They were further told that one of the wines received a higher rating, and were asked to choose the wine they thought received the higher rating, mirroring a typical purchase decision. We told participants that they would get a free candy if they pick the wine with the higher rating to motivate decision. In the no-touch condition, we held up the two bottles of wines so that the participants can see the front label. We asked "Can you tell us which one you think is the wine that received the higher rating?" and participants responded by either pointing to one of the wines, or by saying the name of the wine. In the touch condition, we handed over the two bottles of wine so that people can hold them and asked the same question mentioned above. The back label of the wine was removed to hold information constant across touch and no-touch conditions. Prior to disclosing which wine was better, participants' perceived likelihood of having picked the better wine was measured. In stark contrast to the pattern of predictors, people who actually touched both bottles of wine felt that they were less likely to have chosen the better wine (i.e., less confident) in comparison to the counterparts who made the decision without touching.

### Study 4

Study 4 (experiencers) replicates our findings using a different product (i.e., coffee pods), and utilizing a less obtrusive procedure. One could argue that 1) explicitly instructing participants to 'touch' the objects in the touch condition may be driving the effect (confound and/or demand characteristics) or 2) the way in which researchers interact with participants in the touch conditions could have led to decreased confidence. To address these concerns, we conducted a computer-mediated study in the lab to minimize experimenter effects. Also, we held the instructions constant across touch vs. no-touch conditions without using the word 'touch' nor 'feel'.

Specifically, participants in the no-touch condition were provided with a picture of two different flavors of coffee pods from the same brand priced equally. They were told that one of them received a higher rating for taste and that their job was to pick the better coffee pod. In the touch condition, the same information was given except that the two coffee pods were provided in a cup next to the monitor. Participants in both conditions were told "Please take a moment and examine the two coffee pods," and had to wait at least 10 seconds before they could proceed. Then, participants indicated their choice, followed by the two confidence measures, satisfaction for choice, and willingness to pay (slider scale from \$0 to \$2) for the chosen option. The results showed that participants who touched the two coffee pods felt less confident about their decision, and thought that they were less likely to have picked the better one. Also, participants were less satisfied with their choice when they touched the two coffee pods, mediated by the average of confidence and likelihood measure (5,000 bootstrap samples, 95% CI [068. 491]). Those in touch condition also reported significantly lower willingness to pay, again mediated by the two confidence measures (5,000 bootstrap samples, 95% CI [005. 056]). The significance of mediation analyses did not change when confidence and likelihood measures were used separately for both WTP and satisfaction.

We also measured expectation disconfirmation for those in the touch condition ("How informative was the experience of touching the two coffee pods? 1 = much less informative than I expected, 4 = equally informative as I expected, 7 = much more informative than I expected, Gurhan-Canli and Maheswaran 2000; Swan and Trawick 1981). In line with our conceptualization, participants reported that the touch experience was significantly less informative than expected ( $M = 3.05$ , vs. midpoint:  $t(125) = -7.75$ ,  $p < .001$ ).

### General Discussion

The results shed light on the optimistic bias people hold for touching, and how such belief may negatively influence their decision confidence. While people expect touching to increase decision confidence even in situations where touching should not generate any useful information, providing the opportunity to touch actually reduces confidence. The findings here extends our understanding of the role of touch in consumption contexts by providing pioneering evidence for when and how touching may have an undesirable effect on decision confidence. Further, our research shows that people hold a strong, positive naïve optimism towards touch, and overgeneralize its effectiveness. Thus, this paper joins the emerging stream of research examining how people may readily apply deeply-rooted beliefs and habits in irrelevant contexts (Hsee, Yang, and Ruan 2015; Peysakhovich and Rand 2015).

On the managerial side, the findings suggest that providing the opportunity to touch for consumers may not be a panacea. Specifically, for products for which haptic cues are irrelevant for decision making, touching may in fact decrease choice satisfaction and willingness-to-pay. The results imply that it may not be in the best interest of managers to facilitate touch for those products, even though consumers may seek to do so. Non-touch channels including online and catalogue retailers may also want to implement strategies that prevent people from automatically overgeneralizing their belief in touch.

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# Beyond Subjectivity: Competing Governance Regimes and the Socio-Material Construction of Rational Consumer Action

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## EXTENDED ABSTRACT

Rationality – originally assumed to be perfect, then to be more bounded – is the core tenet of economic theories of action. Consumer behavior provides a more nuanced picture with an entire sub-discipline dedicated to the different modalities in which consumers process information and make decisions (Mowen 1988; Novak and Hoffman 2009; Olshavsky and Granbois 1989; Solomon et al. 2006; Yoon, Sarial-Abi, and Gürhan-Canli 2012); only some of which, as an exception rather than a rule, resemble the rational decision-making model of economics.

In recent years, CCT research took a step back from the question of how consumers make decisions and inquired instead into how consumers evolve into subjects capable and willing to make certain decisions: how they become particular consumer subjects. Research on the formation of consumer subjects in CCT (Giesler and Veresiu 2014; Karababa and Ger 2011), sociology of governmentality (Langley 2007; Miller and Rose 1990) and history of consumption (Trentmann 2006) suggests that consumer subjectivity arises through particular, historically-specific discourses. Building on a Foucauldian tradition, many focused on how discourses assume and call forth particular consumer subjects, such as responsible consumers (Giesler and Veresiu 2014), active consumers (Karababa and Ger 2011) or ‘compliant patients’ (Thompson 2003).

Extending these studies, this paper focuses on rational choice and proposes a model of the construction of rational consumer action. We develop our arguments through the case study of mortgage borrowing in post-socialist Hungary, based on 50 interviews with borrowers, 49 expert interviews with bankers and regulators and extensive archive data. The model conceptualizes consumer choice as an outcome of ‘performance struggles’ (Callon, Millo, and Muniesa 2007) between devices and discourses produced by different organizations, which are shaped by organization-specific information on consumers, organizational interpretative frames and organizational aims.

We make three contributions. First, existing models imply that a particular consumer action is driven by a specific subjectivity. Hence, in these models, discourses and practices shape consumer action through subjectivity. We propose an alternative route in which discourses and practices shape consumer action without being necessarily accompanied by a shift in subjectivity. To develop this point, we draw on the work of Michel Callon (Callon 1998; Callon et al. 2007; Callon and Muniesa 2005). Callon and his followers argue that for rational action to take place, rational subjectivity is not necessary. Replacing personal agency with a distributed, sociomaterial view of agency, Callon suggests that rational action is a product of socio-material arrangements that enable people to act rationally, even if they do not fully possess the subjectivity of the *homo economicus* (Callon 1998). For example, by using an on-line credit calculator, people can make complex rational choices without possessing sophisticated calculative capacities. Drawing on this point, the literature on *market devices* documents how the material set-up of consumer choices and uses format consumer action, which may or may not be accompanied by a concomitant change in subjectivity (Callon et al. 2007; Cochoy 2008; Cochoy, Deville, and McFall 2017). This process differs from existing models of consumer subjectivity, which incorporates devices either as means of developing a subjectivity or, as in Giesler and

Veresiu’s (2014) notion of ‘capabilization’, to enable consumers to act on a subjectivity developed by discourses.

Our model does not deny that organizational discourses and devices shape consumer action through subjectivity. However, it suggests that it is only one of the modalities through which action is shaped; and stresses the importance of the alternative route when organizational discourses and devices act directly on consumer action without being mediated by subjectivity.

Second, building on recent calls (Askegaard and Linnet 2011), and prior research (Giesler and Veresiu 2014; Peñaloza 2000; Thompson and Tian 2008) to study how organizations shape meanings and consumer subjectivity, our model extends the focus on consumers to the producers of discourses and devices. Existing studies, drawing on a diverse body of theories, including governmentality (Foucault 1997; Knights 1997) and performativity (MacKenzie, Muniesa, and Siu 2007) show how a specific organization produces discourses and devices that not only reflect its ideas of the ‘consumer’ but also contribute to the emergence of the consumer fitting these ideas. Our model introduces a comparative aspect to this analysis. It shows that different types of organizations hold different ideas of how consumers are and how they should be. Organizational ideas are products of different institutional frames, theories and interests prevalent in the given organization.

These diverse ideas of the consumer materialize in institution-specific discourses and devices – all potentially capable of performing the consumer that they assume. The acknowledgement of this diversity leads to our last and key contribution. While existing research traces how a specific discourse or device shapes consumer subjectivity, our model stresses that consumers are simultaneously subject to multiple, competing discourses and devices that are conducive to different consumer actions; in our case, to different degrees and forms of rational choice. Using Callon’s (2007, 343) notion of ‘performance struggle’, we theorize actual consumer action as a temporary ‘win’ of one, or of a combination of, these competing devices and discourses. In this respect our model differs from Giesler and Veresiu’s (2014) P.A.C.T. (personalization, authorization, capabilization, and transformation) model, which suggests that competing discourses settle their battle first (through the first two stages), and then the winner agenda gets to create its corresponding consumer subject (till the battle is re-opened). Instead, it chimes with Thompson’s (Thompson and Tian 2008; Thompson 2003) approach that stresses power struggles among different discourses in shaping meanings and consumer subjects.

In our model, competing discourses and devices simultaneously act and struggle over the consumer choice. It is their relative power that matters in formatting behavior. While studies of power following a Foucauldian line of analysis highlighted the subtle ways in which power operates through instilling self-governing mechanisms (referenced as ‘governmentality’), our model follows Latour’s work (Latour 2005; Latour and Venn 2002) to add the very material, coercive power dimension of devices shaping consumer choice.

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# Vicarious Pride: When Gift Customization Increases Recipients' Appreciation of the Gift

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## EXTENDED ABSTRACT

Traditionally, customization researchers have investigated whether and why consumers appreciate customization (e.g. Fiore, Lee, and Kunz 2004; Franke, Keinz, and Steger 2009). Consumers often customize products for someone else as a gift and value customization more highly if it is intended as a gift (Moreau, Bonney, and Herd 2011). However, it hasn't been examined the recipients' appreciation of customized gifts. The current paper focuses on how customization affects the gift appreciation.

We contend that gift recipients appreciate customized gifts because they experience vicarious pride. Pride is a pivotal consequence of customization: Customizers refer pride in the customized product, which increases the value placed on the product ('I designed it myself' effect; Franke, Schreier, and Kaiser 2010). We propose that a similar mechanism may occur when a recipient takes the perspective of a giver customizing a product: The recipient experiences pride vicariously. This proposition builds on simulation theory: Individuals react to others' mental states and actions by mentally replicating them, and this internal simulation elicits the same psychological effects as the actual performance of the action (e.g. Decety and Sommerville 2008; Rizzolatti and Craighero 2004). We propose a psychological transfer between giver and recipient: The feeling of pride generated by self-designing a product (Franke et al. 2010) translates from the customizer to the final user of the product (i.e., the recipient). To test this hypothesis, we conducted three experiments.

The aim of Study 1 is to demonstrate that recipients appreciate a gift more when it is customized (vs. selected between a set of standard options) because of vicarious pride. We recruited participants through the snowball-sample procedure. The study involved real pairs of friends. 74 participants (41.9% male,  $M_{age} = 25.45$ ) were involved in a single factor between-subjects design (gift: customized vs. not-customized). The gift was exactly the same in both conditions (a clothing look), but differently described. In the customized gift condition, the scenario presented a selection process carried out step by step via adding look attributes (vs. the look was selected between a set of predefined looks). Then, we measured vicarious pride (Franke et al. 2010) and allowed participants to change the attributes of the look they did not like as a proxy for gift appreciation – the lower the changes, the higher the appreciation. The amount of changes ranged from 0 (= no changes) to 4 (= all items were changed). The results showed that recipients experienced vicarious pride and were less willing to modify a gift when it was customized. Moreover, vicarious pride mediated the relationship between gift customization and appreciation.

In Study 2 we replicated the experimental design but with a different measure of gift appreciation (two items from Ward and Broniarczyk 2011) and including a second factor. Indeed, an alternative explanation might be that customization is perceived by gift recipients as a time- and energy-consuming activity for the giver. Such time and energy efforts might be a driver of gift appreciation, since recipients prefer gifts that require a high amount of time and energy to the giver (Robben and Verhallen 1994). 109 participants (42.4% male;  $M_{age} = 25$ ) participated in a 2(gift: customized vs. not-customized) x 2(time and energy: high vs. low) between-subjects design. The gift was exactly the same between the two conditions (a T-shirt), but we showed two different videos to manipulate the gift-selection process (customization process undertaken via online

toolkits vs. gift selection was made by surfing different websites) and process length. We found that recipients appreciated the gift more when it was customized, and the vicarious pride was greater in the customized gift condition. Vicarious pride mediated the relationship between gift and appreciation. These findings provide further support to the idea that recipients appreciate a gift more when it is customized thanks to vicarious pride. This effect appears to be independent from time and energy spent on selecting or customizing the gift.

Study 3 further examines the phenomenon and includes a relational factor, since gift exchanges have a strong effect on relationships (Ruth, Brunel, and Otnes 2004) and vicarious experiences are affected by relational factors (Hatfield, Cacioppo, and Rapson 1994). Here, we included relational anxiety because of its relevance in the gift-exchange literature (e.g., Nguyen and Munch 2014; Ward and Broniarczyk 2011). Specifically, we expect that that relational anxiety is an obstacle to vicarious pride, because it prevents emotional connection with others (Bartz and Lydon 2004). Thus, when the relationship is filled with anxiety, the vicarious pride is not elicited and consequently recipients do not appreciate more the customized gift. A 2 (gift: customized vs. non-customized) x 2 (anxiety: no vs. high) between-subjects design involved 184 participants (58.7% male,  $M_{age} = 32.73$ ). Relational anxiety was manipulated as difficulty (vs. ease) of being emotionally close to someone (Bartz and Lydon 2004). Then, the scenario about the gift (watch customization vs. watch selection between standard watches) was presented, followed by items on gift appreciation and vicarious pride. Analyses showed that vicarious pride was greater in the no-anxiety than in the high-anxiety condition and, in the no-anxiety condition, customized gifts elicited greater vicarious pride. Customized gifts were significantly more appreciated in the no-anxiety condition. A mediation analysis on the no-anxiety condition confirmed that vicarious pride mediated the relationship between gift customization and gift appreciation.

Three studies show that customization is a valuable source of gifts because of the activation of vicarious pride: Recipients are vicariously proud of the customized product. The parallelism in terms of pride between the giver and recipient also affects the gift evaluation: Customized gifts are more highly appreciated when givers and recipients are emotionally connected. Conversely, when the relationship is filled with anxiety, vicarious pride is prevented. The effect seems to be strong: we used two different measures of gift appreciation, visual and textual descriptions of the customization process, and different products. Future research should investigate whether and how other characteristics of the gift, such as the fit with the giver's desire, amplify or reduce the effect of vicarious pride.

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# The Viciousness and Caring of Sharing: Conflicts and Motivations of Online Shamers

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## EXTENDED ABSTRACT

Public shaming is defined as informally punishing individuals who have deviated socially or morally, by informing the public about their conduct (Petley 2013). Our research focuses on individuals who engage in public shaming on social media (e.g., Twitter, Facebook) against a wrongdoer who has acted immorally. While public shaming has long been a tool of education, its embrace by the digital world enabling users to easily and effectively spread information about the misconduct (Goldman 2015; Jacquet 2015).

The decision to engage in public shaming consists of two contradictory motivations: informal enforcement against deviant behavior (thereby preventing offenses such as animal abuse or discriminatory customer service) and the violation of privacy rights and dignity (exposing the personal details of the wrongdoer).

We suggest that a person considering participating in online shaming may try to balance these opposing considerations. Specifically, when a wrongdoer identifiability is high (e.g., when a post describing the behavior is accompanied by a clear image or a full name), shaming that individual can give rise to both potential consequences described above. When the wrongdoer identifiability is low (e.g., a vague image is shown, or only a first name is presented), shaming is more likely to give rise to the potential positive consequences than to trigger the potential negative consequences. This tradeoff may lead prospective shamers to experience a moral dilemma, since moral concerns involve the desire to protect others but also restrain them from doing harm (Graham et al. 2011; Janoff-Bulman and Carnes 2013, Crocket, 2017). Therefore, users with high levels of moral concern are more likely to join in on public shaming when the wrongdoer's identifiability level is low rather than high.

A preliminary study ( $n=100$ ) confirmed the assumption that users acknowledge both positive (preventing similar cases and educating others) and negative (causing harm to the wrongdoer) sides of sharing shaming information. It further showed that users' evaluations of these consequences vary according to the level of wrongdoer identifiability.

In our first study we demonstrated how moral concern interact with identifiability levels of the wrongdoer in driving actual choices regarding participation in public shaming. Participants ( $n=141$ ) were presented with several posts and were asked to click "like" on one of the posts through their social media accounts. After making their choices, participants completed a moral concern scale. Logistic regression found that level of moral concern significantly predicted the likelihood to choose to "like" a shaming post in which the wrongdoer identifiability was low rather than high ( $\chi(1)^2=4.87, p=.027$ ). Specifically, the exp(B) value indicated that an increase of one unit in the average moral concern score was associated with an increase of 62% in the odds ratio of choosing a post that include low-level-identifiable wrongdoer. We replicated these results in a study ( $n=209$ ) that considered #METOO campaign posts.

In our second study, participants ( $n=278$ ) were presented with a shaming post that included a photo of a woman (the wrongdoer) dragging a swan out of a lake. We manipulated the identifiability of the wrongdoer by presenting different angles of the image: half the participants saw a high-level-identifiable wrongdoer, and half saw a low-level-identifiable wrongdoer. Participants were asked to rate the likelihood they would share this post.

As expected, the mean-centered interaction between moral concern and wrongdoer-identification (0=Low-identifiability, 1=High-identifiability) was significant ( $b=-.65, p=.0033$ ).

While in the high-identifiability wrongdoer condition, we found a significant positive association between moral concern and sharing likelihood ( $b = .69, SE = .15, t(274) = 4.53, p < .001$ ), under the low-identifiability wrongdoer condition, the association was not significant ( $b = .03, SE = .16, t(274) = .22, p = .83$ ).

In a replication study, participants ( $n=374$ ) were presented with a post that described a manager of a restaurant who had ignored a complaint about possible food poisoning. Half the participants saw a photo of the restaurant's manager, and the other half did not. Again, the interaction between moral concern and wrongdoer-identification condition had significant effect on participants' likelihood of sharing the post.

In our fourth study ( $n=393$ ), we attenuated the negative outcomes of shaming by presenting more than one target as being shamed, thereby reducing the likelihood that a given wrongdoer would be hurt: Participants were presented with a post describing either a spa receptionist or a group of receptionists who had ignored an elderly customer. A photo of the receptionist or receptionists was presented either from the back (low-identifiability) or from the front (high-identifiability). Also, we manipulated moral concern instead of measuring them. An ANOVA found a three-way interaction: Among participants under the high-moral-concern manipulation, those in the low-identifiable-single-receptionist condition were more likely to share the post than were participants in the high-identifiable-receptionist condition ( $M_{manipulation\_low-identifiable\_receptionist} = 4.55$  vs.  $M_{manipulation\_high-identifiable\_receptionist} = 3.46, t(385) = 2.59, p = 0.01$ ).

In our last study we focused on the underlying process of our interaction, as well as the moderating role of group relatedness. When a person is being shamed in his own community, the negative outcomes and the positive outcomes can be particularly strong. Participants ( $n=305$ ) were presented with a shaming post about an airline passenger who had misbehaved. The passenger's photo was either blurry (low-identifiable) or sharp (high-identifiable). Also, the passenger was described either as part of the participants' ingroup (same nationality) or as an outgroup member (different nationality). Higher moral concern were positively correlated with sharing likelihood when the wrongdoer was low-identifiable and an ingroup member ( $b=.25, t(297)=2.04, p=.04$ ). Surprisingly, we also found a significant positive effect for moral concern when the wrongdoer was high-identifiable and an outgroup member ( $b=.28, t(297)=2.83, p=.005$ ). The effect of moral concern on sharing likelihood was mediated by expected positive outcomes of sharing the post ( $b=-.21; 95\% CI: -.43, -.04$ ) but not by the expected negative outcomes.

Taken together, our studies suggest that while people acknowledge the dual outcomes of shaming, morality and the extent to which the wrongdoer is identifiable affect the decision to participate in public shaming. While negative outcomes are acknowledged, the expected positive consequences are the ones that drive potential shamers' decisions regarding whether or not to participate in public shaming.

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# Names Are the Mirrors of the Soul: The Role of Possessive Brand Names in Brand Evaluations

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## EXTENDED ABSTRACT

Marketing practitioners frequently rely on brand anthropomorphism (i.e., endowing brands with humanlike features (Puzakova and Kwak 2017) as an effective strategy that increases affective reactions and product evaluations (Aggarwal and McGill 2012). One of the popular means that brand strategists rely on to encourage anthropomorphism is endowing a brand with a human name. For example, Lily takes photos of consumers' adventures, Dave assists customers with banking fees, and a cup of fresh coffee is served at Tim Horton's.

Furthermore, a more nuanced analysis of these humanlike names points out to subtle semantic variations in a way these brand names are formed. For example, marketers use a possessive form in Tim Horton's and Trader Joe's brand names, whereas a non-possessive version is used in the Lily and Dave brand names. Does this subtle difference matter, and if yes, in what way? In this regard, prior research in psychology and linguistics indicates that possessive forms have crucial affective consequences (Shi et al. 2011). Despite the widespread prevalence of humanlike brand names and theoretically important consequences of possessive semantic units, to the best of our knowledge, no prior studies have examined the effectiveness of using possessiveness as a linguistic cue in anthropomorphized brand names. In response, we attempt to fill this gap. Our key contribution lies in demonstrating an important role of brand name possessiveness in consumers' anthropomorphized brand inferences and evaluations. As a theoretical basis, we draw from both psychological ownership theory and linguistics research that demonstrate that perceptions of an individual's ownership toward an object is easily formed by presenting people with possessive pronouns preceding the target of ownership (Pierce, Kostova, and Dirks 2003; Shi et al. 2011). Thus, we propose that the use of a possessive form in brand names can lead to greater consumer inferences that a brand is owned by a specific external entity (implied in the brand name).

Our second contribution lies in identifying a novel process of this effect. Psychologically owned items are seen as extensions of people who own them (Belk 1988) and can help people communicate important aspects of their identity to others (White and Argo 2011). Because people frequently experience feelings of psychological ownership and signal their identity through owned items to others (Pierce et al. 2003), we propose that individuals are also likely to view others' owned items as signaling an owner's identity. As such, consumers are likely to perceive that an inferred brand owner's identity spills over to the brand, subsequently resulting in greater inferences of identity-relevant brand attributes. Importantly, we expect this effect to occur only for brand names that include an identity marker (i.e., a qualifier that provides consumers with the information about an inferred owner's identity). Because an identity marker provides unique information about an inferred brand owner's identity, consumers will view a possessive (vs. non-possessive) brand name with an identity marker as performing better on identity-relevant brand attributes, thus, resulting in more favorable brand evaluations.

We test these ideas in three studies. The results of study 1 (n=117, students at a U.S. East Coast university) reveals that a possessive brand name of a café (introduced via an advertisement) joint that includes an identity marker (Sweet Tatiana's) leads to more favorable brand evaluations than a non-possessive brand name with an

identity marker (Sweet Tatiana):  $M_{\text{possessive}}=5.45$  vs.  $M_{\text{non-possessive}}=5.02$ ;  $F(1,115) = 3.690, p=.057$ . Next, study 2 (n=186, MTurk participants) replicates the effect in a different service context (a hair-salon brand) and examines whether the positive effect of possessiveness holds only for brand names with an identity marker (e.g., Elegant Charlie's vs. Charlie's). The results of this study revealed that when an identity marker was present, the possessive (vs. non-possessive) brand name led to more favorable brand evaluations ( $M_{\text{possessive}}=6.14$  vs.  $M_{\text{non-possessive}}=5.68, F(1,182)=5.652, p=.018$ ). Conversely, in the absence of identity marker, brand evaluations did not differ between the possessive and the non-possessive brand name conditions ( $M_{\text{possessive}}=5.88$  vs.  $M_{\text{non-possessive}}=5.78, p=.594$ , Figure 1). Similar results were obtained for the word-of-mouth and purchase intentions. Overall, in line with our theorizing the effect of brand name possessiveness is mitigated when no identity marker is present.

Study 3 (n=186, MTurk participants) further examines the mediating role of consumers' attributions of identity-relevant brand attributes and considers potential alternative explanations for our results. We tested our effects with advertisements for a brand of catering: Artful Mark's vs. Artful Mark. Replicating results of studies 1 and 2, the findings reveal that a possessive brand name of a catering business that included an identity marker (Artful Mark's) led to more favorable brand evaluations than a non-possessive brand name with an identity marker (Artful Mark):  $M_{\text{possessive}}=6.03$  vs.  $M_{\text{non-possessive}}=5.74; F(1,184)=4.405, p=.037$ . Next, the results of the model testing the serial relationships (brand name possessiveness  $\rightarrow$  perceived brand ownership  $\rightarrow$  attributions of identity-relevant brand attributes  $\rightarrow$  brand evaluations; model 6; Hayes 2013) revealed a significant overall mediation effect ( $B_{\text{brand evaluations}}=.08, SE=.03, 95\% \text{ CI} [.03, .16]$ ). That is, a possessive (vs. non-possessive) form of a brand name led to greater inferences of brand ownership which in turn enhanced participants' attributions of identity-relevant brand attributes, thus, resulting in more favorable brand evaluations. Finally, our results further ruled out several alternative accounts: responsibility for service outcomes and inferred service quality.

Overall, this research identifies important consequences of inferring others' (or anthropomorphized brands') ownership states. In particular, studies 1 through 3 demonstrate that the use of a possessive (vs. non-possessive) form in anthropomorphized brand names with an identity marker leads to more favorable brand evaluations, word-of-mouth, and purchase intentions. Study 3 sheds light on the underlying process through greater attributions of identity-relevant brand attributes, while also ruling out alternative explanations.

Our findings add a new dimension to work on anthropomorphism (Aggarwal and McGill 2012; Puzakova and Kwak 2017). Although the use of both possessive and non-possessive humanlike names is a widely prevalent tactic that enhances brand anthropomorphism, scant research has systematically investigated nuances of this branding strategy. In response, our work highlights the impact of an important linguistic cue that market strategists can rely on to enhance new customers' brand perceptions.



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# The Impact of Anthropomorphized Cute Brands on Consumer Preferences for Distinctive and Majority-Endorsed Products

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## EXTENDED ABSTRACT

Marketers strategically use anthropomorphism (i.e., imbuing nonhuman objects with humanlike characteristics, motivations, intentions or behaviors; Puzakova, Kwak and Rocereto 2013) as a brand positioning strategy. Prior work identifies downstream consequences of using this strategy including positive brand evaluations and emotional reactions towards the brand (Aggarwal and McGill 2007; Delbaere, McQuarrie and Phillips 2011). However, previous research has not looked at how anthropomorphizing a brand can systematically affect consumer preferences for a different brand in a consumption sequence. An understanding of this phenomenon is both theoretically and managerially important because consumers frequently shop for products in predictable patterns (e.g., looking for coffee creamers after selecting a pack of coffee). Importantly, marketers carefully place products in particular sequences in retail stores and effectively utilize cross-selling tactics to increase the purchase of a full product line (Knott, Hayes and Neslin 2002).

In this paper we examine a specific brand positioning strategy—cute brand anthropomorphism (imbuing a humanized brand with specific configuration of infantile features; Wang and Mukhopadhyay 2015)—and demonstrate that consumer exposure to or interaction with a cute anthropomorphized (vs. nonanthropomorphized) brand has significant downstream consequences for preferences for products or brands positioned to be either distinctive or majority-endorsed (popular). We further establish that these unique effects of cute brand anthropomorphism hold only for male consumers. Specifically, we demonstrate that men's exposure to anthropomorphized cute products prior to exposure to a distinctive brand in a different product category can have a negative effect on the preferences for the distinctive brand. In contrast, exposure to anthropomorphized cute products enhances male consumers' preferences for majority-endorsed brands. The theoretical rationale is that anthropomorphized cute products threaten men's gender identity and activate self-protection responses. This activation of a self-protection response further facilitates an evolutionary response of "going with the group is safe" because standing out from the crowd limits one's chances of survival (Griskevicius et al. 2009). Thus, our work demonstrates that cute anthropomorphized products increase conformity in men; these products reduce attraction to distinctively-positioned brands and increase attraction to brands positioned as majority-endorsed.

We conducted three studies to test our hypotheses. Studies 1 and 2 demonstrate that exposure to cute anthropomorphized products reduces men's attraction to distinctive brands in a subsequent choice task, whereas this positioning strategy has no effect for women. Study 3 extends the findings of studies 1 and 2 by providing insights on the underlying process. Our conceptualization predicts that men's exposure or interaction with cute anthropomorphized brands threatens their masculine identity. If this is the case, then allowing consumers to reaffirm their identity before the second choice task should attenuate the negative impact of cute anthropomorphized brands on preferences for brands positioned to be distinctive. Study 3 highlights the underlying process using a moderation approach, and shows that the negative impact of cute anthropomorphized brands on preferences for brands positioned to be distinctive can be attenuated by allowing consumers to reaffirm their identity before evaluating the distinctive brand.

To summarize, we provide important insights regarding the downstream effects of consumer interactions with cute anthropomorphized brands on subsequent preferences for majority-endorsed and distinctive brands. To our knowledge this is the first investigation on how exposure to anthropomorphized brands systematically affects consumers' preferences for other brands during a subsequent consumption experience. Specifically, we argue that men associate cute anthropomorphized brands with femininity, which in turn threatens their gender identity. Hence, men's exposure to anthropomorphized cute products prior to choice in a different product category decreases their preferences for distinctive brands and enhances their attraction toward majority-endorsed brands. We further demonstrate the underlying process: allowing male consumers to reaffirm their gender identity before the second choice task attenuates the negative impact of cute anthropomorphized brands on their preferences for distinctive brands. While prior work sheds light on the impact of anthropomorphism on consumer preferences of an entity being anthropomorphized (Aggarwal and McGill 2007; Puzakova and Kwak 2017), our work establishes the novel downstream effects of interacting with cute anthropomorphized brands on subsequent consumption of other brands positioned as distinctive or majority-endorsed. On the practical front, our research highlights a very interesting interaction effect between gender and brand anthropomorphism in the context of a subsequent consumption task. The role of gender identity in consumer exposure to cute anthropomorphized brands is an interesting juxtaposition of factors that marketers may wish to consider when developing brand strategies while taking into consideration sequences of consumption choices.

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# Trust, But Verify: A Multi-level Examination of Online Reviews and Persuasion Knowledge

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## EXTENDED ABSTRACT

Stories of companies (and pranksters) manipulating online reviews are abound in the news. These actions potentially affect consumer trust not only at the review-level, but also their perceptions of specific websites (platform-level) and online reviews as a whole (system-level), as consumers struggle to discern real reviews from fake.

The Persuasion Knowledge Model (PKM, Friestad & Wright, 1994) offers a useful framework for understanding how consumers identify and respond to persuasion attempts. The basic idea behind this framework is that consumers develop contextualized persuasion knowledge (PK) about persuasion tactics, agents, and appropriate responses to allow them to navigate the marketplace. Researchers have explored PK in the context of direct persuasion situations, such as sales or advertising (Campbell & Kirmani, 2000; Kirmani & Zhu, 2007), but the relationship between PK and online reviews is less clear, largely due to the limited research on the topic.

From a broad perspective, online reviews can take many forms; from individual consumer reviews (e.g., Amazon, ePinions) to blogs and vlogs. Research suggests that subtler forms of sponsored content, such as branded editorials, do not always activate skepticism and recognition of persuasive intent (Boerman, Willemsen, & Van Der Aa, 2017). Consumer reviews may be particularly challenging, as those that are sponsored may be nearly identical to genuine perspectives. One study noted a wide variation in consumers' application of PK in this context (Bambauer-Sachse & Mangold, 2013), though the prevalence of fake reviews has received more attention in the media since this study, perhaps leading to greater PK activation. Thus, we investigate: to what extent does PK activation occur in the context of online reviews?

Based on two available studies, avoidance was the most prominent coping behavior when PK was activated in an online consumer review context (Bambauer-Sachse & Mangold, 2013; Reimer & Benkenstein, 2016). However, the focus was at the review level, and did not consider the effects on consumer perceptions of the platform or system-wide, of reviews in general. Therefore, we investigate a second set of questions: how does PK manifest at the system- and platform-levels? What subsequent coping mechanisms do consumers employ?

To investigate these questions, we use data from 22 semi-structured depth interviews (McCracken, 1988) that involved general questions as well as real online product searches, where informants narrated their thoughts, and responded to prompting questions. The data was analyzed through the PKM independently by two of the authors, who also met for cross-informant comparison.

The data indicates high levels of skepticism towards reviews from all informants, suggesting the development of PK surrounding this context. The PK schemata tended to include typical company approaches for influencing reviews (e.g., 'click-farms', sponsorship), and as expected, led to several reviews being avoided or counter-argued because informants felt they were fake. However, other coping behaviors were also revealed, such as using site-level heuristics to confirm consensus opinions. Notably, analysis revealed that many informants did not differentiate between sponsored and biased reviews, categorizing both as fake.

At the platform-level, certain sites were simply avoided because of preconceived notions of active filtering of negative reviews (e.g.,

branded websites) or past experience where content was largely sponsored (e.g., certain blogs). Third-party sites tended to receive greater trust, but in a qualified form; our informants' PK schemata at the platform-level included known barriers for posting content, and inferences about how that impacts the pervasiveness of deceptive reviews. Even when perceptions about a platform did not prompt avoidance, they still tended to heighten PK or lead to other coping mechanisms. As purchase importance increased, informants tended to cope by engaging in cross-platform comparisons.

At the system-level, informants continued to apply coping mechanisms intended to corroborate the information. While one informant practiced complete avoidance of online reviews, the remaining informants tended to complement the information from online reviews with offline sources (trusted people) or through directly visiting the retail outlet (webrooming). This verification and lack of reliance on online reviews increased in relation to the perceived importance of the purchase.

The consistent activation of PK at every level, and the resulting coping mechanisms are simultaneously troublesome and indicative of opportunities from a managerial perspective. Considering the role of online reviews—reducing risk (Hennig-Thurau & Walsh, 2003) and simplifying the decision making process, the extra steps consumers take to verify the information could lead to more people bypassing this information. However, this also suggests that efforts to highlight verified reviews (as opposed to eliminating fake ones) could be well-received by consumers.

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# Bundle Variety and Preference: A Neuromarketing Study Using Event-related Potentials

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## EXTENDED ABSTRACT

Bundling has raised many interests for decades (e.g., Hansen & Martin, 1987; Janiszewski & Cunha Jr, 2004), but very few studies have been conducted to systematically examine the relationship between bundle variety and bundle preference. With the development of consumer neuroscience, three event-related-potential components, namely the P1, P2 and N2, have been linked to consumer preference for single products (Goto et al., 2017; Guo et al., 2016; Mickleborough et al., 2014; Telpaz et al., 2015; Zhang et al., 2011). However, it remains unclear whether these early components could reveal consumer preference for product bundles, and if so, how the component variety of bundles might modulate this effect. The present study addressed this issue to shed some light on the neural underpinnings of consumer's responses to product bundles.

In the present study, we chose bundles consisted of three cups of yogurt in fruit flavors as experimental stimuli, because variety seeking behavior was found to be more likely to occur with hedonic products (Baltas et al., 2017; Inman, 2001). We first run an online survey on 79 naïve participants to determine which yogurt flavors to use in the main experiment. Based on these results, we decided to use strawberry and yellow peach as two popular flavors (PFs), sea-berry and water chestnut as two unpopular flavors (UFs), as well as coconut, mulberry, and cherry as three flavors with moderate popularity (MFs). We used four types of bundles, including the 3PF, 3UF, 2P1U, and 3MF bundles. Importantly, the 3PF and 3UF bundles were identical bundles, whereas the 2P1U and 3MF bundles were coded as bundles with lower and higher variety, respectively.

Twenty young healthy participants took part in the main experiment which consisted of a pre- and a post-test survey, a wanting test, and a selection test. At the beginning of the experiment, the participants chose which one of the two popular flavors they preferred more, and which one of the two unpopular flavors they preferred less. The chosen flavors were then presented in the following tests for each participant. In both of the pre- and post-test surveys, participants were asked to indicate their liking of each bundle. The EEG signals were recorded during the wanting test in which participants viewed the picture of each bundle and used the mouse to pick a number from 0 to 100 to indicate their desire for it. Each participant completed two blocks of 120 trials each, while equal numbers of different types of bundles were mixed and presented in a random order. After the wanting test, participants were presented with pairs of bundles in the selection test, and they were asked to choose the preferred ones.

The rating results revealed some significant positive correlations among the wanting scores, preference scores (the total number of times each bundle was chosen by each participant), and liking scores, all  $r_s > 0.72$ ,  $p_s < 0.001$ , suggesting the validity of wanting and preference scores. The results also revealed some significant positive correlations between the N2 amplitude for each bundle and the wanting/preference scores, both  $r_s > 0.26$ ,  $p_s < 0.05$ . Next, we conducted a 2 (Bundle Preference: most- or least-preferred)  $\times$  4 (Electrode Site: Fz, FCz, CPz, or Pz) repeated-measure ANOVA on the N2 amplitude. The results revealed a significant main effect of Bundle Preference,  $F(1, 19) = 6.69$ ,  $p < 0.05$ ,  $\eta_p^2 = 0.26$ . Planned pairwise comparison showed that in electrodes Fz, FCz, and CPz, the N2 amplitude was significantly smaller for the most-preferred bundles than for the least-preferred ones, all  $t_s > 2.17$ ,  $p_s < 0.05$ , whereas no such effect was significant in electrode Pz,  $t(19) = 1.71$ ,

$p = .10$ . We also performed a 2 (Bundle Variety: lower or higher)  $\times$  4 (Electrode Site: Fz, FCz, CPz, or Pz) repeated-measure ANOVA on the N2 amplitude. The results revealed no significant main or interaction effects, all  $F_s < 1.66$ ,  $p_s > .21$ . That said, planned pairwise comparisons showed that only the N2 amplitude in electrode Pz was significantly smaller for bundles with higher variety than those with lower variety,  $t(19) = 2.60$ ,  $p < 0.05$ , Cohen's  $d = 0.61$ ; whereas there was no such effect in other electrodes, all  $t_s < 0.45$ ,  $p_s > .65$ .

Furthermore, the 2 (Bundle Preference: most- or least-preferred)  $\times$  2 (Electrode Site: P7/P8 or PO7/PO8)  $\times$  2 (Hemisphere: left or right) repeated-measure ANOVA on the P1 amplitude revealed a marginal significant main effect of Bundle Preference,  $F(1, 19) = 3.94$ ,  $p = 0.06$ ,  $\eta_p^2 = 0.17$ . However, the 2 (Bundle Variety: lower or higher)  $\times$  2 (Electrode Site: P7/P8 or PO7/PO8)  $\times$  2 (Hemisphere: left or right) repeated-measure ANOVA on the P1 amplitude showed no such effect of Bundle Variety,  $F(1, 19) = 1.87$ ,  $p = 0.19$ . By contrast, the analogous ANOVA on the P2 amplitude revealed a significant main effect of Bundle Variety,  $F(1, 19) = 7.82$ ,  $p < 0.05$ ,  $\eta_p^2 = 0.29$ ; whereas the 2 (Bundle Preference: most- or least-preferred)  $\times$  2 (Electrode Site: P7/P8 or PO7/PO8)  $\times$  2 (Hemisphere: left or right) repeated-measure ANOVA on the P2 amplitude showed no such effect of Bundle Preference,  $F(1, 19) = 0.001$ ,  $p = 0.98$ .

In conclusion, the present study provides the first physiological evidence investigating the relationship between bundle variety and bundle preference. The results revealed both associations and dissociations between consumer preference and variety seeking. Our findings suggest that the frontal area is more involved in inhibiting less preferred bundles (Aron et al., 2004, 2014), whereas the parietal area is linked to the categorization of bundles according to its variety level (Freedman & Assad, 2006, 2011; Levine & Schwarzbach, 2017). Furthermore, our findings suggest that bundle preference is associated with early configural processing, whereas later featural processing is important for bundle variety (Boutsen et al., 2006; Mercure et al., 2008; Wang et al., 2016). These findings not only have implications in helping researchers and practitioners better understand consumer preference and variety seeking, but also indicate the promising future of using ERP method in neuromarketing practice.

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# A Rational Model to Predict Consumers' Irrational Behavior

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## EXTENDED ABSTRACT

The current research developed a mathematical model that could predict consumers' price-quality perceptions based on their ability and motivation to process the product information accurately. This model effectively demonstrates how the price can influence consumers' judgments of quality after they purchased and used the product. Furthermore, this model sheds light on the underlying reasons that price has different effects on consumers' perceptions of quality under different product categories. Finally, this model offers a powerful statistical tool that could be utilized to find the best price-points for products in dynamic environments.

The developed model is based on the reference-dependent utility model proposed by Kőszegi and Rabin (2006). They argued that expected utility is the sum of gain/loss utility [ $n(q|r)$ ], consistent with the predictions of prospect theory (Kahneman and Tversky 1979), and reference-dependent consumption utility [ $m(q|r)$ ], where  $m(q)$  denotes the experience of quality and  $m(r)$  denotes the expectation of quality:

$$(1) \quad U(q|r) = m(q|r) + n(q|r)$$

In this model, when  $m(q) - m(r) > 0$ , consumers will experience a gain utility equal to  $\eta[m(q|r) - m(r)]$ . In contrast, when  $m(q) - m(r) < 0$ , consumers will experience a loss utility of  $\eta\lambda[m(q|r) - m(r)]$ .  $\lambda$  is always greater than one because as proposed by Kahneman and Tversky (1979) losses have a greater influence on consumers' experienced utility (a strong negative effect) than gains. Furthermore, Kőszegi and Rabin (2006) argued that the consumption utility itself would depend on a reference point. As an example, driving a C-Class Mercedes-Benz would create a higher consumption utility when the reference product of the driver is a Toyota Camry than when it is a Rolls-Royce. This notion is consistent with the placebo effect of the price that is reported in the literature (Shiv, Carmon, and Ariely 2005).

To further develop the model, the arguments put forward by Gneezy, Gneezy, and Lauga (2014) were followed. Based on their study, Alpha was defined as the probability that the product was a high-quality product. Furthermore, as supported by numerous studies in the pricing literature, it was assumed that Alpha was a function of price:

$$(2) \quad \alpha = P(rqh) = f(\text{price})$$

$$(3) \quad m(r) = ql + \alpha(qh - ql)$$

After using the products, consumers acquire some additional information about the real quality of the product. For high-quality products, if consumers' expectations are consistent with the product quality, most would judge the quality as high (i.e., sqh). When consumers' expectations of quality are inconsistent with the actual quality of the products, a sizable percentage of them will make the wrong judgment about the quality of the product. Based on these arguments,  $\beta_c$  and  $\beta_i$  are defined as the probabilities that consumers' will accurately judge the quality when their expectations are consistent and inconsistent with the real quality, respectively. Therefore:

$$\beta_c = P(sqh | qh \text{ and } rqh; sq | ql \text{ and } rql); 1 - \beta_c = P(sq | qh \text{ and } rqh; sqh | ql \text{ and } rql)$$

$$\beta_i = P(sqh | qh \text{ and } rql; sq | ql \text{ and } rqh); 1 - \beta_i = P(sq | qh \text{ and } rql; sqh | ql \text{ and } rqh)$$

$$0 < \beta_i < \beta_c$$

Given the above conditions, the consumption utility of high-quality products [i.e.,  $m(qh|r)$ ] and the consumption utility of low-quality products [i.e.,  $m(ql|r)$ ] can be conceptualized as below:

$$(4) \quad m(qh|r) = ql + \alpha h \times (qh - ql); \alpha h = [(\beta_c - \beta_i) \times \alpha + \beta_i]$$

$$(5) \quad m(ql|r) = ql + \alpha l \times (qh - ql); \alpha l = [1 + \alpha(\beta_c - \beta_i) - \beta_c]$$

Therefore, the gain loss utility of the model [ $n(q|r)$ ] could be calculated as:

$$(6) \quad n(q|r) = \{\eta[m(q|r) - m(r)] \mid \alpha h > \alpha \text{ or } \alpha l > \alpha; \eta\lambda[m(q|r) - m(r)] \mid \alpha h < \alpha \text{ or } \alpha l < \alpha\} \text{ and } \lambda > 1$$

Based on the gain loss utility function, the total utility functions of high-quality [ $U(qh|r)$ ] and low-quality products [ $U(ql|r)$ ] could be conceptualized as below:

$$(7) \quad U(qh|r) = \{\eta[ql + \alpha h(qh - ql) + \eta(\alpha h - \alpha)(qh - ql)] \mid \alpha h > \alpha; ql + \alpha h(qh - ql) + \eta\lambda(\alpha h - \alpha)(qh - ql) \mid \alpha h < \alpha\}$$

$$(8) \quad U(ql|r) = \{\eta[ql + \alpha l(qh - ql) + \eta(\alpha l - \alpha)(qh - ql)] \mid \alpha l > \alpha; ql + \alpha l(qh - ql) + \eta\lambda(\alpha l - \alpha)(qh - ql) \mid \alpha l < \alpha\}$$

Note that if  $\alpha < \beta_i / (1 + \beta_i - \beta_c)$  then  $\alpha h > \alpha$ . Since  $0 < \alpha < 1$  and  $0 < [\beta_i; \beta_c; \beta_i / (1 + \beta_i - \beta_c)] < 1$ , we can define the  $P(\alpha h > \alpha) = \beta_i / (1 + \beta_i - \beta_c) = \gamma$ . Similarly, if  $\alpha < (1 - \beta_c) / (1 + \beta_i - \beta_c)$  then  $\alpha l > \alpha$ ;  $0 < (1 - \beta_c) / (1 + \beta_i - \beta_c) < 1$ ;  $P(\alpha l > \alpha) = (1 - \beta_c) / (1 + \beta_i - \beta_c) = 1 - \gamma$ . Given the calculated values of  $\gamma$ , we can rewrite the expected utility models as:

$$(9) \quad SQAh = ql + [\alpha h + (\eta\lambda + \eta\gamma - \eta\lambda\gamma)(\alpha h - \alpha)](qh - ql)$$

$$(10) \quad SQAl = ql + [\alpha l + (\eta + \eta\lambda\gamma - \eta\gamma)(\alpha l - \alpha)](qh - ql)$$

$$(11) \quad dSQAh/d\alpha = [(\beta_c - \beta_i) + (\eta\lambda + \eta\gamma - \eta\lambda\gamma)((\beta_c - \beta_i) - 1)](qh - ql)$$

$$(12) \quad dSQAl/d\alpha = [(\beta_c - \beta_i) + (\eta + \eta\lambda\gamma - \eta\gamma)((\beta_c - \beta_i) - 1)](qh - ql)$$

The predictions of the model were tested using several samples including 519,200 product/day observations from Amazon.com. The findings showed that the predictions of the developed model closely matched the observed relationships in the real-world data.

The findings of this paper could present companies with a powerful tool that they could use to find the best price points for their products based on consumers' product knowledge and thinking style. In practice, companies could conduct a small study to estimate the parameters of the model, and then use the model to find the ideal price points for their products. Furthermore, this article makes significant theoretical contributions. Extant literature in pricing suggests that the effect of price on consumers' perception of quality is not homogenous across different market segments. This article is the first to offer a mathematical model that can not only explain the previous

findings in the literature but predict consumers' price-quality perceptions based on consumer and product characteristics.

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# Pangs from Persuasion: When Recommendations Undermine Consumers' Social Worth

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## EXTENDED ABSTRACT

Research on the Persuasion Knowledge Model (PKM) (Friestad and Wright 1994) has documented many negative responses to persuasion attempts (Isaac and Grayson 2017), including lower attitudes towards salespeople (Campbell and Kirmani 2000; Decarlo 2005; Main et al. 2007; Reinhard et al. 2006), advertisements (Campbell 1995; Campbell and Keller 2003; Darke and Ritchie 2007), and brands (Ahluwalia and Burnkrant 2004; Wei et al. 2008). To explain these responses, several mechanisms have been implicated having to do with perceived selling motives, such as suspicion of ulterior motives, inferences of manipulative intent, and consumer skepticism (Kirmani and Zhu 2007; Isaac and Grayson 2016). However, it is not completely clear why selling motives should necessarily incite these responses because goals to sell or make profits are well-known to consumers before exposure to a communication (Babin et al. 1995; Boush et al. 1994) and are often top of mind (Thompson 1972; Bhattacharjee and Dana 2017). An alternative possibility is that consumers may see attempts to persuade as deceptive. Although this may explain some empirical findings (Forehand and Grier 2003), perceived deception is unlikely to fully account for consumers' responses since they respond in the same way without deception (Campbell and Kirmani 2000; Main et al. 2007; Ahluwalia and Burnkrant 2004; Reinhard et al. 2006).

The current work investigates a different reaction consumers may have to perceived persuasion, which we suggest is responsible, in part, for their negative reactions. We suggest that consumers react to the interpersonal implications of being the target of a persuasion attempt. We argue that labelling a communication as "persuasion" activates consumers' beliefs that the agent is attempting to pursue their own interests instead of (and perhaps at the expense of) consumers' interests. This violates an important norm of interpersonal conduct – not taking advantage of others – conveying a lack of respect and value for the consumer. In short, we suggest that perceiving a communication as an attempt to persuade may convey threatening information about consumers' social worth.

Inferences of social worth (i.e. the extent to which an individual feels respected and valued by others) is a critical part of psychological and social functioning. They are an important part of self-esteem (Leary and Baumeister 2000; Leary 2005; Leary and Batts Allen 2011) and have a powerful influence over how individuals judge and respond to others. In particular, we tend to dislike, derogate, and withdraw from people we perceive hold us with low regard (Buckley et al. 2004; Leary, Twenge, and Quinlivan 2006; Miller 2001).

People can infer social worth from a wide variety of social cues. Sometimes this information is direct, for example, when others directly state their opinion (Smart Richman and Leary 2009). Other times, individuals infer (a lack of) social worth from actions that can be seen as exclusionary or are perceived as rejection (Buckley et al. 2004), even indirectly. For instance, a large literature in organizational psychology has found that individuals frequently infer social worth from organizations' processes and procedures (Blader and Tyler 2015), and work in consumer psychology has found that consumers interpret unfavorable prices and poor service in this way too (Ashworth and McShane 2012; Liao 2007). In a similar vein, we suggest that consumers may infer social worth from the assumptions they make about why an agent is attempting to persuade them.

Consistent with existing work, we start with the proposition that consumers often assume that persuasion is driven by agents' self-interest. In marketing contexts, this is typically a motive to sell. However, we also argue that this is typically well understood by consumers. The critical feature of a persuasion attempt is that it communicates to consumers that the agent is attempting to benefit from that particular consumer. Regardless of whether the agent actually benefits, this is important because it violates a norm of interpersonal conduct, to not take advantage of others. We argue that this conveys a lack of respect and value for the consumer, and that this is an important reason for consumers' subsequent reactions (derogating the agent and leaving the interaction).

In this paper, four studies test various aspects of our theorizing. First, we tested whether perceiving a communication as persuasion is sufficient to convey socially threatening information. Importantly, we found that a persuasion (vs. neutral) communication lowered consumers' perceived social worth (8-item, seven-point Likert scale i.e., the salesperson thought highly of you, did not think much of you (r); valued you as a customer, etc...). It also augmented advantage-taking beliefs, and it impaired all downstream consumer responses. We found results consistent with simple and serial mediation. This provides initial evidence of the basic effect. In the second study, we provide conceptual replication and extend the findings by varying the extent to which the salesperson benefits from the advocated action – something that should moderate the basic effect. We found that the effect of being a target of persuasion on social worth and advantage-taking beliefs was reduced when the salesperson would benefit less from the tactic compared to when they would benefit more. Additionally, we found serial moderated mediation, replicating the basic effect. Our third study provides a conceptual replication of moderation-of-process by varying the diagnosticity of the persuasive communication. We found that when features of the advocated action were less diagnostic of marketers' beliefs, the effect of being a target of persuasion on social worth and advantage-taking beliefs was attenuated. Our final study attempts to isolate social worth, demonstrating this is a critical element in consumers' overall reaction to persuasion. We showed that advantage-taking beliefs affect inferences of social worth when consumers view attempts to profit from others as a moral violation.

These four experiments provide evidence that persuasion attempts violate a norm of interpersonal conduct – not taking advantage of others – which conveys a lack of respect and value for the consumer, and leads consumers to derogate the agent and withdraw from the interaction. These findings suggest that researchers and marketers must be wary of the social consequences persuasion attempts can have on consumers' reactions and wellbeing.

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# The Self-Bolstering Effects of Repeated Affirmations Over Time

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## EXTENDED ABSTRACT

Should you listen again to that song you have been listening to on repeat, or should you listen to different song? We make consumption choices like this on a daily basis without really knowing if more (or less) variety is better for us—not just in terms of enjoyment (Galak, Redden, and Kruger 2009; Ratner, Kahn, and Kahneman 1999), but also psychological wellbeing. This is not an insignificant choice, however, since we regularly use consumption to help us cope when our perceptions of adequacy are called into question.

The abundance of and chronic nature of threats to one's adequacy can cause lasting negative effects on a person's physical, emotional, and mental wellbeing (Cook et al. 2012; Creswell et al. 2005; Jonas et al. 2014; Sherman and Hartson 2011). By encouraging reflection on valued aspects of the self, self-affirmation through consumption can be an effective way to prevent these harmful consequences since possessions and experiences can be closely tied to one's sense of self (Belk 1988; Carter and Gilovich 2012; Sherman and Cohen 2006; Steele 1988). A considerable body of research has confirmed the effectiveness of affirmations in restoring the self (Mandel et al. 2017), as demonstrated by higher levels of self-esteem, improved performance, increased optimism, and reduced stress levels (Sherman and Cohen 2006). However, this research has primarily investigated these outcomes in isolation, without accounting for the fact the individuals may be faced with a choice to either use a variety of affirmations, or to repeatedly use a single one to defend against the myriad threats they may face every day (Cohen and Sherman 2014; Cook et al. 2012). The purpose of this research is to investigate how the use of varied or repeated affirmations increases their effectiveness.

Prior work on satiation might suggest that repeatedly using an affirmation would make it less effective (Brickman and Campbell, 1971; McSweeney and Swindell, 1999). In this case, variety in affirmations should be beneficial to their effectiveness. Conversely, repetitive consumption can also be reinforcing, and thus beneficial, since it can increase enjoyment, perceived personal control, and agency (Frederick and Loewenstein 1999; Peterson 1999), enabling individuals to cope adaptively with threats (Jonas et al. 2014). Thus, we predict that there is a trade-off between variety and time between consumption, such that variety will be more effective in counteracting self-threats over longer periods; but as time between each affirmation decreases, its threat-reducing effect will attenuate as a reinforcement process bolsters the affirmations.

We believe the research put forth in this paper helps shed light on these issues and helps inform current work in multiple areas. First, this research contributes to the longitudinal perspective of compensatory consumption by exploring the effects of repetition and variety on affirming behaviors. Second, we extend theories on reinforcement by examining them within the context of affirming consumption. Lastly, understanding how marketers may help maintain the effectiveness of an affirmation can go a long way in ensuring consumers' sustained enjoyment and wellbeing. This can in turn, strengthen consumers' loyalty to the brands that facilitate the opportunity to self-affirm through meaningful consumption. In the rest of the paper, we discuss why the effectiveness of an affirmation changes over time depending on how often one consumes the same product, and what role variety plays in the process.

According to self-affirmation theory, it is not necessary to address a self-threat directly in order to maintain the perception of adequacy; it is also possible to do so by affirming one's overall self-concept (Steele 1988). For example, if a student's self-esteem has been threatened after failing an exam, they can restore their perceptions of adequacy by behaving in ways that signal other aspects they value about themselves, such as through the consumption of products that remind them of their athletic skills or social ties. Product choices that convey higher status have been shown to provide affirmational benefits to those whose self has been threatened (Sivanathan and Pettit 2010). In addition, a recent study by Townsend and Sood (2012) showed that participants who affirmed by writing a values essay were less likely to choose high design options (vs high functionality). In another study by the same authors, participants who chose the aesthetic product option were more open to arguments, similar to those who had affirmed by writing about their values.

Single affirmations like those in the previous examples have been shown to have lasting effects. Nonetheless, considering the wide range of sources from which threats may originate, a single affirmation may not be strong enough to counteract all the threats one might encounter on a daily basis (Cohen and Sherman 2014; Cook et al. 2012; Jonas et al. 2014; Mandel et al. 2017; Stinson et al. 2011). If an affirmation attempt is not successful, a person may no longer see themselves as adequate, and will need to find another way to affirm (Galinsky, Stone, and Cooper 2000).

It is common to provide participants in studies with a list of values which can be affirming (McQueen and Klein 2006), but which aspects of the self are affirmed naturally is usually determined by what is available and mentally accessible at the time for the individual (Steele 1988). For instance, in many cases a person's occupation or social affiliations are especially valued; for others their personal possessions, such as clothing and accessories, represent many aspects of an individual's self and as a result can become chronically salient. Often people lack awareness of who they are, but can infer qualities and characteristics from their own behavior (Bem 1972; Schooler, Ariely, and Loewenstein 2003), and consuming can provide crucial feedback—signaling to an individual that they are an adequate person (Bodner and Prelec 2003). Furthermore, because individual identities are mentally interconnected, the values and aspects that are central to a person's self-concept can become activated and interact with other identities during consumption through a spreading activation process (Anderson 1983; Reed and Forehand 2016; Swann and Bosson 2010; Verplanken and Holland 2002). Therefore, if an individual consumes more varied products that are personally meaningful and representative of what they value, the ability to affirm should increase since more aspects of the self are likely to be activated in the mind of the consumer. In this case, each time a consumer contemplates the painting they have hanging on their living room wall, new self-aspects can be reflected on and more meaning ascribed to the experience—reaffirming how they exemplify the value they place on art and aesthetic appreciation (Ahuvia 2005). Thus, we predict that variety will be beneficial to affirmations, such that:

*Hypothesis 1*    *Relative to repeating an affirmation, using a variety of affirmations will have a positive impact on self-esteem following repeated threats.*



However, during shorter consumption periods, there may be a positive effect of using the same affirmation, due to potential reinforcement effects. Repetition may lead to sensitization (Frederick and Loewenstein 1999; McSweeney and Swindell 1999), since pattern recognition and repetitive consumption have been shown to increase enjoyment, as well as provide a sense of stability, agency, and control over an individual's surroundings and self-concept (Frederick and Loewenstein 1999; Norton and Gino 2014; Peterson 1999; Whitson and Galinsky 2008). Furthermore, the familiar cues provided by the repetitive consumption can enable an approach motivation in dealing with future threats (Jonas et al. 2014). Reinforcement of valued aspects of the self could also help explain why people satiate slower to products that have more sentimental value associated with them, since sentimental value can be linked to memories of our relationships and other valued aspects of the self (Yang and Galak 2015). However, because these reinforcement effects require that consumers reflect consistently on a similar affirmation experience, we expect that they will only occur during relatively shorter time periods, when individuals can recall the thoughts and feelings surrounding previous uses of the affirmation. In other words, variety will not have as strong an effect in the short term due to the reinforcing effects of repetition.

*Hypothesis 2 The positive relative effect of affirmational variety, compared to repeating an affirmation, will be attenuated in shorter time periods.*

We tested these predictions in two longitudinal experiments, in which participants completed a threatening task, and then affirmed before completing the dependent measure assessing their self-perceptions. Because there were multiple observations for each participant, we employed models with individual fixed effects to capture these within subject variances.

The first study sought to provide an initial test of our predictions while employing a values essay task most commonly used in self-affirmation research (McQueen and Klein 2006). Ninety participants were recruited from the Amazon Mechanical Turk panel and asked to complete four rounds of the study, one to two days apart. Only participants who completed at least three rounds in total were included in the analyses ( $n = 54$ ). The study used a two-level (affirmations: same, different) between subjects design. The threat task was designed to threaten their competence and consisted of responding to difficult-to-impossible CAPTCHAs, a commonly used test used to distinguish human users from automated responses. Using a procedure adapted from Cohen, Aronson, and Steele 2000, after the first trial, participants ranked a list of values, and wrote an essay about their highest ranked value (same affirmation condition) or several values (different affirmation condition) after each round of CAPTCHAs. Finally, participants rated their self-esteem using two items adapted from Rosenberg 1979.

Results revealed a simple effect of time ( $\beta = .242$ ,  $t = 2.71$ ,  $p < .01$ ), qualified by a negative interaction effect of time and a dummy-coded same affirmation ( $\beta = -.288$ ,  $t = -2.05$ ,  $p < .05$ ). This indicates that, compared to those who used different affirmations, participants who used the same affirmation repeatedly in the face of threats had less positive self-perceptions, suggesting that variety improves an affirmation's effectiveness and supporting H1.

The goal of the second study was two-fold. First, we sought to replicate these results using actual consumption. Second, we wanted to demonstrate the boundary condition for the effectiveness of variety in affirmations proposed in our H2. Three hundred and thirty participants were recruited from MTurk to complete the study over four rounds. The study used a 3 (affirmation: same, different, control)

X 2 (time delay: short, long) between subjects design. In an initial task completed several weeks prior to the main study, participants provided a list of personally meaningful songs (adapted from Galak et al. 2009). In each round of the main study, participants first completed a threat task where they wrote a short essay on their personal insecurities. Then, they listened to either their top rated song (same affirmation condition), their top four rated songs (different affirmation condition). Lastly, participants completed the same measure of self-esteem used in Study 1. The time gap between affirmations was manipulated by having participants wait either 30-60 minutes (short gap) or 1-2 days (long gap) between rounds.

Replicating the findings of the first study, comparing the different and same affirmation conditions, in the long gap condition we observed a significant positive effect of time ( $\beta = .130$ ,  $t = 3.48$ ,  $p < .01$ ), qualified by a significant interaction effect ( $\beta = -.116$ ,  $t = -2.36$ ,  $p < .05$ ). However, in the short gaps condition, although there was a positive effect of time ( $\beta = .126$ ,  $t = 2.78$ ,  $p < .01$ ), the interaction effects were attenuated ( $\beta = .05$ ,  $t = .87$ ,  $p = .39$ ), indicating that using either varied or repeated affirmations had equally positive effects on self-esteem.

While consumption can provide many options and opportunities to affirm, there is also potential for repetition to reduce the effectiveness of an affirmation. Our results provide initial evidence which suggests that this not necessarily the case. Although variety seems to increase effectiveness of an affirmation over longer periods (hypothesis 1), repetition can be beneficial in the short term. Together, the results of two longitudinal studies support our prediction that using a variety of affirmations is more effective than repeatedly consuming an affirmation. However, over shorter periods, the reinforcing effect of using an affirmation repeatedly eliminates this difference. Thus, to counteract self-threats over time, it may be best to vary one's affirmations, unless there is a possibility of reinforcement of these effects.

By considering how using a particular affirmation repeatedly may influence its effectiveness in bolstering the self, the research presented in this paper provides several theoretical implications. First, in contrast to extant research on self-affirmation which has mainly looked at the effects of single affirmation interventions, our research delves deeper into understanding the effects of multiple affirmations. Second, our work extends the literature on product variety by exploring the novel context of affirming consumption. Third, this research also adds support for the effectiveness of indirect forms of compensatory consumption (Mandel et al. 2017). Our results show that it is not necessary to affirm within the same domain as a threat to one's self in order to address its negative psychological effects. Consumption provides many avenues for affirming the self that do not call more attention to the threat by addressing it directly (Lisjak et al. 2015).

These findings also help inform how marketers can tailor their offerings to help consumers sustain their products' affirmational benefits—encouraging them to keep consuming their favorite products. For example, products can be offered only during limited times, in which case variety would be beneficial (Sevilla and Redden 2014). The amount of variety provided, such as with video and streaming services, can also be modified depending on consumers' previous behavior. Controlling consumers' sense of variety (versus actual variety in options) may also help regulate their pace of consumption (Redden and Galak 2013), and thus improve affirmational benefits.

Finally, this research provides insight into enhancing consumer wellbeing, by highlighting ways in which individuals can adaptively cope with (and possibly prevent) self-threats through the intrinsically meaningful use of consumption (Kim and Rucker 2012; Schimel



et al. 2004). Enabling consumers to develop and sustain psychological resources can help in the short run to deal with experienced threats, and may also help in the long run to prepare for threats such as personal shortcomings and health recommendations (Ehret and Sherman 2014; Schmeichel and Vohs 2009; Taylor and Broffman 2011). By further exploring the affirmational benefits of consumption, we provide support for more natural and spontaneous ways to self-affirm (compared to writing values essays), which may possibly be used more often and proactively by consumers (Emanuel et al. 2016; Kim and Rucker 2012; Toma and Hancock 2013).

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# Consumers' Journey into Access-Based Consumption: A Narrative Analysis Approach

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## EXTENDED ABSTRACT

Consumers are increasingly shifting from traditional ownership-based consumption to relatively novel access-based consumption (hereafter, ABC). Access involves transactions that are market mediated but without transfer of ownership rights (Bardhi and Eckhardt 2012 881). Typically, ABC manifests in the form of renting, sharing, subscribing, or borrowing. This manifestation could be in the context of public services such as parks, museums, and libraries or could be in the context of private services such as Netflix, Spotify, and Airbnb. The primary focus of this study, however, is consumer engagement with private services. Specifically, the current research focuses on business-to-consumer situations with internet as a platform that facilitates access of products/services to consumers. Examples of such private services include companies like Rent the Runway, and Bag Borrow or Steal, which enable consumers to access fashion products such as handbags and jewelry. Moreover, music streaming services such as Spotify and Pandora allow consumers to store music in cell phones as opposed to buying stacks of music CDs. Broadly, ABC is a part of the sharing economy, wherein consumers place underutilized assets as market offerings to make a profit (Pricewaterhouse Coopers (PWC) Consumer Intelligence Series Report 2015). As per the PwC report (2015), 19% of all US consumers participate in sharing economy transactions; 72% plan to participate in the near future; and 57% view access as the new ownership. These numbers paint an optimistic picture of ABC's promising growth in the future.

Scholars have examined ABC from multiple perspectives. Since a wide range of activities pertain to access, there is a conceptual overlap in the literature regarding the semantics of ABC. As a result, there is certain degree of fragmentation and confusion regarding different terms such as sharing, collaborative consumption, renting, and access (Habibi, Davidson, and Laroche 2017; Habibi, Kim, and Laroche 2016). Belk (2007) defines sharing 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" (126). In collaborative consumption, people coordinate the acquisition and distribution of a resource for a fee or other compensation (Belk 2014) while engaging in joint activities with additional consumers (Felson and Spaeth 1978). Furthermore, renting goods usually involves an agreement between two parties whereby the renter obtains the right to use the rented object and relevant benefits for a specified period of time and fee (Moeller and Wittowski 2010). In contrast to ownership, consumers in ABC, derive benefits from access to objects or networks which they could not afford to own due to spatial or environmental constraints (Bardhi and Eckhardt 2012). In the current research, we focus on ABC and follow the definition by Bardhi and Eckhardt (2012) as "transactions that may be market mediated in which no transfer of ownership takes place" (881). Specifically, we narrow our focus to consumption through internet enabled transactions with emphasis on online applications which facilitate the ABC.

Extant research focused on ABC characteristics (Bardhi and Eckhardt 2017), ABC benefits (Lambert and Rose 2012), and motivations for participation in ABC (Bardhi and Eckhardt 2012; Edbring, Lehner, and Mont 2016; Gruen 2016; Lawson et al., 2016). Overall, extant literature has mainly endeavored to understand the "what" and

the "why" of ABC, with little emphasis on the "how" question. For example, how do consumers first encounter ABC products and services? How do they proceed after early encounters? How do different events transpire in consumer ABC journeys? Answering these questions is important because emerging research has identified sharing economy as an economic opportunity allowing a sustainable form of consumption leading to a decentralized, equitable, and sustainable economy (Martin 2016). In addition, it is speculated that the economic impacts of the sharing economy could grow from \$15bn in 2013 to \$335bn by 2025 (PwC Consumer Intelligence Series Report 2015). Despite such positive outcomes, Schor et al. (2016) find that consumers engaged in some sharing economy practices actually employ distinction practices that deter others, who lack cultural capital, from partaking in the exchanges resulting in an inequitable marketplace. The mixed findings in ABC research warrants an in-depth account of consumers' engagement with ABC. Therefore, a narrative textual approach was employed. A narrative analysis approach allows entry into participants' minds through in-depth interviews, enabling the researcher to witness their stories and journeys (Reissman 1993). Using iterative analysis of consumer stories pertaining to their ABC experiences, this paper sheds light on the key "turns in the road" that consumers experience as they navigate ABC in the context of their daily lives (Cortazzi 1994; Reissman 1993).

## THEORETICAL BACKGROUND

### ABC Enablers: Internet and Apps

Sharing and accessing as an Internet phenomenon started with Napster and other peer-to-peer (P2P) file sharing networks, where users were able to share and access digital files, often illegally (Giesler 2006; Henning-Thurau, Henning, and Sattler 2007). The Internet served as the springboard for the creation of these access systems; however, it is the rising role of smartphones and their capability to access mobile applications that has truly enabled the adoption of access systems (Botsman and Rogers 2010; Zolfagharian and Yazdanparast 2017). Research has identified mobile applications as key drivers of access system adoptions such as car sharing and streaming services (Hamari, Sjöklint, and Ukkonen 2016; Molhmann 2015).

### Liquid Consumption

The current research draws on the logic of liquid consumption which is derived from the theory of liquid modernity. Liquid modernity "is a social condition where social structures are no longer stable or long-term" (Bauman 2007, 1). Flexibility, mobility, and openness to change are key components of liquid modernity (Bardhi and Eckhardt 2017; Featherstone 1995; Hannerz 1996). Recently, Bardhi and Eckhardt (2017) applied the theory of liquid modernity to the domain of consumption and conceptualized the logic of liquid consumption defined as access-based, ephemeral, and dematerialized. The access-based characteristic of liquid consumption is central to the current research. The primary focus of this study then is to understand consumer engagement with private access services. Consumer micro-narratives of ABC were viewed through the lens of liquid consumption and synthesized to understand consumers' journey with ABC.

## METHOD

Given the research purposes, a qualitative approach using in-depth interviews was employed to extract consumer ABC narratives. Narratives serve as an instrument for individuals to make sense of the events that happen in the world (Reissman 1993). Narrative analysis is considered to be an entry into the mind of an individual or, if analyzing a group of storytellers, into their culture (Cortazzi 1993). Researchers interested in the lived experiences of consumers have employed narrative analysis to interpret and make sense of these experiences (Braun, Zolfagharian, and Belk 2016; Stern, Thompson, and Arnould 1998). By employing narrative analysis, the current research analyzes consumers' interpretations of their experiences with ABC and important events as they occurred in the context of their lived experience.

Text was generated through semi-structured in-depth interviews that allowed researchers to delve deep into consumer narratives (McCracken 1988). All researchers were involved in the data collection process, resulting in a total of 19 interviews conducted in the South-west United States. The purpose of the interviews was to extract the experiences and stories of the participants as they transitioned (or not) into ABC. For this reason, a purposive sample of ABC users was recruited using the researchers' social network. Thus, the deciding criterion for recruitment was participants' prior experience with ABC. Participants' age ranged from 20 to 65, with an average age of 27 (see appendix A for respondent profile). Participants represented a variety of occupations such as retired professionals, graduate students, and working professionals. Additionally, the extent of experience with ABC services also ranged from participants who were very used to ABC and those who had not had much experience with it. The researchers encouraged respondents to tell their personal narratives and probed for specific experiences contingently during the dialogue. The interviews generated 196 single-spaced pages of text. Transcripts generated from interviews are among the most popular forms of text used by consumer researchers (Arnold and Fischer 1994; Braun et al. 2016; Stern et al. 1998).

Interviews started with general questions about participants' experiences with ABC that enabled them to provide as rich a description of their emotions and opinions as possible. A research protocol was designed to ensure that the conversation did not deviate from its intended direction and to remind researchers of important probes and follow-ups to enrich consumer narratives (Rubin and Rubin 2005). Moreover, the use of the interview protocol enabled coverage of intended domains across all interviews as well as consistency across interviewers (McCracken 1988). The researchers began the interviews by asking participants if they had any experience with ABC. In some cases, participants were not familiar with the term ABC so the researchers provided examples to bring consumers' experiences with ABC (if any) to the fore.

## ANALYSIS

Text generated from the interviews was subjected to an interpretive analysis where researchers moved from the text to the etic understanding in an iterative manner. This resulted in the discovery of stages emerging from the text, informed by the researchers' framework (McCracken 1998). Each interview was analyzed individually to identify the emergence of a micro-narrative and then considered in the "big picture" with the rest of the interviews to form an overarching macro-narrative. Once all interviews were transcribed, the researchers analyzed the text, searching for the underlying macro narrative that not only constituted the different plots of the overall story, but also identified the most plausible sequence of events. The macro-narrative materialized from the similarities and differences

uncovered by the researchers along the spectrum of the complete text (Reissman 1993). The iterative process was complete when consensus across researchers was reached (Schensul et al. 1999).

Throughout the generation and analysis of the text, the researchers took appropriate steps in order to ensure credibility, dependability, confirmability, and integrity (Wallendorf and Belk 1989). Credibility was established by debriefing participants to verify an appropriate representation of their narrated reality. Dependability was established by incorporating member checks in over half of the interviews where at least two members of the research team were present. This also allowed for the triangulation of participants and researchers. Confirmability was established by audio recording each interview and making the digital transcriptions available to all members of the research team. Lastly, integrity was established by creating rapport among participants and researchers and by assuring participants of the confidentiality of the research.

## FINDINGS

The macro-narrative is visually presented in Figure 1 in the form of a pinwheel, with each of its components representing specific characteristics of it. Moreover, the study identifies specific drivers of ABC that act as the "wind" making the pinwheel turn. The resulting macro-narrative describes the key milestones consumers undergo through their experiences with ABC. More specifically, eight sequential "turns in the road," four major and four deviant, emerged from the analysis of micro-narratives. The sequence of these "turns in the road" is: initiation/rejection, experimentation/renunciation, contamination/alternation, and devotion/reversion. It should be noted that not all participants' narratives described such journey, as some of them deviated from the journey at different points in time effectively abandoning ABC, while some remained in a specific stage never reaching the devotion stage.

While initiation, experimentation, contamination, and devotion represent key stages in consumers' engagement with ABC; rejection, renunciation, alternation and reversion demonstrate alternate points from which consumers deviate from ABC. The unique feature of the emergent macro-narrative is that, it not only captures consumers' journey of becoming a devout user of ABC, but also captures the deviant "turns in the road" from which consumers leave their journey with ABC.

Consumers' journey with ABC begins with "initiation" which is characterized by consumers' random or purposeful internet searches, confirmation to recommendations from trusted relationships, or through product or service referrals. Alternatively, this journey is ceased when consumers' outright "reject" the idea of engaging in ABC for various reasons. Even after transitioning from initiation to "experimentation" wherein consumers "test the waters" of ABC, some consumers become ambivalent. They either continue and contaminate their consumption patterns with ABC or decide to renounce use of ABC. Consumers who continue with their occasional experimentation eventually experience "contamination" of their consumption patterns with ABC. This "turn in the road" represents an important milestone for ABC consumers because it is from this point onwards that consumers start considering access-based products or services as feasible options in their consumption decisions. However, for some consumers this contamination is not compelling enough. Specifically, with "alternation", they continue their traditional consumption practices and integrate ABC whenever convenient. This alternation does not reflect the complete embrace of ABC, as traditional consumption is still present. While some ABC consumers may not move beyond the alternation milestone resulting from their lack of devotion to such services/products. Devotion marks the pin-



nacle of consumers' engagement with ABC, characterized by strong emotions and bonding behaviors toward access-based products or services. However, at the pinnacle of engagement, some ABC consumers experience inconsistency with the ideology, stance or overall functioning of the access-based products or services. It is at this point, that consumers who previously showed devotion to ABC, revert back to their previous consumption practices. This progression of consumers' journey with ABC through each of the milestones is powered by the driving forces which are characterized by flexibility, status seeking, temporary nature of use, and low price of engaging with ABC (Edbring et al. 2016).

## DISCUSSION

Our findings can inform and equip marketing managers with key insights in various areas such as market-driven strategies, customer satisfaction, market-driving practices, service recovery, product and/or service sales and consequently, firm profitability. As per the findings, some consumers acknowledged the benefits of ABC, while some cited excuses pertaining to physical safety, information security, negative experiences, and liability of newness of the service or products for distancing themselves with ABC. As prior literature has shown, alternative methods of consumption do not always result in the positive outcomes they had originally been intended to provide (Schor et al. 2016). Marketers can tap into the reservations consumers have for not engaging in ABC by providing safety and security assurance or employee training as a potential remedy for negative consumer experiences, among others.

The current research makes several contributions to the liquid consumption literature. First, it not only identifies the unique milestones involved in ABC, but also demonstrates that each of these milestones has an alternative component that forms an integral part of the macro-narrative. Second, by analyzing consumer stories, the findings provide a nuanced understanding of liquid consumption as manifested through ABC. Each of the unique milestones that emerged in the macro-narrative delves deeper into the experiences of consumers. This is important, because consumer research has shown that under certain conditions, experiences make consumers happier compared to material possessions (van Boven and Gilovich 2003). Lastly, this research contributes to the theory of liquid modernity which posits that social structures are no longer stable or long-term (Bauman 2000) by adding more shades to the theory of liquid modernity and explaining how consumers progress through different milestones in their ABC journey.

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# Product Search on Crowded Retail Shelves: Impact of Vertical Product Location on Search Performance

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## EXTENDED ABSTRACT

In the context of FMCGs, consumers often arrive at the store with a choice of a product in mind. Their task then is to find their already chosen product among the products present at the point of purchase. In the current paper, we focus on this task of visual search for a target product on a shelf with a large assortment (i.e., a crowded shelf). Specifically, we investigate the influence of vertical location (VL) of a product on a crowded shelf on consumers' search performance. We provide initial evidence that, when the task is to find a target product on a shelf, the middle shelf (MS) is a position of disadvantage, when compared to the top shelf (TS) and the bottom shelf (BS).

Finding a target product on a crowded shelf is not easy. As the number of objects in any scene increases, it becomes difficult to distinguish the objects in that scene from one another. This is known as the "crowding effect" (Levi 2008; Whitney and Levi 2010). Among the factors influencing the strength of the crowding effect, is the location in the scene and the visual field. We investigate the influence of product location on search performance.

In a product choice context, products on MS and TS have been shown to get more attention and positive evaluation (Chandon et al. 2009; Valenzuela and Raghuram 2009; Atalay et al. 2012). The impact of product location on search, however, is underexplored.

According to the crowding literature, the ability of identifying an object in a crowded scene depends on that object's location by way of two mechanisms: *anisotropy* and *asymmetry* (Levi 2008; Whitney and Levi 2010). Anisotropy suggests that the crowding effect differs along the vertical axis of the visual field, and, specifically, is less strong in the lower visual field (He et al. 1996). Hence, the ability to identify an object's features is improved when the object is located in the lower visual field. Asymmetry refers to the role of surrounding (flanker) objects: a target object is more difficult to identify when it is presented with two flankers, positioned one on each side of the target, than when it is presented with only one flanker on one side (Bouma 1970; Bouma 1973). Thus, in a display of objects, the objects on the outer sides of the display will be easier to identify than the inner objects.

Drawing on these theories, we predict that there will be a main effect of vertical product location on search performance and that products on both top and bottom shelves (i.e., products in the outer locations) will be easier to find than products located on the middle shelf.

In study 1, 668 MTurk participants were asked to find a target (i.e., "sugar free" jam) among 25 different jams. The location of the target was manipulated in a between-participant design. On a 5x5 planogram, we rotated the target across the jams on TS, on MS, and on BS. Search performance was measured by search task duration, perceived duration of the task, perceived task difficulty, and satisfaction with task duration. Results showed a main effect of VL on task duration ( $F(2,653) = 5.12, p = 0.006$ ), perceived duration of the task ( $F(2,653) = 3.19, p = 0.042$ ), perceived task difficulty ( $F(2,653) = 2.69, p = 0.069$ ), and satisfaction with task duration ( $F(2,653) = 2.33, p = 0.099$ ). Planned comparisons suggested that MS is a position of disadvantage for product search when compared to BS and TS.

In study 2, 127 participants completed the study on a lab computer, and were asked to find the toothpaste for smokers on a shelf of 15 toothpastes arranged on a 3(columns) x 5(shelves) planogram. The VL of the target was manipulated in a between-participant design. Results showed a significant effect of VL on task duration ( $F(2,118) = 3.30, p = 0.04$ ), perceived task difficulty ( $F(2,118) = 3.75, p = 0.026$ ), and satisfaction with task duration ( $F(2,118) = 5.20, p = 0.007$ ). Planned comparisons suggested again that MS is a position of disadvantage for product search.

Eye-movement data showed that, when the target is on MS, the total number of fixations needed to explore the assortment is the highest ( $F(2, 118) = 3.93, p = 0.022$ ), the total duration of all fixations is the longest ( $F(2, 118) = 3.18, p = 0.045$ ), and the total duration of fixations that land on the target (i.e., total time needed to look at the target before "finding" it) is the longest ( $F(2, 118) = 4.03, p = 0.02$ ). The time to first fixation on the target did not differ significantly when the target was on MS or BS. However, the time elapsed since the first fixation on the target until the end of the task was shorter when the target was on BS than when it was on MS, suggesting that even though it takes the same time to look at the target product for the first time, the time necessary to recognize the target and complete the task is longer when the target is on MS than on BS.

A follow-up study, with a more pictorially depicted target that did not necessarily require reading to be found, provided additional evidence. Forty-nine participants searched for a box of almond-flavored cookies on a 5x5 planogram of cookies. Results confirmed that, when the target was on MS, rather than on TS or BS, the search task took the longest to complete ( $F(2, 46) = 3.39, p = 0.042$ ).

Taken together, our studies provide evidence for location effects on product search and a different take on location quality: while in a choice context the lower shelves are regarded as a position of disadvantage and the middle as a position of advantage, our results suggest that when the task is to search for a target product, MS may not be the best location, while BS gains value. Further research on factors influencing product search is needed, as it is a question relevant to consumers, retailers, and brand managers.

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# The Psychological Impact of Annuities: Can Pension Payout Choice Influence Health Behavior?

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## EXTENDED ABSTRACT

Across the world, a growing number of people face the important financial decision whether to take out their pension in the form of a one-time lump-sum payment or as monthly income, also referred to as an annuity. In the US and Australia, for instance, people have traditionally had the freedom to choose between these payout options, whereas some countries where annuitized pensions are traditionally more common such as the UK have recently introduced the option of cashing out one's pension as a lump-sum. Besides this increase in choice, the demographic development with aging populations implies that more and more people face the decision between an annuity and a lump-sum.

Policy makers have been debating whether people should be given a choice between annuitization and lump-sum payout, and whether choice of annuities should be encouraged or mandated. One consideration in this debate is self-selection. Specifically, it has been argued that individuals are to some extent aware of their own life expectancy, and that since the financial payout of annuities increases with growing length of life, those with a higher (compared to lower) life expectancy are more likely to choose an annuity. Indeed, literature has documented a positive relationship between receiving an annuity and longevity (Finkelstein and Poterba 2002).

In the present research, we raise the possibility that in addition to self-selection, a causal effect of choosing an annuity over a lump-sum on longevity may underlie this relationship. This proposal is based on the argument that for annuity (but not lump-sum) recipients, extending their lives implies a financial gain. Further, losing a substantial part of one's savings in the event of early death is a central concern regarding annuities (Hu and Scott 2007). As a result, positive consequences of reaching a high age may be particularly salient among annuity recipients. Hence, we hypothesize that individuals who perceive a higher likelihood of receiving an annuity will be more likely to engage in more (versus less) healthy behaviors as a means to increase life expectancy.

### Study 1

We recruited UK-based, currently employed participants through the website ProlificAcademic. Participants were randomly assigned to either a lump-sum- or an annuity- condition. The instructions stated that a recent policy change in the UK had given pensioners the freedom to choose between a lump-sum and an annuity. We then presented a short explanation of the two payout options. To facilitate comprehension, each participant also saw a table indicating the cumulative amounts of money that they would have received by certain ages with each option. The annuity payout was determined using current annuity rates. Both options were presented in counter-balanced order.

Next, participants in the annuity condition listed the one or two most important reasons for choosing an annuity and the one or two most important reasons against choosing a lump sum, whereas participants in the lump-sum condition listed the one or two most important reasons for choosing a lump sum and the one or two most important reasons against choosing an annuity. Our reasoning was that enhancing the accessibility of advantages of an option (and of

disadvantages of the alternative) would increase the subjective likelihood of choosing this option. As intended, participants in the annuity (vs. lump-sum) condition reported being significantly more likely to choose an annuity.

To measure health behavior, we then presented five scenarios involving a choice between a more and a less healthy behavioral option, and participants indicated which behavior they would be more likely to choose. The behaviors included selecting a costly comprehensive vs. a free basic health check, and joining a more strenuous exercise program that particularly benefits long-term health vs. continuing one's regular exercises.

The results confirmed our central hypothesis: Across scenarios, participants in the annuity condition were significantly more likely to select the healthy behavioral options than participants in the lump-sum condition.

### Study 2

The purpose of Study 2 was to replicate the effect that choice of an annuity vs. a lump-sum boosts health-related behavior in the context of real behavior. Participants were randomly assigned to a lump-sum- or annuity-condition. Upon arriving at the lab, participants exercised on a stationary bike for two minutes. A combined measure of the amount of calories burnt and distance travelled (z-scored) within these two minutes was included as a covariate in the main analysis to control for individual differences in exercising performance.

Next, participants were told they would participate in an unrelated study while taking a break between exercising tasks. In fact they completed the task manipulating perceived likelihood of choosing an annuity vs. a lump-sum from Study 1 – our manipulation of the financial decision. As intended, participants in the annuity (vs. lump-sum) condition indicated being more likely to choose an annuity for their own retirement.

After this manipulation was administered, participants exercised again on the bike for up to ten minutes. They were told that it was up to them how vigorously they wanted to exercise. Our main dependent variable was the combined measure of the amount of calories burnt and distance travelled (z-scored) within the ten minutes. In addition, participants indicated how likely they were to exercise later that day.

Addressing our main hypothesis, participants in the annuity-condition had significantly higher values on the exercising measure than participants in the lump-sum-condition, indicating that they had exercised more vigorously. In addition, participants in the annuity-(vs. lumps-sum-) condition reported being significantly more likely to exercise later that day.

Prior literature has focused on antecedents (Payne et al., 2013; Shu, et al., 2016) rather than consequences of choosing a lump-sum vs. an annuity pension. We manipulate expectations of choosing an annuity (vs. a lump-sum) and find evidence of a causal effect on health-related behaviors. Such potential consequences should be considered in the public policy debate on pension payout choice.

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# Born to Shop? A Genetic Component of Deal Proneness

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## EXTENDED ABSTRACT

Price discounts, cents-off coupons, and other retail sales promotions have been found capable of eliciting strong consumer enthusiasm. Research on this sales promotion enthusiasm has shown that people have enduring differences in their likelihood of feeling it. The tendency to feel strong promotion enthusiasm has been termed *deal proneness* (Webster 1965). Given that deal proneness is both an interesting behavioral phenomenon as well as descriptive of an important market segment, it is worthwhile to gain a better understanding of the origin of this consumer disposition.

An early view concerning the origin of deal proneness is that consumers learn it from the shopping environment. However, virtually all consumers are exposed to sales promotions, but only some of these consumers become deal prone. The possibility that a financial need for price discounts leads people to become deal prone conflicts with data indicating that deal-prone consumers tend to be higher income, not lower income, individuals (e.g., Bawa and Shoemaker 1987). Rather, the tendency for some consumers to become deal prone is likely to be based on differences among consumers as to how they experience retail sales promotions. For example, some consumers may enjoy deals more than others because of the ego satisfaction they receive from them (Schindler 1998).

In addition to the possibility of acquiring deal proneness from the shopping environment, consumers could acquire it from their parents. Schindler, Lala, and Corcoran (2014) found that deal-prone consumers are likely to have deal-prone parents. Although they found evidence that factors related to the quality of family interactions affected the degree of deal-proneness similarity between consumers and their parents, the consumer-parent similarity raises the question of whether there is an inherited component to deal proneness. Supporting this are recent findings of inherited components to various types of consumer and financial decision-making (Cesarini et al. 2012; Cronqvist and Siegel 2014; Simonson and Sela 2011).

In this study, we test for an inherited component to deal proneness. We use a classical twin design to compare the similarity of monozygotic (MZ) and dizygotic (DZ) twins reared together. Because MZ twins have all of their genes in common, but DZ twins have, on average, only half of their segregating genes in common, a higher correlation in the amount of a trait between the members of MZ twin pairs than between the members of DZ twin pairs indicates some heritability of the trait. If MZ and DZ twin pairs are relatively similar in their correlations, then shared environmental influences are inferred to be at work in shaping the trait.

The twins included in this study were recruited with the assistance of the registrar at Rutgers University. All pairs of students who attended the university between the years 2016-2018 and who had the same last name, same birth date, and same gender were contacted by email and were invited to participate. A total of 108 twin pairs responded. To determine the zygosity of each set of twins, we asked each twin to complete a five-item self-report questionnaire that has been validated against DNA-based zygosity determination (Lykken et al. 1990). By these questions, 73 twin pairs were classified as MZ and 35 were classified as DZ.

Each of the twins in the sample completed the deal-proneness measure used by Schindler et al. (2014). The scale included 32 seven-point agree-disagree items with five or six items addressing each

of six deal types. The items measured the enjoyment and pleasure that was received from the deal types. For example, one of the six deal types represented was *free gift* (e.g., "I enjoy buying products that come with a free gift") and another was *coupon* (e.g., "Redeeming coupons makes me feel good").

The twins in the 73 MZ twin pairs in our sample showed a high degree of similarity with each other in their scores on the 32-item deal proneness scale ( $r = 0.55, p < 0.001$ ). The twins in the 35 DZ twin pairs in our sample showed a much lower degree of deal proneness similarity ( $r = 0.13, p = 0.46$ ). This greater similarity among the MZ twins than among the DZ twins is statistically significant (Fisher's  $z = 2.30, p = 0.024$ ) and is evidence for a high degree of heritability in deal proneness. Using Falconer's (1989)  $h^2$  measure of heritability, our results indicate that 84 percent of the variability in deal proneness is associated with genetic factors.

The MZ-DZ correlation differences did differ among the six deal types. There was considerably more similarity among the MZ twins than among the DZ twins in their interest in coupons, rebates, and items being on sale. For free gift deals, there was considerably more correlation among MZ twins than among DZ twins, but this difference was not statistically significant. For buy-one-get-one-free promotions and contests and sweepstakes, there were only small, non-statistically significant differences between the similarity among MZ twins and that among DZ twins. This suggests an effect of shared environment on those types of deals rather than heritability.

The greater deal-proneness similarity among MZ twins than among DZ twins provides strong evidence for the existence of an inherited component to deal proneness. This finding provides a basis for approaching the question of what factors make deals attractive to consumers. For example, Simonson and Sela's (2011) finding regarding the compromise effect suggests some heritability of the degree to which a consumer uses external stimulus information (e.g., whether an alternative is the middle option) over internal preference information (e.g., his or her liking of the alternative). Such use of external stimulus information over internal preference information may also be important in how promotional deals are experienced. For marketing practice, the finding of the heritability of deal proneness is further evidence that this trait tends to run in families and suggests that there might be a particular effectiveness of promotional deals that encourage interactions among consumers and their family members.

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# “Eww, It Has a Face!” Anthropomorphizing Food Products Deteriorates Consumption Experience

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## EXTENDED ABSTRACT

Anthropomorphism – the attribution of human characteristics to nonhuman objects – is a popular marketing strategy used for various products (Aggarwal and McGill 2007; Epley, Waytz, and Cacioppo 2008). This research focuses on the anthropomorphization of food products – a fairly neglected area of research. To promote food products, companies frequently rely on anthropomorphized brand characters such as Mr. Peanut, Tony the Tiger, or the M&M mascots and endow products with humanlike characteristics. For example, *Nestlé* promotes its cinnamon toast crunch cereals by making the cereals appear alive and *Dunkin’ Donuts* recently introduced a smiley face donut. In addition, governmental institutions such as the *United States Department of Agriculture* (USDA) anthropomorphize fruits and vegetables to promote healthy eating to children.

What are the consequences of anthropomorphizing food products? While extant anthropomorphism research has focused predominantly on consumer responses before purchase (e.g., liking, purchase; e.g., Wen Wan et al. 2017), the current research takes a new perspective and investigates how anthropomorphizing food products impacts consumption-related outcomes. Drawing from mind perception theory, the central proposition of this research is that anthropomorphizing leads to the perception of *Experience* – that is, capacity to feel pain, pleasure and emotions (Gray, Gray, and Wegner 2007). Experience transforms an entity into a moral patient. A suffering moral patient triggers feelings of care and concern (Gray et al. 2007; Waytz et al. 2010b), which should negatively influence consumption-related responses.

Two studies provide evidence for the deteriorating effect of anthropomorphism on consumption experience. Study 1 ( $n = 46$ ), a field study, was presented as a new product evaluation task. Participants were instructed to choose one of two cookies (control vs. anthropomorphized), eat it, and, then, indicate how much they enjoyed it and how they felt after eating it. The results show that consumers enjoyed eating the anthropomorphized cookie significantly less and felt significantly worse after eating the anthropomorphized cookie compared to the non- anthropomorphized version (all  $p$ 's  $< .05$ ).

Next, study 2 shed light on the underlying mechanisms. Study 2 ( $n = 116$ ; MTurk sample) used a single-factor (control vs. anthropomorphized) between-subjects design. As stimulus, we used a recent *Chips Ahoy!* cookie advertisements. For the anthropomorphized condition, we used the original ad which featured a cookie with human face features. For the control condition, we removed the human face features from the cookie. The results showed that while anthropomorphizing enhances consumption experience due to greater whimsical cuteness, it simultaneously, and even more so, deteriorates consumption experience because of feelings of inflicted harm. Consumers feel as if they would hurt the anthropomorphized food product by eating it, which negatively influences consumption-related responses.

In doing so, the current research contributes to anthropomorphism literature in several ways. First, while existing anthropomorphism research focused predominantly on consumer responses before consumption (e.g., liking, evaluation), the current research outlines important downstream consequences of anthropomorphism. To the best of our knowledge, this is the first research to systematically document deteriorating effects of anthropomorphism on post-purchase consumer responses. This adds a novel chapter to an evolving stream of research investigating consumers differential pre- and

post-purchase responses (Lee and Tsai 2014; Wu et al. 2017). Second, while extant anthropomorphism research has mainly focused on the consequences of moral agency (i.e., the capacity to perform intentional actions), the current research is among the few exceptions that examine the consequences of experience – the second dimension of mind perception (Gray et al. 2007; Waytz et al. 2010b). This is relevant because many anthropomorphized entities do not act themselves but are acted upon (especially in a consumption context). Third, the current research has implications for prior research on consumption-related consequences of anthropomorphism. Research has demonstrated that anthropomorphizing a tempting consumption object increased consumption amount because anthropomorphizing reduced experienced conflict among consumers with a strong dieting goal (Hur et al. 2015). Our work extends this line of research by uncovering an additional mechanism that impacts consumers' consumption-related responses. We find that anthropomorphizing a food product inhibits consumption and leads to more negative emotional outcomes because consumers feel as if they would harm the anthropomorphized product by eating it. We believe that findings of Hur et al. (2015) do not contradict our results, but rather suggest an additional boundary condition. That is, for consumer with a strong dieting goal, the negative effect of anthropomorphism on consumption enjoyment should be attenuated because feelings of reduced conflict counteract perceptions of inflicted harm.

Lastly, the current research offers implications for marketers and public policy makers. For example, a negative consumption experience might lead to lower re-purchase likelihood and frequency, which is why marketers need to be aware of post-purchase consequences of an anthropomorphism strategy.

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# When Lack of Belonging Means Bad News for the Planet: The Consequences of Low Belonging on Ethical Product Purchases

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## EXTENDED ABSTRACT

Consumers increasingly report feeling disconnected from others. They live farther from family, belong to fewer social groups, and are more likely to live alone than ever before (Pew Research Center 2015). Low belongingness is an aversive state for consumers, since belonging is a human need (like food, water, and shelter), and relationships with others provide access to survival benefits such as resources and protection (Buss 1990). Consumers often use ethical products to help them experience belonging since these products can signal altruism and convey status to others (Griskevicius et al. 2010; Van Vugt et al. 2007). But for individuals low in belongingness, investing in ethical products may not be worthwhile since they cannot harness social benefits of these products such as elevated group status and increased access to resources within groups.

Some literature suggests that low belongingness decreases prosocial actions (Baumeister et al. 2007). In this research, we predict that low belongingness may reduce interest in ethical products, leading individuals to view ethical products less favorably and pay less for them. We expect that these effects occur due to a lower focus on others, which results in less concern for social acceptance.

Experiment 1 predicts that consumers who experience lower (vs. higher) feelings of social belonging will evaluate ethically branded products less favorably. 80 students participated in a lab study. Participants read a passage about an invented brand called Ony. The passage allowed us to manipulate perception of the brand as either an ethical, socially responsible brand, or as a typically branded control.

Next, participants indicated their overall evaluation of the Ony brand: bad/good, unfavorable/favorable, and negative/positive ( $\alpha = .94$ ) as our dependent variable. Following, participants completed Twenge et al.'s belonging scale (2007,  $\alpha = .87$ ).

Using Hayes Process Model 1 (2013), we conducted a multiple regression. As expected, the analysis revealed a marginally significant two-way interaction (ethical or control  $\times$  belongingness,  $b = .25$ ,  $t(1,76) = 1.94$ ,  $p = .06$ ). Participants lower in belongingness ( $-1$  SD) showed less favorable evaluations of the ethical brand ( $M_{\text{low belongingness}} = 4.70$ ) than participants higher in belongingness ( $M_{\text{high belongingness}} = 5.57$ ,  $+1$  SD,  $t = 2.22$ ,  $p = .03$ ).

Experiment 2 tests the underlying mechanism "focus on others" and "concern for social acceptance" and suggests that individuals low in belongingness may display lower willingness to pay for ethical products due to a lower focus on others that leads them to lack concern for social acceptance. 258 participants were recruited on Mturk. Participants first completed a writing task to prime low belongingness (vs. control). In the low belongingness condition, participants wrote about a time they felt they did not belong; in the control condition, participants wrote about a TV show. Next, participants saw the Ony ethical product manipulations from experiment 1. As the dependent variable, participants indicated how much they would be willing to pay for a cup of Ony coffee. Afterward, participants answered the focus on others (from Winterich and Barone, 2011,  $\alpha = .89$ ) and concern with social acceptance scales (from Chen, 2017,  $\alpha = .96$ ), the mediators.

Using Hayes Process Model 1 (2013), we conducted regression to predict willingness to pay. Willingness to pay was transformed to account for extreme values. Due to the transformation, lower values

represent higher amounts. As predicted, we found a significant two-way interaction ( $t(1, 254) = 2.42$ ,  $p = .02$ ). Individuals who viewed the ethical product and were primed with low belongingness were willing to pay less for the ethical product than controls ( $M_{\text{low belongingness, ethical}} = .36$ ,  $M_{\text{control, ethical}} = .29$ ;  $t(1, 254) = -2.18$ ,  $p = .03$ ).

To explore the underlying mechanism, we conducted dual moderated mediation using Hayes Process Model 86. The results confirmed that both focus on others and concern with social acceptance mediated the moderated effect ( $[.001, .018]$ ). Among participants primed with low belongingness, the effect was significant (Effect =  $-.01$ , 95% CI =  $[-.015, -.002]$ ), suggesting that participants low in belongingness are less willing to pay for ethical products because they are less focused on others, which leads to less concern with social acceptance. Among controls, the effect was the opposite. Dual mediation was not significant when the order of the mediators was reversed.

Experiment 3 provides further evidence for the underlying mechanism, concern with social acceptance, by testing whether individuals who feel low belongingness gravitate toward minority (vs. control) endorsed products. 133 participants were recruited on Mturk. Participants completed the writing task from experiment 2 to prime low belongingness (vs. control). Next, participants saw one of two advertisements about a green brand, EcoTowel, encouraging them to purchase it and decrease their urban footprint. The advertisements were identical except for the manipulation: 1) Only 19% of American households look for green products when they shop (minority endorsed), or 2) no statement (control). Participants indicated their willingness to pay for the EcoTowel.

We transformed willingness to pay; lower values represent higher amounts. We found a significant two-way interaction ( $F(1, 129) = 4.47$ ,  $p = .04$ ). Among individuals primed to feel low in social belonging, those who viewed the minority endorsed advertisement (vs. control) reported a higher willingness to pay for the ethical product ( $M_{\text{minority endorsed, low belongingness}} = .15$ ,  $M_{\text{ethical control, control}} = .21$ ;  $F(1, 129) = 6.41$ ,  $p = .01$ ).

Experiment 3 shows that individuals low in belongingness gravitate toward ethical products that endorse the minority opinion, suggesting that these individuals may be less concerned with others and social acceptance. This finding provides an important contribution to past research on social influence, which has found that individuals are more likely to engage in ethical behavior, such as recycling and donating (Goldsmith, 2015; Goldstein, Cialdini, and Griskevicius, 2008), when majority norms are used. We suggest that this effect may vary for individuals low in belongingness.

Overall, our results reveal that individuals who feel low in belongingness (vs. controls) evaluate ethical products less favorably and are less willing to pay for them. Applied, our results suggest that feelings of isolation and low belongingness may engender unintended consequences for society and the environment.

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# When Less is More - How Making Products More Personal Can Decrease Purchase Intention

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## EXTENDED ABSTRACT

Personalization (i.e., tailoring products and services to individual consumer needs) is central to many successful businesses (Kavadias, Ladas, and Loch 2016). Research on personalization has predominantly investigated the effects of consumers sharing personal information with companies (e.g., Zhang and Wedel 2009). Yet in various industries, companies are also sharing personal information with consumers (i.e., the flow of information is reversed): The furniture retailer IKEA provides names of product designers aside its products in its retail and online stores. The food manufacturer Ruedgenwalder Muehle displays pictures and job descriptions of product developers on its products' packages. The FMCG company Beiersdorf shares videographic stories of product developers online. These examples illustrate a novel approach to personalization (hereafter referred to as "personalization" (Fuchs et al. 2016)), which is different from traditional personalization in several aspects: Foremost, companies share personal information with consumers. Thus, the direction of information flow is reversed. Furthermore, personalization might make products appear to be more personal, yet they do not become more individual. Finally, consumers cannot opt out of personalization as there is no proactive consent necessary. Thus, the author believes that the existent research on personalization is only partially applicable to this matter. To the best of the author's knowledge, there is only one study specifically dedicated to this topic (Fuchs et al. 2016), which demonstrates that consumers choose personalized over non-personalized products in a series of choice-based experiments. Considering that personalization used in practice yet under-researched, the author examines positive and negative effects of personalization on consumer behavior in two studies.

The aim of Study 1 was to establish the underlying psychological processes of personalization. On one side, the author hypothesizes that personalization influences perceptions of anthropomorphism. Anthropomorphism "describes the tendency to imbue the real or imagined behavior of nonhuman agents with humanlike characteristics, motivations, intentions, or emotions" (Epley, Waytz, and Cacioppo 2007, 864). In marketing literature, different forms of anthropomorphism and their effects on consumer behavior have been discussed (e.g., Kim and McGill 2011). Also, research suggests that even non-diagnostic information, for example knowing a person's name, can influence consumers (e.g., Jiang et al. 2010). On the other side, the author hypothesizes that personalization influences perceptions of uniqueness (Snyder and Fromkin 1980). Compared to the majority of products, personalization still might be a distinctive feature making products unique. To test these hypotheses, data for Study 1 ( $N = 211$ ) was collected in a large Western European country. In a between-subjects design, participants were randomly assigned to one of two conditions. In both conditions, participants saw a snack foods product. In the treatment condition, participants were informed how and by whom (i.e., the product developer's name was explicitly mentioned) the product was developed. In the control condition, participants were only informed how the product was developed. Results suggest that participants had higher perceptions of anthropomorphism ( $t(209) = 4.90, p < .001$ ) and uniqueness ( $t(209) = 4.74, p < .001$ ) in the treatment condition. While the findings of a mediation model suggest that personalization has indirect effects on purchase intention via anthropomorphism ( $b_{a1 \times b1} = 0.50, CI_{90\%} [0.32, 0.69]$ ) and uniqueness ( $b_{a2 \times b2} = 0.16, CI_{90\%} [0.06, 0.29]$ ), there is no overall effect ( $b_c = 0.16, CI_{90\%} [-0.17, 0.49]$ ).

The aim of Study 2 was to replicate the findings of Study 1 and to identify potential downsides of personalization. Research in the domain of personalization suggests that over-personalization can induce negative consumer reactions (Doorn and Hoekstra 2013; White et al. 2008). To explain negative consequences of personalization, the author builds on social presence theory and the role of intimacy (Short, Williams, and Christie 1976). Personalization might enable an object to become a social participant in the environment of the consumer. Following social presence theory, the author hypothesizes that personalization can violate consumers' privacy in categories associated with a high level of intimacy (e.g., toiletries, hygiene products). Study 2 ( $N = 209$ ) followed the same between-subjects design as Study 1. Shower gel was chosen as a product associated with a high level of intimacy in usage. In both conditions, participants saw a bottle of shower gel containing a new formula. In the treatment condition, participants were informed by whom the new formula was developed (i.e., two product developers of the company). Additionally, a picture of the two developers was shown on the bottle. In the control condition, participants received no information on the product developers. Reconfirming the findings of Study 1, participants reported higher perceptions of anthropomorphism ( $t(207) = 1.90, p = .059$ ) and uniqueness ( $t(207) = 5.48, p < .001$ ) in the treatment condition. Also, participants perceived the treatment condition to be more intrusive to privacy ( $t(207) = 7.87, p < .001$ ). Subsequently, a mediation model was estimated. In line with Study 1, personalization has positive indirect effects on purchase intention via anthropomorphism ( $b_{a1 \times b1} = 0.21, CI_{90\%} [0.03, 0.40]$ ) and uniqueness ( $b_{a2 \times b2} = 0.15, CI_{90\%} [0.05, 0.26]$ ). Additionally, a negative indirect effect of personalization on purchase intention via intrusion to privacy ( $b_{a3 \times b3} = -0.19, CI_{90\%} [-0.34, -0.06]$ ) was found. The total effect of personalization on purchase intention was negative ( $b_c = -0.44, 90\% CI_{90\%} [-0.75, -0.12]$ ). These results suggest that for products associated with a high level of intimacy, personalization is perceived to be intrusive to consumers' privacy and thus decreases purchase intention.

These findings indicate that personalization is a double-edged sword. While personalization increases perceptions of anthropomorphism and uniqueness, it can be used in practice to differentiate products by making them appear to be more human and unique. However, this approach seems not to be appropriate for all categories. The findings highlight that for categories associated with a high level of intimacy, personalization can decrease purchase intention as consumers feel violated in their privacy.

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# A Conceptual Framework of Violation of Trust and Negative Emotional Responses during Brand Transgressions

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## EXTENDED ABSTRACT

### Summary:

Though parallels to interpersonal relationships are drawn to explain various facets of consumer-brand relationships, seldom focus has been shown on explaining the nature of trust and its role in emotional responses, particularly its violations and negative emotions. By drawing from exchange and penetrations principles of social psychology theories, we build a conceptual model describing the development and decline of trust, and its possible outcomes in the consumer-brand dyad. We outline the growth of this relationship through Knapp's (1978) ten stage model and the evolution of trust over these stages by employing Lewicki's (1995) development and decline model of trust in relationships. We further posit the emergence of negative emotional responses from the consumers at times of breach of this trust.

### Conceptualization:

#### *Development of Trust*

Extant consumer behaviour literature predominantly examines the phenomenon of trust as purchase situation characteristics between exchange partners (Dwyer, Schurr, and Oh 1987; Das and Teng 1998; Sirdeshmukh, Singh, and Sabol 2002), or alongside consumer commitment to organizations as a result of marketing practices (see: Morgan and Hunt 1994; Shankar and Ron 1997). However, there is a need for a perspective of understanding the nature of trust in a consumer-brand relationship through stages of its development, to better establish its similarities and distinctions from interpersonal relationships. To this end, we correlate Lewicki's (1995) model of development of trust with Knapp's (1978) stages of formation and disintegration of relationships.

Knapp's (1978) ten stage relationship model describes the coming-together and coming-apart stages of an interpersonal relationship. It is through this model we describe the developmental stages of a consumer brand relationship, progressing from initiating and experimenting, to integrating and intensifying, and finally reaching the bonding stage, where the relationship partners are able to form a shared identity. As the relationship continues to develop, the nature of trust evolves alongside (Lewicki 1995). Lewicki's (1995) model describes the evolution of trust in relationships over three stages. The first stage of building of trust is the Calculus-Based Trust, where the validity of trust is confirmed through consistent meetings of expectations of both involved parties. The expectations in this phase are limited to calculated value in exchanges between the partners (Das and Teng 1998). The second stage of evolution of trust is the Knowledge-Based Trust, where trust develops by gaining more knowledge of the partners' needs, preferences, and priorities (Bhattacharya, Devinney, and Pillutla 1998). By reassuring the promised value propositions and creating a consistent brand personality in the consumers' minds over the period of the relationship, the consumer internalizes knowledge about the brand creating a stronger trust in it (Keller 2008). Consistency in this stage leads the consumer into developing a much stronger relationship with the brand, where the consumer beings to substitute a portion of the self-concept using the brand, creating a shared identity. The Identification-Based trust that

drives the consumer into adopting the brands identity comes from extending the knowledge about the brand into a more personal identification (Tanis and Postmes 2005). At this resonance stage bonding, there exists a trust equilibrium that maintains the relationship at its strongest level of development. An instability in this state of trust results from the perception of the behaviour of one party by the other as violating the mutual trust. This instability causes the perceiver to assess the situation at a cognitive and emotional level, leading to the relationship's decline or eventual disruption. Brand transgressions create instability in this state of trust in the relationship.

#### *Transgression and Decline of Trust – Dissatisfaction versus Violation of Trust*

Conflicts and misunderstandings arise out of situations where the behaviour of a partner does not fall into the boundary of the expected behaviour, leading to a sense of distress (Lewicki & Bunker, 1995). Dissatisfaction resulting from unmet performance expectations as against a sense of loss arising from violation of trust would lead to distinct outcomes on the relationship (Reimann et al. 2018) two studies shed new light into the experience of brand betrayal. A large-scale psychometric study shows that brand betrayal (vs. dissatisfaction). Though dissatisfaction causes negative emotional responses from the consumer, however, it would not be as strong or deeply rooted as responses resulting from a sense of moral violation (Romani et al., 2012; Reimann et al., 2018)discontent, dislike, embarrassment, sadness, and worry. While reactions to moral violations could lead to immediate termination of a relationship, dissatisfaction would more likely follow a path of separation much in similarity with an interpersonal relationship that would fall out of equilibrium, taking the five *coming-apart* stages of Knapp's (1978) ten stage relationship model (Anderson, Avtgis, and West 1998). Knapp's (1978) model lists five stages of *coming-apart* as a result of misunderstandings and conflicts in a relationship. It is also seen that stronger derived emotions emerge in the emotional-activity stage of the dynamics of trust violation in case of violation of trust, while the assignment of importance to the transgressing event happens in the cognitive-activity stage (Lewicki 1995). The role of transgressor response as a moderator is also pertinent, wherein the nature of the response from the brand could drive the outcome towards rupture, recalibration or restoration of the relationship.

### Major findings and Conclusions:

Drawing upon principles of social exchange and penetrations from social psychology theories, this work contributes in differentiating the distinct outcomes of a performance related transgression as against a perceived violation of trust by the brand, resulting in negative emotional responses from the consumer, and their subsequent impact on the consumer-brand relationship. Further conceptual and empirical contributions on the nature of this trust and its role in the context of different consumer-brand relationship types and stages, across cultures and product categories, will strengthen the field of humanizing brands that is increasingly gaining attention from marketing scholars. Furthermore, the role of trust as antecedent of consumer negative emotions towards brands, and its implications on consumption as well as consumer well-being also can be explored

to build on the similarities, and distinctions, between interpersonal and consumer-brand relationships.

Understanding the role of trust, and the negative emotional responses associated with a violation of trust in a consumer brand relationship would provide a predictive strength to practitioners aiming at creating strong bonds with consumers in a crowded marketplace.

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# Round it up: Preference Exists for Rounded Totals (PERT)

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## EXTENDED ABSTRACT

In recent years, charitable giving has stagnated. In the US, on average individuals only donate about 2% of their annual disposable income, a level of contribution that has remained fairly constant across the past four decades (Giving USA 2017). Such charitable contributions are positive and admirable, of course, but there remains a considerable and untapped upside of potential contributions in donors' mental budgets. We therefore present a simple method for nudging more people to donate more money to charities.

Our main hypothesis builds from prior research showing that rounded numbers (e.g., \$3.00) subjectively "feel right" (Wadhwa and Zhang 2015), and that people prefer offers with rounded prices (Yan and Pena-Marín 2017). We investigate charitable donations that, when added to the price of a product, sum to a *rounded total* i.e. for example, when purchasing a product for \$7.60, might people be more willing to donate an additional \$1.40 than \$1.20?

To the best of our knowledge, no research has investigated whether the *roundness of the total amount* affects donations, and if so, by what psychological process it operates. Moreover, although consumer researchers have revealed many important factors affecting charitable donations (e.g. Charness and Holder 2018; Koschate-Fischer, Stefan and Hoyer 2012; Krishna 2011; Goswami and Urminsky 2016; Hagtvéd and Patrick 2016), no prior research has examined donation behavior in the context of add on to a purchase. Here we focus on the roundness of a total amount, hypothesizing that a preference exists for rounded totals (henceforth *PERT effect*).

While rounded numbers could have positive effects, on the other hand, however, rounded numbers are also perceived to be bigger than nonrounded numbers (Thomas, Simon and Kadiyali 2010). This could lead consumers to feel that a rounded total is psychologically more costly than a comparable but nonrounded number. Thus, the presumed PERT effect is not a foregone conclusion; theoretically, the opposite effect could occur.

### Study 1

( $N=99$ ) tested whether a rounded total amount (product price + charity donation) is preferred over a nonrounded total, even though the rounded total was a higher overall cost.

Participants were asked to imagine that they visited an arts and crafts fair and purchased products costing \$27.30 (including taxes). They were asked whether they would like to donate to a charity associated with the fair from options: \$28.70 (donation of \$1.40), \$30.00 (donation of \$2.70), or no donation.

Despite the rounded total being a higher overall cost, about half of the participants ( $n=49$ ; 50%) chose to donate with this rounded total (\$30.00) while only 26% chose the other donation option (\$28.70). This preference for the higher, rounded total was significant,  $\chi^2(1)=7.05$ ,  $p<.01$ . These results provide a first demonstration of the PERT effect.

### Study 2

( $N=303$ ) replicated PERT effect, but instead examined the *likelihood* of donating. We show that more people prefer to donate if the donation option has a rounded total rather than a nonrounded total.

### Study 3

( $N=397$ ) tests if PERT effect also occurs when participants must mentally sum the purchase and donation amounts? We again used the art and craft scenario from the prior studies, using a 2 (total amount: present, absent)  $\times$  2 (rounded number: present, absent) between-participants design with only two options of donation or no donation in all conditions.

Moreover, in all conditions the only the 'donation' option varied across conditions and was presented either as a total (i.e., total cost) or as its component costs (i.e., purchase + donation). Thus, the 'donation' option was \$30.00 in the *rounded-present condition*, and \$29.84 in the *nonrounded-present condition*, while in these total-absent conditions, it was \$27.60 + \$2.40 in the *rounded-absent condition*, and \$27.60 + \$2.24 in the *nonrounded-absent condition*.

In the total present conditions, there was a significant preference for donating in the rounded-present condition ( $n=70$ , 71%),  $\chi^2(1)=16.98$ ,  $p<.001$  but not in nonrounded-present condition ( $p=.55$ ). More importantly, in the total-absent conditions there was a preference (marginally) for donating in the rounded-absent condition ( $n=59$ , 60%),  $\chi^2(1)=3.65$ ,  $p=.056$  but not in nonrounded-absent condition ( $p=.19$ ). The difference in donation choices was significant among the two total-present conditions ( $\chi^2(1)=11.54$ ,  $p<.001$ ) as well as for total-absent conditions ( $\chi^2(1)=5.18$ ,  $p<.05$ ). There was no statistical evidence of moderation ( $p=.33$ ). We show in this study that PERT effect is strongly associated with rounded totals.

### Study 4

( $N=197$ ) tested whether processing fluency mediates the PERT effect. With the same scenario, participants were assigned to one of two conditions (total amount: rounded, nonrounded) between-participants. The 'donation' option was \$30.00 (\$2.36 donation) and \$29.82 (\$2.18 donation) in the rounded and nonrounded conditions respectively. Participants also rated the total amount of the 'donation' option (i.e., \$30.00 in the rounded condition, \$29.82 in the nonrounded condition) in terms of simplicity (2 items) and ease of processing (2 items).

We again found support for PERT effect. There was a significant preference to donate in the rounded condition ( $n=66$ , 67%;  $\chi^2(1)=11.00$ ,  $p=.001$ ), but not in the nonrounded condition ( $n=52$ , 53%;  $p=.54$ ), and this preference for donating differed marginally between the rounded and nonrounded conditions,  $\chi^2(1)=3.80$ ,  $p=.051$ . Bootstrap mediation analysis (Hayes 2015, model 4, 10K samples) revealed a significant indirect effect,  $B=.32$ ,  $SE=.12$ , 95%  $CI [.12, .62]$  with fluency ( $\alpha=.92$ ). The rounded total increased fluency ( $B=.65$ ,  $p<.001$ ), which in turn increased the likelihood of donating ( $B=.49$ ,  $p=.001$ ). Thus, these results suggest that rounded totals increase donations because they are more fluently processed than nonrounded totals.

In the current research, we show that people prefer rounded total amounts over non-rounded ones. This makes them choose a charity donation option in addition to a purchase which makes the total amount rounded. In addition, we show that if the option to donate is presented as a total amount which is rounded, more people choose to donate. We also show that this effect exists as people find the rounded total amount to be simpler and easier to process. Our research has important implications for consumer research related to charity, as we show an easy way to make more people to donate and to increase donation amount if a higher donation option is rounded.

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# Neural Pattern Similarity Reveals Brand Equity

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## EXTENDED ABSTRACT

Memory about a brand is associated with memory about the category of the brand's product (Hutchinson, 1983). Consequently, when thinking about products in that category, that brand is likely to be recalled by the activation of the associative network and to be considered for choice (Nedungadi, 1990). Therefore, the strength of mental association between a brand and its product category determines the top-of-mind accessibility of the brand in the product category and constitutes a fundamental aspect of consumer-based brand equity (Keller, 1993). Despite its importance, the structure of mental association between a brand and a product category is largely invisible in traditional behavioral measurements.

We posit that mental representation for a brand and for its product category can both be directly visualized as neural representations, and that mental association between the brand and the product category can be operationally defined as the similarity of the neural representations between the brand and the product category. Furthermore, we hypothesize that neural representational similarity between brand and product category will be predictive of mental accessibility of brand assessed by behavioral measurement such as brand recall. To demonstrate our neural definition of brand-category association and to test our hypothesis about the relationship between neural similarity and mental accessibility, in an fMRI study, we recorded consumers' brain activity in response to car brands and the concept of car in an MRI scanner as well as recorded the process of brand recall when they were cued by the product category "car" outside the scanner.

In the experiment, participants first completed a brand recall task without brain imaging. The brand recall task was designed to be done first because we intended to protect participants' memory of brands from being contaminated by any experimental exposure to brands. In the recall task, participants first saw a word indicating the product category (i.e., "car") on the screen of a laptop, and then recalled and typed down brand names of the product category in 10 minutes. The time at which they typed down the first letter of a brand was taken as the recall time for the brand.

Thereafter, in the MRI scanner, we recorded blood-oxygen-level dependent (BOLD) signals in participants' brains when they were presented with each of 14 car brands, including Ford, Toyota, Chevrolet, Honda, Nissan, Hyundai, Subaru, Volkswagen, Mercedes-Benz, Mazda, BMW, Chrysler, Volvo and Fiat. In addition to car brand names, we also recorded their brain activity to the word of the target product category, "car", as well as their brain activity to the word of a control product category, "computer". Each of the 14 car brand names and the 2 product category words was presented 24 times in two runs in a pseudorandom order. The presentation of each word lasted 2 s, followed by a fixation of varying durations (mean=2 s, ranging from 1 s to 10 s). Participants were instructed to think about the meaning of each word when they saw it. To monitor participants' attention, twenty four nonsense words were randomly inserted and participants were instructed to press a key when they saw a nonsense word.

fMRI data analysis primarily included three steps. In the first step, we obtained a whole-brain pattern of activation to each word and to each product category by estimating a general linear model on BOLD signals. In the second step, we performed a searchlight representational similarity analysis across the brain to compute the similarity of regional neural pattern between each brand and each product category. In the third step, we conducted a voxel-wise survival analy-

sis across the brain to find brain regions where the neural pattern similarity between a car brand and car was predictive of brand recall.

Neural representational similarity analysis revealed a whole brain map for each car brand that illustrated their neural similarity with the product category car. These whole-brain maps showed the variance of neural similarity across different brain regions and the gradient of neural similarity across different car brands. Survival analysis revealed that brand recall was predicted by neural similarity between car brand and car across a distributed brain network including ventral medial prefrontal cortex (VMPFC), posterior cingulate cortex (PCC), and lateral temporal cortex (LTC). Neural similarity at these brain regions were still predictive after neural similarity between car brand and computer were included as a control variable, suggesting that car brand recall was selectively predicted by neural similarity between car brand and the product category car rather than other product categories.

By performing pattern analysis with neural data acquired by fMRI, we illustrated the way to operationally define the structure of mental association between brand and product category by calculating neural similarity between brand and product category. Furthermore, we showed a neural network where the neural similarity between brand and product category was predictive of the accessibility of brands to consumers. The brain regions found to be predictive of brand recall in our study, including VMPFC, PCC and LTC, are largely overlapped with the neural network underpinning semantic knowledge (see Binder, et al., 2009 for a quantitative meta-analysis). This implies that the degree to which the knowledge about a brand is incorporated with the concept of a product category is critical for the mental accessibility of the brand in that product category.

Echoing with recent effort to imaging brain equity with neural pattern analysis (Chen, Nelson & Hsu, 2015), our measurement of neural similarity between brand and product category has potential to act as a new indicator for brand equity in the future. Importantly, estimating consumer-based brand equity with neural activity will be beneficial for grounding the concept of brand equity. In a more broad sense, redefining key concepts in marketing such as brand equity with neural evidence will guide marketing science to advance in a more quantitative and scientific direction.

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# Seeing Brands Through Rose-Colored Lenses: When Fear of Being Taken Advantage Of Leads to Increased Trust

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## EXTENDED ABSTRACT

People often face issues and domains that they do not understand. As such, people are often dependent on experts to manage complex issues (Deci and Ryan 1985; Iyengar and Lepper 2000). In the context of products and services, a lack of knowledge and having to rely on others brings with it risk and the potential to be taken advantage of (Balafoutas, Beck, Kerschbamer, and Sutter 2013; Darby and Karni 1973; Ford, Smith, and Swasy 1990; Mitra, Reiss, and Capella 1999; Ostrom and Iacobucci 1995).

Uncertainty such as this is uncomfortable and people are motivated to avoid it (Hogg 2007; Kruglanski and Webster 1996). Although increased skepticism and minimizing interdependence is an intuitive strategy for managing this uncertainty, many domains exist that consumers cannot easily opt out of. Therefore, counterintuitively, some consumers may instead respond by putting on rose-colored lenses and bolster trust in those they are reliant on. The idea that interdependence-related concerns are regulated by bolstering the value of one's partner is found in a variety of literatures (de Jong, Van der Vegt, and Molleman, 2007; Murray et al. 2008; Murray and Holmes 2009; Shepherd and Kay, 2012; van der Toorn et al. 2011).

Who is most likely to engage in this process? Those high in victim sensitivity (VS) have a basic need to trust, but are also particularly sensitive to being victimized (Gollwitzer and Rothmund 2011). However, our reliance on products to manage complex domains is a relationship that is not always easy to opt out of. Because those high in VS are concerned about being taken advantage of, facing a complex domain that one does not understand (and can therefore be taken advantage of) may increase anxiety and actually lead them to bolster trust. In other words, bolstering trust in a brand's intentions and competency may be a defensive strategy that helps alleviate concerns about being taken advantage of.

*Hypothesis 1* When a domain is complex, those high (vs. low) in VS will see greater opportunity to be taken advantage of.

*Hypothesis 2* When a domain is complex, those high (vs. low) in VS will bolster trust in a product/product manufacturer that manages the domain at hand.

If this increase in trust is defensive in nature, such that it serves to manage anxiety and concerns about being taken advantage of, then it follows that:

*Hypothesis 3* When the opportunity to be taken advantage of is less present, the effect posited in H2 will be eliminated.

*Hypothesis 4* When domain complexity is high (vs. low) and the opportunity to be taken advantage of is present, VS will predict anxiety regarding one's knowledge of a domain, which will in turn predict increased trust.

Study 1 (N=150) had participants complete the VS scale and then presented them with either a simple or complex description of how the sun's rays affect one's skin. Participants then rated their perceptions of how easy it would be for a sunscreen manufacturer to take advantage of consumers (e.g., the product that does not actually work). Results showed that when the domain was complex (vs. simple), those high in VS saw it as more possible for a company to take advantage of consumers.

Given that domain complexity leads high VS consumers to see increased opportunity to be taken advantage of, and given their concerns about being victimized, one would expect that high VS consumers would respond with decreased trust. However, based on past work on defensive trust, we posited that high VS consumers will address this concern by bolstering trust. Study 2 (N=201) supported this; high VS consumers showed increased trust in a brand of sunscreen when the domain (how the sun's rays affect one's skin) was complex as opposed to simple. Study 3 (N=299) replicated this effect by first describing harmful bacteria in either simple or complex terms, and then measuring trust in a brand of kitchen cleaner.

Finally, if high VS consumers manage concerns about exploitation (i.e., when domain complexity is high) by bolstering trust, then we should observe that reducing the opportunity to be taken advantage of will eliminate the positive effect of VS on trust. We also predicted that high VS consumers would show increased anxiety when thinking about their knowledge of the domain at hand, but that this anxiety only translates into increased trust when complexity is high and concerns about being taken advantage of are present.

Study 4 (N=536) supported these hypotheses. When the opportunity to be taken advantage of was present, we replicated the effects observed in Studies 2 and 3; high VS consumers showed higher levels of trust in their brand of sunglasses when the sun's effect of one's eyes was described in complex (vs. simple) terms. However, this effect disappeared when participants were told that industry standards and regulations ensure that most sunglasses protect against UV rays (i.e., when the opportunity to be taken advantage of was reduced). Additionally, when the domain was complex and the opportunity to be taken advantage of was present, we found an indirect effect from VS, to anxiety, to trust, such that those higher in VS felt more anxious about their lack of knowledge regarding how the sun affects one's skin, and this anxiety predicted increased trust. This indirect effect was not present in any of the other three conditions. These effects further support the prediction that because those high in VS are especially concerned about being taken advantage of, they ironically bolster trust under conditions that one might expect to decrease trust; that is, when a domain is complex and poorly understood by the consumer, and when the opportunity to be taken advantage of is present.

Although existing consumer behavior research would not easily predict these effects, the current findings make sense in the context of a broader literature on domain complexity, interdependence, and defensive trust. This addresses a gap in the marketing literature regarding our understanding of consumer trust. Moreover, we introduce VS as a relevant construct to the marketing literature.



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# The Effect of Future Focus on Self-Control is Moderated by Self-Efficacy

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## EXTENDED ABSTRACT

For consumers, sometimes the future may be very salient, while other times it may not be (Shipp, Edwards and Lambert 2009). Future focus is critical to self-control, as one cannot self-regulate without at least some consideration of future goals or consequences (Baumeister and Heatherton 1996). Indeed, companies that support self-control pursuits highlight this notion. For example, a Fidelity Investments advertisement featured the tagline “The Future is the Present,” while Weight Watchers highlights “My Bright Future” on its website. Not surprisingly, research has found that focusing on the future can be beneficial. For instance, future focus can lead to the choice of virtue foods (Winterich and Haws 2011), a greater likelihood of investing in retirement (Nenkov, Inman and Hulland 2008) and increased patience (Bartels and Urminsky 2011).

However, other research hints at special circumstances under which focusing on the future may actually lead to indulgence. For instance, when consumers are asked to consider future progress towards goals, it may lead to indulgence in the present (Fishbach and Dhar 2005; Laran 2010; Zhang, Fishbach and Dhar 2007). Similarly, simply anticipating a future opportunity to choose a healthy option can lead to indulgence (Khan and Dhar 2007). This research suggests that future focused individuals may lose self-control in the present if they foresee themselves balancing out the negative effects of current indulgence.

Thus, it is not entirely clear as to when future focus will lead to greater self-control, or what types of people will benefit from future focus. In addressing these issues, we posit that consumers' self-efficacy (Bandura 1994; Wood and Bandura 1989) will moderate the effect of future focus on self-control. Focusing on the future will lead to higher self-control when one foresees the negative outcomes of current indulgence, but will lead to lower self-control when one foresees successful counteractions in response to negative outcomes of current indulgence. We posit that self-efficacy can determine the extent to which people will focus on negative outcomes versus successful counteractions when thinking of the future.

Self-efficacy is defined as the belief in one's capabilities to undertake actions to meet situational demands and combat goal obstacles (Wood and Bandura 1989). A higher self-efficacy means a greater belief in one's capability to successfully cope with goal setbacks through action. However, individuals low in self-efficacy tend to visualize scenarios of goal failure (Bandura 1994). When one has an opportunity to engage in a goal inconsistent action, a focus on the future should bring to mind the consequences of indulgence. We expect that a future focused individual with low (high) self-efficacy would visualize goal failure and its consequences (successful counteractions to indulgence). Hence, we predict that when one is low (high) in self-efficacy, focusing on the future will increase (decrease) self-control.

## Studies

In study 1, we manipulated participants to either write a statement about focusing on the future or office products. Next, they imagined a scenario in which they had to choose between chocolate cake and fruit, and completed a self-efficacy scale (Chen, Gully and Eden 2001). Those low in self-efficacy chose the healthier option

more when focusing on the future, but the reverse emerged for those high in self-efficacy.

Study 2 replicated the effects we found in study 1 using the same future focus manipulation in the domain of spending. After the future focus manipulation, participants imagined that they were trying to save money but had come across a pair of shoes that they really liked. After indicating whether they would purchase the shoes, they completed a financial self-efficacy scale. Those low in self-efficacy were less likely to purchase the shoes when focusing on the future, but the reverse emerged for those high in self-efficacy.

Study 3 shows that our effects hold for real choice when both factors are manipulated. Participants completed a self-efficacy manipulation in which the scale to which they responded created the illusion of low or high success in goal achievement. Then, participants were asked to write about what comes to mind when they think about either the future or the present, and made a choice to receive either a Dairy Queen or Subway gift-card in a lottery. In the low self-efficacy condition, participants chose the unhealthy option, Dairy Queen, less when focusing on the future (vs. the present), but the reverse emerged for those in the high self-efficacy condition.

In study 4, we demonstrate process via mediation. Future focus was manipulated, then participants imagined that they were trying to save money, but had come across a pair of headphones that they could purchase. Next, we measured the degree to which participants perceived that the purchase would negatively impact their savings goals. Finally, participants completed a self-efficacy scale. The self-control results mirrored those of past studies, and these effects were mediated by the extent to which participants felt the purchase would negatively impact their savings goals.

In study 5, we demonstrate process via moderation. That is, we predict that our effects will diminish for those who believe that the future does not bring about change (i.e., entity theorists). In the low (high) self-efficacy condition, participants were asked to solve nine puzzles, and thereafter were told that they performed better than 30% (90%) of all other participants. Then, participants in the entity (incremental) condition were asked to write a statement in agreement with a passage that stated people's personalities could not be changed (could be changed) even late in their lives. Participants then imagined a scenario where they were determined to perform well in a course, and had an exam coming up, and chose between studying versus going to a party. Participants subsequently completed a future focus scale (Shipp et al. 2006). Our effects persisted in the incremental condition, but were attenuated in the entity condition.

## Conclusion

Our findings have significant implications. Theoretically, we delineate when and for whom a future focus may be detrimental to self-control. This has implications for consumer welfare, as asking consumers to focus on the future might not always be beneficial.

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# The Asymmetry between Time and Money Compensation effect when feeling Scarcity: Time helps the Money Poor, but Money doesn't help the Time Poor

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## EXTENDED ABSTRACT

We examine two important aspects of scarcity. First, we identify a new scarcity effect on consumers' advice-taking tendency. Second, we show whether the abundance of one resource alters the scarcity effect of another resource in the domain of advice-taking and whether such interplays vary depending on the resource type (e.g. time abundance compensating for money scarcity vs. money abundance compensating for time scarcity).

Researchers found that feelings of resource scarcity systematically affect how consumers think, perceive, feel, and behave through scarcity mindsets (Shah et al. 2012; Shah et al. 2015; Roux et al. 2015). Adding to this line of research, we suggest that when feeling time or money scarcity, which are the two common scarcities that people experience, the scarcity mindset affects consumers' advice-taking tendency. We argue that when people are feeling time or money scarcity, people are less likely to change their pre-existing opinions based on someone else's advice. Resource scarcity signals that the environment is harsh (Laran and Salerno 2013; S. E. Hill et al., 2012; Griskevicius et al. 2013), such that people need to compete with others for the scarce resource (Kristofferson et al. 2017; Roux et al. 2015). Thus when people are feeling scarcity, the self becomes more important and people act in accordance to one's own benefit (Roux et al. 2015). Thus, time or money scarcity can make people focus on the self more, thereby leading to lower advice-taking tendency.

Another important gap in the literature is that research on resource scarcity examines the effect of scarcity in comparison to that of resource abundance (Shah et al. 2012; Shah et al. 2015; Mehta and Zhu 2016; Sharma and Alter 2010; Zhu and Ratner 2015). However, consumers often experience both resource abundance and scarcity at the same time. For example, busy people may feel time scarcity but they may also feel money abundance. Poor people may feel money scarcity but they may also feel time abundance. Thus in this article, we examine how feelings of resource abundance interplay with feelings of resource scarcity.

We suggest that time abundance compensates for money scarcity effect while money abundance does not compensate for time scarcity effect. We suggest that this asymmetric compensation of time (vs. money) abundance when feeling money (vs. time) scarcity is due to the difference in the nature of time (vs. money). First, people perceive money is a substitutable resource whereas time is not (Leclerc et al. 1995). Due to the greater fungibility of money, money scarce people may have a mindset that money can be substituted even with a different resource such as time. However, time is a less fungible resource than money, thus time scarce people may have a mindset that time cannot be substituted with any resources. Second, people may perceive time to greater value than money. Time is more laden with personal meaning than money (Aaker, Rudd and Mogilner 2011; Mogilner and Aaker 2009; Reed et al. 2007; Reed et al. 2015) and thus people may assign greater value to time than money. If this is the case, having such valuable resource, which is time, may compensate for lack of less valuable resource, which is money.

Study 1 first examined whether feeling time or money scarcity leads to lower advice-taking tendency. We used a one-way ANOVA (money scarcity vs time scarcity vs. control). After manipulation, we asked participants to imagine a wine bar that they did not like. Next, we showed a review that was very positive. After reading the review,

we asked participants to indicate their willingness to accept advice from the reviewer. As predicted, we found that compared to the control condition, the time scarcity condition and the money scarcity condition showed lower advice-taking tendency.

In study 2, we investigated the compensation effect. We used  $2(\text{scarcity: time vs. money}) \times 2(\text{abundance of alternate resource: abundance vs. nonabundance}) + \text{control condition}$  between-subjects design. We used the same wine bar scenario from study 1. Results showed that when people felt only time or money scarcity but no feelings of abundance, we replicated our previous effect that scarcity leading to lower advice-taking tendency. However, when money scarce participants also felt time abundance, time abundance compensated for money scarcity and increased participant's advice-taking tendency. Moreover, when time scarce participants also felt money abundance, money abundance did not compensate for time scarcity, showing asymmetric compensation effect.

In study 3, we investigated whether such asymmetric compensation effect is due to how people perceive value of time versus money. We used the  $2(\text{scarcity: time vs. money}) \times 2(\text{abundance of alternate resource: abundance vs. nonabundance})$  between-subjects design. In this study, we asked participants which option between diets and exercising is better for health and then showed an article about an opposing opinion. We then asked how willing they are to take advice from the article writer. After a filler task, we asked measured participants' belief about value of time compared to money. The results showed a significant three-way interaction. For those who believe time is more valuable than money, participants who felt only money scarcity showed marginally lower advice-taking tendency than those who felt only time scarcity. However, among those who believe time is more valuable than money, people who felt money scarcity and time abundance showed greater advice-taking tendency than those who felt time scarcity and money abundance. As expected, this effect was not significant for those who believe money is more valuable than time.

Finally in study 4, we examined the underlying process of asymmetric compensation effect by manipulating whether time and money are substitutable. In this study, we primed people the concept of time and money substitutability or imperfect substitutability. We used the same wine bar scenario from the previous studies. As expected, when primed with money can be substituted with time, the results replicated our previous findings that time abundance compensated for money scarcity. However, when the imperfect substitutability is primed, the time abundance no longer compensated for money scarcity.

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# The Subjective Experience of Goal Failure: How Choosing the Lesser Evil Eradicates the Negative Consequences of Goal Failure

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## EXTENDED ABSTRACT

Imagine that you're attending a morning meeting and are offered an assortment of pastries: muffins, donuts, and brownies. While deciding whether to indulge in one of these tempting options you remember your fitness goal, and therefore opt for the muffin since you perceive it as the healthiest of the three options – i.e. lesser evil. How will this choice affect your subsequent food-related decisions throughout the day? Will your initial indulgence encourage or discourage subsequent healthy eating?

The goal literature suggests that once we violate an activated goal, the resulting feelings of guilt and despair generally impel further transgressions (McGonigal 2011; Soman and Cheema 2004). Based on these findings, we would predict that the individual depicted in the introductory scenario who violated her fitness goal by eating a muffin is likely to temporarily disengage from the focal fitness goal, and continue to indulge throughout the day.

In the present paper, I suggest that violating a goal does not always demotivate behavior. Focusing on the decision context that offers exclusively vice alternatives (i.e. options that violate a goal), I suggest that the subjective experience of goal failure is dampened when choosing the lesser evil option – i.e. option that is least detrimental to the focal goal, by attenuating perceptions of goal digression. In this sense, even though a goal violation transpired, selecting the lesser evil can actually motivate subsequent goal-congruent choices, similarly as if no transgression was committed.

The present project contributes to the literature in at least three ways. First, while past research generally primed goal failure (i.e. goal failure versus no failure conditions), in the present paper, I manipulate the subjective perception of goal failure, and show that goal failure leads to further goal violation only when subjectively experienced. Second, I introduce an alternative mechanism that explains reform after goal violation (Taylor and Wilson 2015), namely perceptions of goal digression. Third, most goal research examines consumer motivation within a single decision task and focuses on the conflicting choice between a “vice” and “virtue” (Wang and Huang 2018). In the present study, I show how choosing the *lesser evil* within a two vice context motivates subsequent sequential consumer decisions.

Findings from four studies show that choosing the lesser evil attenuates perceptions of goal digression and as such prevents goal disengagement that generally occurs after a goal transgression. This effect is only prevalent when the lesser evil is considered alongside a greater vice, versus in isolation.

## STUDIES

### Study 1

The objective of Study 1 was to verify whether choosing the lesser evil improves motivation compared to choosing an alternative that is more damaging to the end goal. After a fitness goal prime, participants read a scenario in which they either selected the healthiest pastry (lesser evil), the unhealthiest pastry or did not buy a pastry for breakfast (control). In the scenario, they proceeded to go about their day, have lunch and now had a choice of dessert. The selected dessert's calorie count served as the dependent variable. Findings revealed that participants who initially chose the healthiest pastry, sim-

ilarly as those who forwent a pastry, subsequently selected a more healthy dessert than those who initially selected the unhealthy snack.

### Study 2

The main objective of Study 2 was to provide mediational evidence for the proposed model. After the goal prime, participants read a scenario in which they were asked to choose a snack at the movie theater: popcorn (lesser evil), M&Ms, or no snack. After their snack selection, participants were asked to report their perceptions of goal (fitness) digression. Finally, participants were asked to select a beverage to go with their snack: water or soda (using sliding scale: -50 to 50). A mediational analysis indicated a significant partial mediation supporting our premise that choosing the lesser evil attenuates perceptions of goal digression, preventing goal disengagement, as manifested by a higher likelihood of choosing water over soda.

### Study 3

In study 2, it is plausible that participants perceived popcorn as an authentically healthy snack, and therefore the results are a simple replication of past research demonstrating that choosing the virtuous (versus vice) option improves self-regulation (Knight and Boland 1989). In study 3, I show that choosing popcorn evokes the typical demotivating effects of goal violation when it stands alone. This demotivating effect disappears when the popcorn is presented alongside a greater evil. A 2 (choice: lesser evil; greater evil) x 2 (number of vices presented: one; two) between subject design was used. In the first two conditions, participants were exposed to, and selected one snack option: popcorn or M&Ms. In the remaining conditions, participants were told that they have a choice between the two snacks and either selected popcorn (condition 3) or M&Ms (condition 4). Participants were subsequently asked to make a beverage selection: water or soda. Findings confirmed that when only popcorn was offered, subsequent self-regulation was impaired, but when both popcorn and M&Ms were offered, selecting popcorn did not induce goal disengagement, but rather continued to motivate healthy choices.

### Study 4

The objective of study 4 was to replicate the main effect with real consumption. Participants read a scenario in which they either selected popcorn or M&Ms at the movie theater. In a seemingly unrelated task, participants were asked to evaluate the packaging for a fictitious chip brand. While completing the questionnaire, participants were given a bowl of chips and instructed to eat as many chips as they wanted. The consumption dependent variable was assessed by subtracting the weight of the bowl before and after the study was completed, representing the amount of chips the participants ate. Findings showed a significant difference of consumption between the two conditions, supporting that choosing the lesser evil enhances the likelihood to resist temptation, demonstrating goal perseverance, instead of goal disengagement.

The present research shows that consumers can reform after a minor goal violation since choosing the lesser evil prevents consumers from recognizing a goal digression, and therefore evades the negative motivational effects of typical goal failure.

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# Is All That Glitters Gold?

## The Effect of Product Surface Glossiness on Consumer Judgments

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### EXTENDED ABSTRACT

Glossiness describes how much the surface of an object reflects light in a specular (i.e. mirror-like) way (Nicodemus et al. 1977). Notwithstanding the importance of glossiness in product design, compared with other visual marketing elements such as shape, color, symmetry and boundary, there is little research on glossiness in the marketing realm, except the work by Meert, Pandelaere, and Patrick (2014), in which they explored the impact of glossiness originating from its biological association with water resources. In an attempt to fill this void, this research proposes that consumers have a general preference for products with a glossy, compared to a matted appearance, an effect which is mediated by psychological newness, and moderated by priming of the inconsistent association, feelings of nostalgia, and durability concerns.

Glossiness can be mentally associated with newness due to embodied cognition. Embodied cognition arises when a conceptual metaphor is built up due to the repeated association between a concrete sensory feeling (e.g., visual glossiness in this research) and a more abstract cognition (e.g., psychological newness; e.g., Lakoff and Johnson 1999). In particular, we argue that human beings may have learned that glossy things are usually newer. For example, automobiles, jewelry, and tableware can be very glossy when they are newly manufactured, but will become dull after usage and abrasion. Consequently, the mental association between glossiness and newness is established (associative network model; e.g., Wickelgren 1981). Meanwhile, as a pervasive logical fallacy in philosophy, *argumentum ad novitatem* (appeal to novelty; Bennett 2012) argues that individuals may pursue new things because of a belief that newness implies improvements, even if it is unnecessarily always the case (Jie and Li 2017). Hence, we suggest that the perceived newness induced by glossiness should result in more favorable product evaluations.

In five experiments, we found support for this proposition and evidence for three moderating factors. In Study 1, university students ( $N = 176$ ) were randomly given either a glossy version or a matted version of the same computer mouse, and were instructed to bid for it, where the winner could purchase the mouse at his/her indicated price. Following the bid task, chronic newness-seeking tendency was measured. The results revealed that the participants bid higher prices for the glossy, rather than the matted mouse, and this effect was more salient among those who has a higher chronic newness-seeking inclination.

Study 2 tested the mediating role played by psychological newness. One hundred mTurk participants were randomly given the image of a glossy or a matted set of mugs, and reported their evaluations and perceived newness of the mugs. Consistent with predictions, glossiness (vs. matte) induced increased perceptions of newness and subsequently resulted in more favorable product judgments.

In spite of the prevailing glossiness-newness mental association, priming of the inconsistent association (i.e. matte-newness) should at least temporarily weaken the positive link between product glossiness and evaluations. To verify this, in Study 3, mTurk workers ( $N = 309$ ) were randomly assigned to one of the 2 (glossy vs. matted)  $\times$  2 (consistent vs. inconsistent association) between-subjects conditions. Participants first performed a memory task with eight pairs of products (one labeled as the *old* version and the other labeled as the

*new* version). The new version of product in each pair either always looks glossier (the consistent-association condition) or looks more matted (the inconsistent-association condition) than the old version. Participants then completed a product evaluation task in which a glossy or a matted power bank (i.e. portable battery for mobile devices) was evaluated. As expected, preferences for the glossy over the matted power bank were significant and mediated by perceived newness only when the primed association was consistent with the default.

Study 4 investigated another moderator, i.e. feelings of nostalgia. Nostalgia refers to a situation in which people reminisce about a positive life episode in the past (e.g., Sedikides, Wildschut, and Baden 2004). Consumers are likely to prefer older products to new ones when nostalgic feelings are induced. Thus, we predict that the effect of glossiness on product attitude will be weakened among nostalgic consumers. Employing a 2 (glossy vs. matted)  $\times$  3 (nostalgia vs. control vs. baseline) between-subjects design, 397 undergraduate students listened to and rated three pretested old songs (the nostalgia condition), recent songs (the control condition), or skipped this task (the baseline condition). Afterwards, participants evaluate a glossy or matted chair. Consistent with our expectation, participants in the control and baseline conditions judged the glossy chair more favorably, whereas the matted chair was rated more favorably in the nostalgia condition.

The last study adopted a 2 (glossy vs. matted)  $\times$  2 (durability concern vs. baseline) between-subjects design on mTurk ( $N = 281$ ) to explore the moderating effect of durability concerns. Durability is one of the major quality dimensions (Garvin 1987). Glossy products could be seen as less durable than their matted counterparts, as glossiness induces the cross-modal perception of lighter weight and thinness (Cloonan and Decré 2015), which we reasoned as conceptually related to brittleness. In this study, participants in the durability concern condition first imagined that their previous mug was broken after just one week, whereas participants in the baseline condition were not given this information. Then all participants were given a set of glossy or matted mugs to evaluate. The results confirmed that participants' attitudes were more favorable toward the glossy (vs. matte) mugs in the baseline condition, but this effect was dismissed when durability concerns were elicited.

Taken together, the five experiments in the current research supported that consumers generally judge glossy products more favorably than matted ones, an effect promoted by a perception of newness and moderated by priming of the inconsistent association, nostalgic feelings, and durability concerns. The research contributes new knowledge to visual marketing, and to an attribute that thus far has hardly attracted any research, i.e. visual glossiness. It provides insight into not only why consumers generally prefer glossy products, but also the circumstances under which they are likely not to have this preference. In doing so, it provides managerial guidance for designing products.

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# Decisional Conflict Predicts Myopia

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## EXTENDED ABSTRACT

Despite the integral role conflict plays in the subjective experience of self-control decisions, most work investigating conflict does not measure it directly. In the present paper, we use mouse-tracking (Freeman & Ambady, 2009, 2010; Wojnowicz, Ferguson, Dale, & Spivey, 2009) – an emerging technique in which researchers measure participants' computer-mouse movements while making a decision – to demonstrate the utility of a real-time measure of decisional conflict for studying self-control. Specifically, we investigated the directness of participants' mouse movements while they made intertemporal choices (e.g., \$5 today vs. \$10 tomorrow), with greater conflict inferred for decisions in which participants' trajectories were less direct (i.e., greater veering towards the unchosen option). Past work suggests that these deflections are a sensitive measure of response conflict (for a recent review, see Freeman, in press).

Across four studies, we first test how the relative subjective value of both options influences conflict as measured by mouse-tracking, predicting that the more similar the subjective values, the greater the conflict and therefore the less direct mouse trajectories will be. We then test whether (and how strongly) directness of these decisions predicts participants' myopia, as quantified by their hyperbolic discount rate.

## Methods

### Procedure

Participants completed 180-210 (depending on the study) intertemporal choice trials that pitted a smaller amount of money available immediately ("smaller-sooner") against a larger amount available at some delay ("larger-later"). Participants completed trials in blocks of 15, in which the delay of the larger-later was kept constant. At the start of each block, we told participants how long the delay would be for that block.

Each trial began with a screen that was blank except for a black box in the bottom center labeled "Start". Once participants clicked on the start box, their mouse cursor disappeared, and the delay information appeared in the top-left and top-right areas of the screen, followed by the magnitude information (e.g., \$25 and \$50). Participants' mouse-cursors then reappeared in the bottom-center of the screen, and they made their selection using the mouse.

## Results

### Metrics of conflict and myopia

To gauge conflict on a given decision, we analyzed the area under the curve (AUC). This metric quantifies the area between an ideal trajectory (i.e., straight toward the chosen option) and the participants' actual trajectory. To gauge myopia, we estimated participants' hyperbolic discount rate ( $k$ ) and inverse temperature parameter ( $\beta$ ).

### The relationship between conflict and trial difficulty

We first wanted to demonstrate that mouse trajectory directness was influenced by the response conflict present during a given decision (see also Dshemuchadse, Scherbaum, & Goschke, 2013; O'Hara, Carey, Kervick, Crowley, & Dabrowski, 2016). Specifically, we predicted that the differences in subject values on a given trial would predict greater conflict as measured by the degree to which mouse movements were attracted to the unchosen alternative. To in-

vestigate this, for each participant and for each trial, we used their discount rate to calculate their subjective value for both the larger-later and smaller sooner options. We then calculated the distance between the two subjective values and predicted trial-by-trial conflict from this difference, predicting that trials for which the subjective values are more similar should produce more conflict than trials for which the subjective values are further apart. Consistent with this, across all four studies, the further apart the two subjective values were, the less conflicted participants' mouse movements were ( $ps < .001$ ).

### The Predictive Power of Conflict

We next wanted to demonstrate that conflict within decisions was predictive of myopia more generally. Specifically, we hypothesized that curvature while resolving self-control conflicts should predict the participants' discount rates. To test this, for each participant, we divided their trials based on whether they selected the larger-later or the smaller-sooner option. We then calculated the average curvature within these two groups, yielding two metrics per participant -- average conflict when choosing the larger-later option, and average conflict when choosing the smaller-sooner option -- and used this to predict individuals' discount rate,  $k$  (log transformed, Kirby, Petry, & Bickel, 1999). Consistent with our hypotheses, across all studies we find a strong relationship between both measures of conflict -- conflict when choosing larger-later and conflict when choosing smaller-sooner -- and log discount rates. The greater conflict participants displayed when ultimately choosing the larger-later (i.e., delaying gratification), the higher their discount rates, and the greater conflict participants displayed when ultimately choosing the smaller-sooner (i.e., indulging), the lower their discount rates ( $ps < .001$ ). Further, across studies we explain a large amount of the variance in discount rates with our two metrics of conflict,  $R^2$  between .49 and .70.

## Discussion

Although conflict plays an integral role in both the subjective experience and theoretical understanding of self-control, conflict itself is rarely studied using real-time approaches. In the present paper, we used mouse-tracking to more directly tap into conflict while participants decided between immediate gratification and delayed rewards in an intertemporal choice paradigm. Across four studies, we show that the difference in the subjective values of the smaller-sooner and larger-later options strongly predicts conflict as indexed by the degree to which cursor movements deviated from a direct path towards the chosen option. These findings suggest that mouse-tracking is a sensitive measure of the conflict present in a given decision.

We further find that average conflict -- both when electing the larger-later reward over the smaller-sooner, and vice versa -- strongly predicts participants' myopia as indexed by their discount rate. Notably, our metrics of conflict are relatively uninformed -- they quantify only the average amount of conflict on decisions in which participants ultimately chose the larger-later or the smaller-sooner, and do not account for information regarding the magnitudes or delay for a given trial. Even with this relatively blunt measure of conflict, we are able to account for a large proportion of the variance in discount rate, with  $R^2$  ranging from .49 to .70. Together, these results demonstrate the predictive strength of direct measures of conflict for studying self-control.

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# Love Is Blind: How Sensory Liking Impacts Perceptions of Unbranded Products

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## EXTENDED ABSTRACT

Brand elements have been shown to impact perceptions of things even unrelated to the brand or product such as the consumer's environment (Rahinel and Nelson 2016) and group identity (Torelli et al. 2017). Even though brands have been demonstrated to impact perception, companies regularly use "blind" testing in the product development process. We suggest that this may be a mistake as it may lead to a different sensory experience in the testing process than would be experienced after purchase, when a brand is present.

While individuals may sense the same thing, their perceptions of these sensations may differ drastically. Individual perceptions of a sensory experience (i.e. how sweet, salty, strongly scented/flavored a stimulus is) are malleable, in that they are often influenced by environmental factors. Judgments about the taste or smell of a product have been shown to be affected by things such as ambient lighting (Oberfeld et al. 2009) and package design (Becker et al. 2010). Given the prevalence of brand imagery and the malleability of sensory perceptions, we hypothesize that the presence of a brand during consumption can impact perceptions of the sensory experience. Research on cultural symbolism supports this idea by demonstrating that taste evaluations can be impacted by the values a product embodies (Allen, Gupta, and Monnier 2008) and other product information (Lahne, Trubek, and Pelchat 2013).

There are groups of consumers who love a certain sensory experience (e.g. chocoholics). It seems likely that those who love a sensory experience will have very different perceptions of that experience than those who do not. In our case, we are limiting this sensory "love" to merely a strong positive attitude valence which has been considered one dimension of the brand love construct (Rauschnabel et al. 2015). We therefore hypothesize that the presence (versus absence) of a brand will differentially impact those who love the specific sensory experience (i.e. chocolate lovers) versus those that do not. We hypothesize that those who love a sensory experience will be reveling in that experience when they consume an unbranded product and be less able to judge perceptions of that experience. Conversely, when an unfamiliar brand is present consumers who love the particular scent or flavor being presented will be more mindful to the consumption experience in order to integrate the new product information with their existing knowledge and experiences.

In Study 1, using strong or weak scented peppermint shampoo and a fictitious brand, we demonstrated that high liking participants (+1 SD above the mean on a generally liking scale) rated both shampoos as equal in strength on a 100-point scale when there was no brand present ( $M = 81.41$  vs.  $80.40$ ,  $t(126) = .25$ ,  $ns$ ). Conversely, high liking participants who read a fictitious brand description prior to smelling the shampoo accurately judged the stronger scented shampoo as being stronger ( $M = 89.44$  vs.  $80.77$ ,  $t(126) = 2.18$ ,  $p < .05$ ).

Study 2 replicates this effect using the sense of taste and mild or sharp cheddar cheese as the stimuli. Once again there was no difference between judgments of strong or weak for people who loved cheese when no brand had been presented ( $M = 74.15$  vs.  $69.17$ ,  $t(122) = .81$ ,  $ns$ ); but cheese lovers who had read a fictitious brand descriptions accurately rated the sharp cheddar cheese as being stronger tasting ( $M = 78.64$  vs.  $58.53$ ,  $t(122) = 3.07$ ,  $p < .01$ ).

Study 3 attempted to find initial evidence for the role of mindfulness as the mechanism behind the effect. Additionally, it used a real brand, Yoplait, with a product that was described as new to

participants. Participants tasted either regular strawberry yogurt or strawberry yogurt that had been sweetened. They responded to four items regarding their mindfulness during consumption on a 7-point scale. Yogurt loving participants in the brand present condition that consumed the novel-tasting, sweetened product rated themselves as more mindful than those that consumed the normal strawberry yogurt ( $M = 78.64$  vs.  $58.53$ ,  $t(122) = 3.07$ ,  $p < .01$ ). There was no difference in mindfulness for yogurt lovers who had not been presented with a brand ( $M = 6.04$  vs.  $5.88$ ,  $t(136) = 0.60$ ,  $ns$ ).

Study 4 combines the findings of the first three studies but re-searching both strength perceptions and mindfulness in the same study. Strong or weak coffee was used and new 7-point rating scales of both strength and mindfulness. Once again coffee lovers rate the strong and weak coffee as equal in strength when no brand was present ( $M = 3.61$  vs.  $3.33$ ,  $t(156) = 0.84$ ,  $ns$ ) but different in strength when they had read a description of a brand prior to consumption ( $M = 4.11$  vs.  $3.10$ ,  $t(156) = 3.87$ ,  $p < .001$ ). Furthermore, the coffee lovers rated themselves as more mindful of the consumption experience when a brand description had been presented versus not ( $M = 4.70$  vs.  $3.80$ ,  $t(160) = 3.67$ ,  $p < .001$ ).

Our findings demonstrate the importance of understanding the interaction of sensory love and brands on judgments of sensory perceptions. By showing that individual who love a certain scent or taste may have difficulty in judging different sensory stimuli – in our case, the strength of the scent or taste. However, the presence of a novel brand can make these consumers more mindful of the consumption experience and thus better able to judge their sensory perceptions.

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# Attentional Breadth Affects In-Store Exploration and Unplanned Purchasing

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## EXTENDED ABSTRACT

Maximizing shoppers' in-store travel has become an important strategy to trigger unplanned purchasing (Gilbride, Inman, and Stilley 2015; Hui et al. 2013) because longer in-store travel exposes shoppers' to relatively more products which may remind about forgotten needs or may even evoke new ones (Inman, Winer and Ferraro 2009). No research has, however, addressed the role of attentional breadth in shaping store exploration and unplanned purchasing.

*Attentional breadth* refers to the focus that is directed to a wider or more limited area in processing visual scenes (Friedman et al. 2003). It is a malleable state and may become narrowed or broadened by prior visual processing. Relative to narrow attention, consumers with broad visual attention explore a larger proportion of the visual field, which increases their susceptibility to environmental stimuli (Wadlinger and Isaacowitz 2006). In retail setting, this should increase the likelihood to perceive objects of interest in the background, such as products in other areas of the store or signs and promotions. Because objects in background are spatially more remote than foreground objects approaching relatively more background products should increase the average travel distance per trip. And because longer travel distance further increases the likelihood to see a tempting product or one that reminds a consumer about forgotten needs (Gilbride, Inman, and Stilley 2015; Hui et al. 2013), we hypothesized that activating broad (vs. narrow) attention should increase unplanned purchasing ( $H_1$ ) by increasing the distance traveled in-store ( $H_2$ ). We further predicted that the effect of attentional breadth on unplanned purchasing would be accentuated among more impulsive buyers ( $H_3$ ) because prior research has shown that impulsive (vs. non-impulsive) shoppers are more susceptible to non-focal products (Büttner, Florack et al. 2014).

In all studies except Study 2, attentional breadth was manipulated by showing participants 20 object pairs on a computer display, one pair at a time (2 sec). Critically, each pair included one object in the center and one in a random corner (periphery) of the display. Participants in the narrow group were instructed to name the object appearing in the center, whereas participants in the broad group named all objects appearing in the periphery. All participants saw and named the same objects. In Study 2, the manipulation was presented as in-store advertisement using 20 products of the store and instead of presenting object pairs participant saw only one product at a time (without naming it).

To validate our attentional manipulation, a pilot study was conducted in a 400 m<sup>2</sup> retail shop using eye-tracking glasses ( $N = 79$ ). After the attentional manipulation, participants were guided to an aisle (~15 meter) and asked to walk down the aisle as if they were shopping. Shoppers with broad attention spent significantly more time walking through the aisle than with narrow attention, they fixated on more products than the narrow group, and also exhibited more cross-aisle saccades (e.g., visual switches between the left and right shelves) than the narrow group. Thus, our manipulation successfully affects subsequent store exploration.

Study 1 was conducted in a 3600 m<sup>2</sup> supermarket. First, shoppers ( $N = 192$ ) indicated their planned purchases on category level and then were released for shopping after the attentional manipulation except those in a control group. After their shopping, the experimenters recorded their unplanned purchases. Attentional breadth did

not significantly differ for planned purchases in all studies reported hereafter. Nevertheless, attentional breadth affected unplanned category purchases. The broad attention group purchased more categories unplanned compared to both the narrow the narrow attention group and the control group. The narrow attention and control groups did not differ. The same pattern of significance emerged for unplanned products and unplanned spending as dependent variable.

Study 2 used the same recording procedures as in Study 1 except that we placed a pedometer on participants after the attentional manipulation to record their travel distance and shopping time ( $N = 74$ ). Activating broad attention significantly increased unplanned categories and the pattern of significance was identical for unplanned products and unplanned spendings, respectively. Participants shopped longer with broad attention than with narrow attention and also travelled farther with broad attention than with narrow attention. A mediation analyses with attentional breadth as independent variable, distance travelled as mediator, and unplanned categories as dependent variable revealed a significant indirect effect.

Study 3 used the same recording procedures in a 3000 m<sup>2</sup> supermarket ( $N = 100$ ). Participants additionally reported their chronic buying impulsiveness (Rook and Fisher, 1995). Activating broad attention significantly increased unplanned categories, unplanned products, and unplanned spending. Chronic buying impulsiveness moderated the effect of attentional focus on these variables. Specifically, the attentional manipulation significantly affected those who scored high in chronic buying impulsiveness than those who scored low in chronic buying impulsiveness.

In sum, activating broad (vs. narrow) attention increased unplanned purchasing and increased in-store travel of shoppers ( $H_1$  and  $H_2$ ). This effect was more pronounced for chronically impulsive shoppers ( $H_3$ ). Theoretically, our studies complement prior theorizing on unplanned purchasing by showing that attentional breadth affects store exploration and unplanned purchasing. Our studies further imply that retailers may stimulate unplanned purchases by influencing shoppers' attentional breadth via digital devices such as displays on shopping trolleys and store aisles.

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# How The Past Shapes The Present: The Assimilation of Enjoyment to Similar Past Experiences

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## EXTENDED ABSTRACT

Throughout their lives, consumers sample experiential products (e.g., movies, coffee). Obviously, the type and number of experiences that consumers accumulate varies greatly. Some gather a great variety, others only a few. Some collect the most amazing product experiences, others only experience mediocre products. A coffee aficionado, for instance, has sampled elite and abysmal coffee while an inexperienced coffee drinker might have mostly visited Starbucks. Past work found that consumers learn distributional information about numeric stimuli such as prices (e.g., the range, the mean) through prior experiences, which boosts sensitivity for value (i.e., knowledge factor, general evaluability theory; Hsee and Zhang 2010). While distributional information about past prices might affect perceptions of how cheap/expensive a product is, it is unclear whether these findings apply to more experiential products. Our investigation is the first to test *whether* prior experiences boost sensitivity for the hedonic value of experiences. We also examine *how* past experiences trigger sensitivity.

Consistent with evaluability theory, we suggest that prior experiences make consumers' enjoyment more attuned to the hedonic value of experiential products (figure 1; A). Their enjoyment of higher vs. lower value products differs more strongly. To illustrate, a coffee aficionado should enjoy coffee of higher hedonic value more than coffee of lower hedonic value while a coffee novice should be more insensitive. While evaluability theory assumes that greater knowledge would generally benefit consumers (e.g., greater knowledge helps determine whether a price is favourable or not), we predict that having (vs. lacking) knowledge not only has hedonic benefits ("blessing of expertise"), but also hedonic costs ("curse of expertise").

## How do Past Experiences Shape Present Enjoyment?

Prior research on the accumulation of experiences focused on processes during the knowledge acquisition phase, such as effects of the serial position of stimuli during sequential evaluation (e.g., primacy/recency or hedonic contrast effects; Ghoshal et al. 2015, Zellner et al 2002). Our research question differs substantially from these studies by examining what happens after, not during, the knowledge acquisition phase. By comparing more experienced with less experienced consumers, our inquiry extends previous work by examining whether and how the distributional information of past experiences affects enjoyment, after knowledge is acquired.

The distributions of experienced (figure 1; B) and inexperienced (figure 1; C) consumers differ in many ways. Given that distributions entail multiple features (e.g., sum, min, max, mean, rank, etc.), the question begs: Which aspect of consumers' distribution of prior experiences will affect present enjoyment?

Evaluability theory suggests that consumers become sensitive to hedonic value because their past experiences provide information about the range and average of hedonic value in the marketplace. As such, coffee aficionados may judge whether a new coffee is more or less enjoyable than their average coffee experience (Helson 1964; Hsee and Zhang 2010). Or, they might gauge how much better or worse the new coffee is compared to their all-time best or worst coffee experience (Hsee and Zhang 2010). Or they might compare it to the experience they typically have (i.e., the mode). Because more

novice coffee drinkers lack this reference system (mean, minimum and maximum), their enjoyment of coffee might be less attuned to hedonic value. Because evaluability theory and other theories on value sensitivity were mostly tested with relatively simple numeric stimuli, it is unclear whether these theories' predictions will hold up for more complex, multidimensional experiential stimuli. Indeed, previous work has shown that consumers use different strategies when evaluating the value of experiences rather than numbers (Martin et al. 2016).

This investigation pursued two goals. First, we aimed to demonstrate that more experienced consumers are more sensitive to the hedonic value of experiential products than less experienced consumers and thus, that greater knowledge might not be universally positive (e.g., the "curse of expertise" or the flipside, "blessed ignorance"). Second, we strived to elucidate *how* accumulating experiences boosts sensitivity. If consumers draw back on past experiences to gauge present enjoyment, do they:

- a) compare the new experience to the past *average* experience (Helson 1964; Hsee and Zhang 2010),
- b) do they use *range* information (minimum, maximum past experience; Hsee and Zhang 2010),
- c) do they determine the *rank* of the new experience (Stewart et al. 2010),
- d) or do they use a different strategy?

## Study 1: Measuring The Distribution

Study 1 explored how the distribution of consumers' past experiences with gaming apps affects their enjoyment of two target games. We measured the participants' past experiences with gaming apps with a distribution builder. Then, participants rated how much they enjoyed two target games of different hedonic value (lower vs. higher). Study 1 served to explore how different features of participants' distribution of past experiences (mean, sum, range, and standard deviation [SD]) would affect their enjoyment of the target games. We counterbalanced whether the distribution builder was completed before or after evaluating the target games to alleviate concerns that we artificially activated past experiences.

### Procedure

Participants (n=156) either reported their past experiences with gaming apps *before* or *after* we measured their enjoyment of two target games. The distribution of past experiences with gaming apps was measured with a distribution builder. Participants allocated balls (1 ball = 1 gaming app) across ten hedonic value categories (1 = horrible to 10 = world class) to indicate how many gaming apps they had experienced in each hedonic value category. They could allocate between 0 and 100 balls in total. We computed the range ( $M_{range}=5.87$ ), the standard deviation ( $M_{deviation}=1.78$ ), the sum ( $M_{sum}=12.65$ ) and the average valence of all past experiences ( $M_{average}=6.21$ ).

We measured participant's enjoyment of two new gaming apps. Participants watched two videos that introduced two gaming apps in random order. These apps were selected to be as similar as possible and involved navigating a green monster through a laboratory. However, a pretest confirmed that their hedonic value differed considerably (84% vs. 24% enjoyment rating). Participants' enjoyment

of each game was measured on 10-point scales (1=horrible game to 10=world class game).

### Results

We computed several separate mixed linear models where we regressed enjoyment on each distribution statistic (range, SD, sum, mean), game hedonic value (higher vs. lower), order (distribution builder first vs. games first), and all interactions. Game hedonic value was the within-subjects variable. No model revealed a 3-way interaction (all  $p > .27$ ). However, 2-way interactions between the range measures (standard deviation statistic and range statistic) and game hedonic value emerged which remained significant after controlling for the mean and sum statistics (all  $p < .08$ ). As an example, we dissected the interaction for the standard deviation measure. Participants' enjoyment was more sensitive (the difference in enjoyment of the good and bad game was larger) when they had consumed a broad (+1SD;  $\beta = 1.61$ ,  $p < .001$ ) rather than narrow range of gaming apps in the past (-1SD;  $\beta = .430$ ,  $p = .231$ ). The two-way interactions between game hedonic valence and sum or average were insignificant (all  $p > .243$ ).

Study 1 explored which feature of the distribution of past experiences would predict sensitivity to hedonic value. We find that sensitivity was only predicted by distribution features that captured the range (range and standard deviation) but not distribution features not directly related to range (sum and average). As such, the results raise doubts as to whether consumers compare new experiences with the average experience and whether the quantity of past experiences is important.

### Study 2: Reducing The Number of Experiences

Study 2 aimed to conceptually replicate study 1 by manipulating, instead of measuring, the range of past experiences in a "knowledge acquisition phase" (KAP). We also strived to provide process evidence.

Study 1 showed that the range, but not the sum or average, predicted sensitivity for hedonic value. In study 2, we thus eliminated moderate experiences from the participants' distribution of past experiences. Thereby reducing the number, while keeping the range of experiences constant.

To test whether, and how participants would compare a target experience to past experiences, we measured enjoyment in the KAP. We then examined the correlations between earlier enjoyment in the KAP and enjoyment of the target experience. Given that we provided a range of experiences, two comparison processes are possible: Consumers might assimilate to similar past experiences (hedonic assimilation: "This is as enjoyable as this other past experience") or contrast away from dissimilar past experiences – those at the opposite end of the range (hedonic contrast: "This is much more (less) enjoyable than this other past experience").

### Procedure

Study 2 manipulated prior experiences with drawings (relevant range – higher quantity, relevant range – lower quantity, irrelevant range) and the hedonic value of a target drawing (lower vs. higher) in a 3X2 between-subjects design. First, participants ( $n = 297$ ) completed the KAP. In the relevant range – higher quantity condition, participants saw 15 mountain drawings. The drawings' hedonic value was normally distributed to ensure a broad range. Participants evaluated three drawings of lower (enjoyment score pretest:  $M = 56$  on a 100-point scale), nine drawings of moderate ( $M = 68$ ), and three of higher hedonic value ( $M = 81$ ). In the relevant range lower quantity condition, participants only evaluated the three drawings of lower and the three drawings of higher hedonic value but no moderate

drawings. In the irrelevant range condition, participants saw 15 animal photographs. Participants rated their enjoyment of each stimulus on slider scales (1=do not enjoy at all to 100=enjoy extremely). Presentation order of stimuli was randomized.

Next, all participants completed six dot-estimation filler tasks. Thereafter, participants were randomly assigned to one of two novel, but similar drawings: one of lower or one of higher hedonic value. Those constituted a gift to take home. A pretest ensured that the targets were similarly enjoyable as drawings of lower and higher hedonic value in the experience building phase ( $M = 60$  and  $M = 79$  respectively). Enjoyment was measured with three items: How happy are you with this drawing, How much do you like this drawing, How beautiful is this drawing? (1=not at all to 9=extremely).

### Results

We regressed enjoyment on gift hedonic value (lower vs. higher), range (coded to compare the irrelevant range [animal pictures] to the other two conditions), and all interactions. Two significant 2-way interactions between gift hedonic value and relevant range – higher quantity (vs. irrelevant range) and relevant range – lower quantity (vs. irrelevant range) emerged (all  $p < .001$ ). Participants' enjoyment was more sensitive to hedonic value when they had experienced all 15 drawings ( $p < .001$ ) as compared to animal pictures ( $p = .18$ ). Participants' enjoyment was also more valence sensitive when they had exclusively seen extreme drawings ( $p < .001$ ) as compared to animal pictures. Sensitivity did not differ between the higher and lower quantity conditions ( $p = .99$ ).

Next, we tested whether present enjoyment was assimilated to similar or contrasted away from dissimilar past experiences. We computed each participant's average enjoyment of the three less ( $M = 42.80$ ) and the three more positively valued ( $M = 85.48$ ) drawings in the KAP. Next, we examined the correlations between these averages and gift enjoyment. The correlation pattern suggests assimilation to similar past experiences. We find no evidence for hedonic contrast.

Consistent with study 1, not the quantity but the range of past experiences increased sensitivity for the hedonic value of a target drawing. Participants with 6 past experiences were as sensitive as those with 15 past experiences. This finding raises doubts as to whether the sum of experiences or the average experience are relevant for enjoyment.

Extending study 1, we demonstrated which past experiences are driving the effects on enjoyment through measurement. Participants assimilated present enjoyment to similar drawings they had seen in the past. Our findings are inconsistent with the possibility that sensitivity was driven by hedonic contrast.

### Study 3: Manipulating The Range of Experiences

Study 3 aimed to test whether consumers rank experiences by manipulating the range of experiences in the KAP. We compared participants with a narrower range of experiences (15 moderate value drawings) with participants with a broader range (the 15 drawings from study 2). If the rank within the distribution determines enjoyment (Stewart et al. 2016), then consumers in the narrower range condition should be sensitive to hedonic value. Because the higher (lower) value target ranks highest (lowest) in their distribution, they should enjoy it very much (not at all).

### Procedure

Study 3 applied a 2 (range: broader vs. narrower) x 2 (hedonic value: lower vs. higher) between-subjects design ( $n = 193$ ). Participants in the broader range condition saw the 15 artworks from study 2 (3 high, 6 moderate and 3 low) while participants in the narrower



range condition saw 15 moderately enjoyable artworks (all similar to the 6 moderately enjoyable drawings from the broader range condition). The drawings were presented in random order. To rule out an explanation in terms of response scale during the KAP, participants did not rate their enjoyment in the KAP. We used study 2's items to assess enjoyment of the - randomly assigned -gift.

### Results

We examined the effect of range (narrower vs. more broad), gift hedonic value (lower vs. higher), and their interaction gift enjoyment. A significant 2-way interaction between hedonic value and range emerged ( $p=.016$ ). Participants' enjoyment was more sensitive to hedonic value when they had experienced the broader ( $p<.001$ ) as compared to the narrower range ( $p=.09$ ) of drawings.

Study 2 demonstrated that experienced participants assimilated to similar past experiences. The ability to draw back on similar past experiences may therefore be what distinguishes novices from experts and creates value sensitivity for experiential products. Study 3 supports this notion. When similar past experiences were absent, sensitivity declined. These findings again raise doubts as to whether consumers compare their experiences to an average or rank them.

### GENERAL DISCUSSION

Our experimental paradigm allowed us to manipulate knowledge. Consistent with evaluability theory, we show that acquiring product knowledge creates value sensitivity. However, we also show that in the domain of experiential products, knowledge has hedonic benefits ("blessing of expertise") but also entails hedonic costs ("curse of expertise"). Knowledgeable consumers enjoy elite products more than novices, but are less able to enjoy mundane products.

Extending beyond evaluability theory, we show which aspect of knowledge contributes to sensitivity. Our findings suggests that the process of acquiring knowledge for experiences differs from the process of acquiring knowledge for numbers. Sensitivity was not driven by the sum, or average experience, or the rank of an experience. Rather, a broad range of past experiences seems crucial because it provides similar past experiences that serve as assimilation standards (study 2). More importantly, our findings imply that expertise for hedonic experiences may be *local*. Consumers seemed sensitive to experiences within but not outside of their range of past experiences

(study 3). A finding that might be specific for experiential stimuli. When judging prices, for instance, consumers were sensitive to prices within and outside their range of past experiences (Janiszewski and Lichtenstein 1999).

Although many consumers strive to accumulate more product experiences to acquire knowledge, having this knowledge involves a cost. A coffee aficionado might need to walk past four Starbucks, sacrificing time and energy, to reach a coffee shop that offers elite coffee.

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# A Complete Consumer Journey: Tracking Motivation in the Marketplace

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## EXTENDED ABSTRACT

Traditional models of shopper motivation assume that a consumer arrives at a store with a particular goal in mind and shops according to that goal. As a result, the majority of studies on in-store decision making have treated shopper motivation as a stable trip-level variable measured either before or after a shopping trip (Kaltcheva and Weitz 2006). In contrast, consumer behavior studies demonstrate that examining motivation and choice through a series of actions and across multiple time points helps to uncover the inherent dynamics of such behavior (Dhar et al. 2007; Khan and Dhar 2006). Studying in-store behavior in a continuous manner from the beginning to the end, therefore, is imperative to understanding consumer motivation in the marketplace.

In this research, we capture one facet of consumer motivation in the marketplace—the amount of time shoppers spend between product choices within a shopping trip. We refer to this measure as inter-choice time. A field study and two online shopping experiments contribute to the measurement and understanding of consumer motivation in the marketplace. First, we advance prior literature on shopper motivation by measuring consumers' in-store behavior in a continuous manner. Second, we add to growing research that uses shopper-tracking technology by drawing attention to an antecedent of in-store behavior—pre-trip planning—and capturing its divergent impact on consumers' motivation over the course of their shopping trips. Third, our findings add to the dialogue that consumer motivation can follow a linear trend (Kivetz, Urminsky, and Zheng 2006) or a curvilinear trend (Bonezzi, Brendl, and De Angelis 2011). We show that pre-trip planning determines whether a curvilinear motivational pattern emerges as a consumer progresses from one product choice to another in the store.

In study 1, 250 shoppers at a grocery store participated in a research study that included an entrance and exit survey as well as video tracking to record the timing and categories of all product choices. The dependent variable was the amount of time leading to each product choice (i.e., inter-choice time). We calculated inter-choice time as the time a participant began shopping to making the first product choice, and then the time from the first product choice to the second, and so on, until the time between the final two product choices. Inter-choice time was regressed on the cumulative trip duration at the moment of purchase, the square of the trip duration, a contrast code for usage of a shopping list (List = 1; No-List = -1), and the two-way interactions between the list code and trip duration and the list code and squared trip duration. The final data set consisted of 2,285 product choices made by 237 shoppers (video files from 13 participants were unusable). There was a positive interaction between squared trip duration and the list code ( $\beta = 0.0010$ , Wald  $\chi^2(1959) = 34.58$ ,  $p < .0001$ ), suggesting that whether a shopper's motivation followed a curvilinear trend depended on pre-trip planning. In the list condition, there was a positive linear effect of trip duration ( $\beta = 0.0247$ , Wald  $\chi^2(1959) = 37.79$ ,  $p < .0001$ ); the quadratic effect of trip duration was not significant ( $\beta = -0.0002$ , Wald  $\chi^2(1959) = 0.81$ ,  $p = .37$ ). In the no-list condition, in contrast, there was a negative quadratic effect of trip duration ( $\beta = -0.0023$ , Wald  $\chi^2(1959) = 56.02$ ,  $p < .0001$ ); the linear effect of trip duration was not significant ( $\beta = 0.0053$ , Wald  $\chi^2(1959) = 1.24$ ,  $p = .27$ ).

In study 2, the Prolific research platform recruited 120 participants to complete a shopping trip in a simulated online grocery store. We randomly assigned participants to one of two pre-trip planning conditions (List vs. No-List). In the list condition, participants received a budget of \$35 and created a list of four categories. In the no-list condition, participants received the same instructions but did not create a shopping list. The store included 15 categories with six items from a national US grocery retailer (Kroger) presented in a fixed order. As in study 1, the dependent variable was inter-choice time and we followed the same procedure to create a regression model. The final sample for analysis included 715 purchases made by 102 participants who remained within the specified budget. We again observed an interaction between squared trip duration and the list contrast code ( $\beta = 2.2482$ , Wald  $\chi^2(595) = 14.88$ ,  $p = .0001$ ). In the list condition, there was a positive linear effect of trip duration ( $\beta = 0.7363$ , Wald  $\chi^2(595) = 14.99$ ,  $p = .0001$ ), while the quadratic effect was not significant ( $\beta = 0.8258$ , Wald  $\chi^2(595) = 0.91$ ,  $p = .34$ ). In the no-list condition, there was a negative quadratic effect of trip duration ( $\beta = -3.6705$ , Wald  $\chi^2(595) = 14.92$ ,  $p = .0001$ ), while the linear effect was not significant ( $\beta = 0.3015$ , Wald  $\chi^2(595) = 1.78$ ,  $p = .1826$ ). We replicated these patterns with another 211 Prolific participants using the same paradigm as study 2 except the store randomized category order and the list condition used a pre-determined shopping list (N = 1,376 purchases from 190 participants).

An in-store field study and an online shopping experiment (plus a replication study) found that shoppers' motivational patterns diverged depending on whether they had a shopping list. Whereas consumers with shopping lists exhibited a deceleration of shopping speed over the course of their trip, consumers without lists showed a nonmonotonic increase then decrease in inter-choice time (i.e., a curvilinear pattern). These patterns reveal the role that reference points may serve for consumers in the marketplace. The moderating effect of list usage on shopper behavior adds a new angle to the literature demonstrating that pre-trip factors influence the dynamic patterns of in-store behavior. Future research can explore other consumer-based antecedents (e.g., the presence of a shopping partner or group; different purpose of the trip) and capture their effects on consumers' motivational patterns in the store. Capturing the dynamics of in-store motivation is critical to providing real-time and relevant messages to enhance the retail experience and consumer welfare (Lee et al. 2018).

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# Dehumanization: Coping with Embarrassment in Consumer Purchases

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## EXTENDED ABSTRACT

Consumers often find themselves in encounters with service providers that can spark feelings of embarrassment. For example, they may need to speak to a pharmacist or a doctor about an embarrassing health condition. They may need to purchase embarrassing personal products (Blair and Roesse 2013). In situations such, consumers employ coping strategies to deal with the feelings of embarrassment, such as buying additional non-embarrassing items (Blair and Roesse 2013; Lewittes and Simmons 1975), shopping in less crowded environments, or avoiding salespeople (Brackett 2004). The current research considers another way that consumers cope with embarrassing interactions with service professionals: dehumanization.

Given that thoughts about what others are thinking leads to embarrassment (Dahl, Manchanda, and Argo 2001), a strategy to cope with embarrassment is perceiving others to be lacking in thoughts or feelings (Epley and Waytz 2010). For example, when buying condoms, consumers may feel embarrassed if they believe that the cashier infers they are promiscuous (Dahl et al. 2005). We propose that consumers in such situations reduce self-consciousness by thinking of the service provider as less like a human being and more like a robot who is simply “doing the job”. Someone who is not fully human should be more focused on the task and less likely to think about the consumer and the potentially embarrassing events that may have led the consumer to need the particular product or service. Thus, by perceiving the service provider as more robotic and less human, the embarrassment of the situation can be mitigated. In this paper, we investigate this subtle form of dehumanization as a coping mechanism consumers employ when buying socially embarrassing products or seeking embarrassing services. We have four hypotheses stemming from our conceptualization:

*Hypothesis 1* When consumers buy embarrassing products or consume such services, they will dehumanize the service provider to reduce embarrassment.

*Hypothesis 2* When consumers buy embarrassing products or consume such services, they will prefer a robotic service provider to a warm one. However, this preference will be reversed when they buy normal products or consume normal services.

*Hypothesis 3* Consumers will be more willing to make self-disclosures about an embarrassing product when the service provider is robotic than when he/she is warm. However, they will be more willing to make self-disclosures about a normal product when the service provider is warm than when he/she is robotic.

*Hypothesis 4* The effect of embarrassment on dehumanization (H1) will be more evident when consumers are of high (vs. low) self-consciousness.

Study 1 tested whether participants would choose a doctor with robotic (vs. warm) characteristics when seeking an embarrassing treatment (H2). Female participants imagined doing either a pelvic exam or an ear exam in a clinic. They were told that only male doctors were available and were asked to choose one between two doctors who were equally knowledgeable and professional but varied in style. Doctor A worked in an efficient, almost robotic way, whereas Doctor B was chatty and asked lots of questions. As predicted, participants seeking embarrassing treatment were more likely to choose the robotic doctor than those in the control condition (59.3% vs. 38.5%;  $\chi^2 = 6.88, p < .01$ ).

Study 2 tested whether embarrassing service contexts lead consumers to dehumanize service providers (H1). Participants read a scenario similar to study 1 but rather than having a choice of doctor, participants simply read that the doctor performed the exam and were asked to judge his style. Results confirmed that participants rated the doctor as more robotic in the embarrassment condition than in the neutral condition (3.84 vs. 3.10;  $F(1,82) = 6.36, p = .014$ ).

Study 3 was a field study conducted in a convenience store built in the lab. Each participant selected, at random, an envelope that contained the name of a product and redeemed it with a coupon. In fact, each envelope identified either an embarrassing product (e.g., condom) or a normal product (e.g., gum) to be redeemed. Results indicated that participants who bought embarrassing products perceived the cashier to be more robotic than those who bought normal products (4.40 vs. 3.39;  $F(1, 113) = 17.64, p < .001$ ).

Study 4 tested the effect of dehumanization on self-disclosure in a field experiment. (H3). An experimenter pretended to be a salesperson and invited passersby to do a survey for a small payment. Participants were told that they could stop answering questions anytime they wanted, without influencing their payment. A list of thirty-two personal questions was developed and the number of questions answered by each participant was recorded as the self-disclosure measure. Participants were told that the product being surveyed was either about condoms or gum, as a manipulation of embarrassment. The salesperson was trained to act in a warm or robotic manner. In the warm condition, the experimenter focused on the participant's eyes and spoke enthusiastically. In the robotic condition, he looked at the participant's face without focus and spoke in a monotone voice. Results confirmed that when the survey was about condoms, participants answered more questions when the salesman behaved robotically than when he behaved warmly (19.47 vs. 13.54;  $F(1, 133) = 18.19, p < .001$ ). This pattern reversed when the survey was about gum (22.35 vs. 28.56;  $F(1, 133) = 4.81, p < .05$ ).

A final study tested the moderation effect of self-consciousness (H4) and found that the effect of embarrassment on dehumanization of salespeople is mitigated for individuals low in chronic self-consciousness.



# A Meta-Analysis on the Endowment Effect in Experiments

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## EXTENDED ABSTRACT

### Previous Meta Research

While the discussion on the phenomenon of endowment effect has been on-going, it is surprising that few meta-analyses have examined this phenomenon exclusively. Three previous meta-analyses have investigated on the disparity that exists between Willingness-to-Pay (WTP) and Willingness-to-Accept (WTA). Experimental and survey studies often find that WTA is much greater than WTP; however, this disparity may not come exclusively from endowment of an object but could also be attributable to seller/buyer perspective, income effects, transaction costs (Randall and Stoll, 1980), commitment costs (Zhao and Kling, 2004), or other psychological variables such as framing (Thaler, 1980).

The most recent meta-analysis on the WTP/WTA gap, by Tuncel and Hammit (2014), is based on a previous meta-analysis by Horitz and McConnel (2002), which reviewed 45 studies and examined the effects of type of good and experimental conditions. Horitz and McConnel's main finding showed that the WTP/WTA disparity was greater for public goods or none-market goods compared to ordinary private goods. Tuncel and Hammit expanded the previous analysis by including new studies up until early 2012 with a total of 76 studies. Tuncel and Hammit replicate prior finding that there exists systematic differences in the WTP/WTA disparity by type of good. However, they showed that this disparity is related to participants' experience (real world experience and experimental trial experience) in valuing the good. Furthermore, the magnitude of this parity has decreased overtime. The third meta-analysis by Sayman and Onculer (2005) examined 39 studies and found that incentive-compatible designs (such as the goods are tangible or intangible) decreased the WTP/WTA disparity.

However, all of these previous three meta-analyses focused on the WTP/WTA disparity. While Tuncel and Hammit's (2014) analysis does include studies that focus on the endowment effect, their analysis and discussion do not offer any specific insight on the actual phenomenon of endowment. This current study is an updated and extension of Tuncel and Hammit but with a focus on the endowment effect. It expands the sample by including newer studies. Similar to Tuncel and Hammit, this meta-analysis uses the logarithm of the ratio of the elicited price from endowed and unendowed participants. This analysis examines several factors that may play a role in contributing to the endowment effect in experimental studies, such as country of origin, type of good, endowment method, price elicitation method, usage of actual endowment, and experimental procedures. Furthermore, regression analysis shows that unlike in Tuncel and Hammit's case where the WTP/WTA gap has diminished by publication date, the price gap due to endowment has increased in recent publications.

### Current Meta-Analysis

#### Data

To identify related studies, PsycINFO was used with keywords "WTA," "WTP," and "Endowment Effect" up to mid-2015. Since this analysis focuses on the study of the price gap due to endowment, none experimental studies and experimental studies that did not involve explicit pricing of a good or object were excluded. For example, in Sen and Block's (2008) study, the experimenters used rating scales and probability to measure participants' inclination to keep an endowed object. This and other induced-value experiments (e.g.,

using tokens) were excluded since they are not relevant to testing a difference between endowment pricings. Furthermore, studies that did not involve endowment (either actual or hypothetical) were also excluded. Few studies, such as Peck and Shu (2009), examined the effect of physical touch on perceived ownership. While the authors argue that theoretically physical touch enhances one's psychological ownership of the object and therefore may lead to an endowment effect, the endowment here is the dependent variable and not what is resulting in the price difference. Hence, such studies were excluded. There are 42 studies included in this analysis with 89 total experiments. The studies included are listed in the Appendix.

#### *Dependent Variable: Endowment Price Ratio*

Similar to Tuncel and Hammit (2014) which used a WTA/WTP ratio, this analysis uses the ratio of the mean price of the Endowed to mean price of Unendowed for each experiment in each study. Since there is no information on the price elicited from each participant in the studies, this analysis focusses on the group means in each experiment instead. Natural log is then used to transform this Endowed/Unendowed price ratio. The resulting Ln-Price-Ratio is a semi-normalized distribution. No outliers were identified during this vetting process and so no studies were excluded as a result.

#### *Independent Variables*

##### *Type of Good: Ordinary Private Goods, Lottery, and Others*

The type of good in each experiment was classified into three categories, ordinary private good, lottery, and others. Ordinary private goods are items that are often seen and bought in everyday transactions. Three most common used items used in endowment experimental studies are pens, mugs, and chocolate bars, all of which are ordinary private goods. Lotteries are a type of good that carries a probability of winning some pre-set face value. In endowment experiments, participants could either be endowed with such a lottery which they have some chance of winning a pre-set value of winnings (and have the option to sell such a lottery) or not have such a lottery but have the option to buy it. Others type of good in this category captures items that were used that were not explicitly captured by the other two categories (such as time) or explained as to what was used in the experiments.

##### *Endowment Method: Real vs. Hypothetical*

In some studies, the endowment experiment takes place with actual items given to the participants; in other studies, the experiment is scenario based and participants are asked to imagine to hypothetically possess (or not possess) some item. Past studies and meta-analysis have shown that the endowment effect is robust regardless of real or hypothetical method of endowment (Tuncel and Hammit, 2014).

##### *Physical Endowment: Physical vs. Non-physical*

In some studies, participants are given actual items to touch and use, while in other studies, participants may be told that the item they are endowed with will be provided to them at the end of the study. While the later experimental methods still uses real endowment where the participants are given an actual item, these participants do not have the opportunity to physically engage with the item itself. Prior studies have suggested that while endowment effect may still occur regardless of physical (or lack of) engagement with an item, physical contact does enhance the endowment effect (Shu and Peck, 2011; Peck and Shu, 2009).

Price Solicitation Method: Solo, Variable Range, and Other

In solo pricing method, participants are given an open ended question on how much they are willing to spend on or sell the item and are only required to provide one single price. In variable range method, participants are presented with several ranges of prices in a sequential manner and are asked under which range they would most likely to pay for or sell the item. The other solicitation method is a catchall for experiments that were not explicit on how pricing was elicited from the participants.

Experimental Procedure: KKT, BDM, and Other

In their seminal paper on the endowment effect and loss aversion, Kahneman, Knetsch, and Thaler (1991) outlined the methodology in which they conducted their experiments. In the KKT procedure, participants are randomly assigned to the endowed and unendowed groups; the endowed participants are the sellers and are asked for their WTA price and the unendowed participants are the buyers and are asked for their WTP price. Alternatively, endowment experiments could use a variation based on the Becker-DeGroot-Marschak (BDM) procedure (Becker, DeGroot, Marschak, 1964). The BDM procedure is commonly acknowledged as more incentive-compatible where it has higher accuracy in measuring one's WTP. In the variations of the BDM procedure, participants are asked to state their best selling or buying price for the endowed or unendowed item with the knowledge that there is a market clearing price (either based on a pre-set price by the experimenter or the mean of the other sellers and buyers in the experiment). If the participants' prices match the market price, they will have the opportunity to buy or sell the item.

Country of Origin: Western vs. Eastern

Finally, this analysis also examines the country where the experiments were conducted in each study. Western countries are categorized based on region (such as North America and Europe) and Language (such as English); Eastern countries are based on region which is mainly from oriental cultured countries (such as China, Japan, and Singapore).

Results

The association between the independent variables and the dependent variable (Ln of ratio between endowed and unendowed prices) is examined by univariate analysis.

Similar to prior research (Tuncel and Hammitt, 2014; Horitz and McConnel, 2002), the analysis reveals a statistically significant effect of type of good on the endowment price ratio. Pair-wise comparison analysis indicate that the main significance comes from the difference between ordinary private good and lottery ( $M_{\text{difference}} = .31$ ,  $SE = .13$ ,  $p = .017$ ). One potential explanation for this greater LN price ratio for lottery compared to ordinary private good is the inherent risk involved in a lottery. Since most people are risk-averse, it is reasonable to assume that owners and non-owners of the lottery would demand greater compensation for their selling and buying of the lottery, leading to the observed greater price ratio.

While there is an apparent statistical significance in the elicitation method used by the studies, pair-wise comparison reveals that the Other method is the main driver of the significance and that no significance exists between Solo and Variable Range methods ( $M_{\text{difference}} = .06$ ,  $SE = .1$ ,  $p = .57$ ).

Using publication year as a factor, a regression analysis was run on the endowed/unendowed price ratio. The regression analysis show a significant effect of publication year on price ratio ( $R^2 = .045$ ,  $b = .21$ ,  $t = 2.0$ ,  $p = .05$ ). While only 4.5% of the change in price ratio may be explained by the publication year, a one standard deviation increase in publication year leads to a .21 unit increase in the endowed/unendowed price ratio. By using a median split based

on the publication year ( $Md = 2011$ ), a marginal interaction is found between publication date and price elicitation method ( $F = 2.44$ ,  $p = .09$ ). This marginal effect may be attributable to the increase in Other price elicitation method since the year 2011 ( $M_{\text{before2011}} = .33$ ,  $M_{\text{after2011}} = .87$ ) since Solo and Variable Range elicitation methods did not change much.

**Discussion**

This meta-analysis takes a closer examination at the effect of endowment on pricing. While it shares some similarities to prior research on WTP and WTA gap, it is theoretically different in the manipulation and the examination of the resulting pricing gap. This study is unique in that it examines exclusively the experiments conducted on the endowment effect with the endowment takes place either in real world situation or in hypothetical scenario. Furthermore, it adds more recent studies while focussing on the experimental studies in the area of endowment.

This result of analysis replicate the findings from Tuncel and Hammitt (2014) and Horowitz and McConnel (2002) that type of good used in experiments has an effect on the gap between prices due to endowment. This analysis shows that lottery endowment leads to greater price gap compared to ordinary private good endowment, a caveat that was missed by prior meta-analyses. This has some interesting implications for future research. Since lottery carries inherent risks, it is possible that risk averse individuals will demand greater compensation in the form of price gap between sellers and buyers to compensate for the potential risk. This is also consistent with the loss aversion account of the endowment effect where individuals demand greater value for losing (or selling) an object compared to gaining (or buying) the same object (Khaneman, Knetsch, and Thaler, 1991).

The publication year also appear to play a role in influencing the effect of endowment on pricing where the pricing gap appears to increase as publication year increased. This result is contrary to Tuncel and Hammitt's (2014) where they showed a diminishing WTP/WTA price gap as a result of increased publication year. One reason for this difference may be because Tuncel and Hammitt's meta-analysis is on the WTP/WTA price gap whereas the current meta-analysis focussed on the endowment effect price gap. Whereas the WTP/WTA is a methodological price elicitation process, the endowment price gap is attributed to fundamental psychological variables such as loss aversion (Khaneman, Knetsch, and Thaler, 1991), ownership effect (Aggarwal 2004; Aggarwal and Law 2005), and even self-enhancement (Dommer and Swaminathan, 2013; Chatterjee, Irmak, and Rose, 2013). There may be two potential explanations for this endowment price gap as a result of publication year. First, participants in general are becoming more loss averse or attached to their endowed objects. This may have some interesting implication in terms of sociology or personal psychology on how our society may be evolving compared to years past. Second, since the current endowment effect price gap seems to be marginally moderated by the change in price elicitation method, there may a change in experimental settings that is resulting in greater endowment price gap. This may have some negative implication in which experimenters are artificially inflating the effect of endowment through experimental settings and procedures.

This current meta-analysis has some limitations. First, while it focusses on the endowment effect in the experimental setting, it ignores the effect through other research methods such as quasi-experiments and surveys. This reduces the power and the scope that could have brought out to examine a larger picture of the endowment effect. Second, since the data used are means from experiments (or the ratio of the price means), it lacks some statistical tools to further refine the relationship between the factors.

One potential way to address both of these limitations is to examine the endowment effect but through a different psychological variable: psychological ownership, the degree to which an individual feels or believes that he or she owns an item with or without actual or physical ownership. Furthermore, the dependent variable could be changed to include not only pricing gaps but also rating or preference gaps that are a result of psychological ownership. This would expand the level of analysis beyond experimental studies and include correlational studies, which more refined meta-analytical tools are available for detailed analysis of the data.

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# Uncertain Reward Campaigns Impact Consumers' Size Choices

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## EXTENDED ABSTRACT

Many companies annually launch uncertain reward campaigns, where consumers are given a chance to win a prize with each purchase. Uncertain reward campaigns offer consumers a probability (e.g., one in four chances) to win a gradient of prizes, ranging from nominal to valuable. For example, Tim Hortons' *Roll-Up-The-Rim* campaign gives explicit odds of a 1 in 6 chance to win, with the prizes ranging from a hot beverage to a new car (Roll-Up-the-Rim Website, 2017). Similar uncertain reward campaigns include Coca Cola's *Sip & Scan*, Pepsico's *Win Every Hour*, M&M's *When We Win, You Win*, and Wendy's *Dip & Squeeze and Win*. The gradients in the prizes exist to elicit interest, but there is anecdotal evidence to suggest that these campaigns may be changing consumer behavior.

Specifically, a recent article in the Huffington Post suggests that consumers are purchasing larger products (or 'supersizing') during Tim Horton's *Roll-Up-The-Rim* campaign (Yum, 2013). Although the company regularly advertises otherwise, it thus appears that customers behave as if larger beverage sizes bring better odds (Yum, 2013). This speculation has incited customers to catalogue the prize frequency and distribution across cup sizes (Roll Up the Stats Website, 2015). The results of over 14,000 crowdsourced reports reveal no statistical variation of wins by cup size (Aspler, 2016). Yet this supersizing tendency persists.

In the current article, we propose the intriguing possibility that supersizing during uncertain reward campaigns is occurring because consumers infer that their odds of winning the most elusive prize are better in the larger sized offerings. Thus, we propose that it is not that consumers are rejecting or ignoring explicit information about their overall odds of winning, but rather they are engaging in tactics to elevate a sense of control over a desirable, but elusive outcome. Of course, from a rational standpoint (e.g., Expected-Utility Theory; Bernoulli, 1738; von Neumann and Morgenstern, 1945), if the goal is to maximize one's chances of winning, consumers should purchase the smallest product offering and enter the lottery twice for an equivalent price. Yet if the goal is to gain a sense of control over seemingly insurmountable odds, then such a tactic may serve an adaptive function.

Across four studies, we sought to test the veracity of the supersizing phenomenon and reveal the underlying process that in fact nudges consumers to purchase larger products during uncertain reward campaigns. As a whole, our findings support the existence of a supersizing tendency during uncertain reward campaigns and further support that it may be a byproduct of consumers' need to increase a sense of control over the elusive grand prize.

In study 1, we begin by confirming the Huffington Post article, validating that consumers do indeed tend to purchase larger products during uncertain reward campaigns. Undergraduate students ( $N = 206$ ) were randomly assigned to one of two conditions (Uncertain Promotion vs. No Uncertain Promotion). While participants in the no uncertain promotion condition chose the coffee cup size they would purchase from Tim Hortons on a normal day, participants in the uncertain promotion condition chose the coffee cup size they would purchase during a time when *Roll Up the Rim* campaign was active (which offered a chance to win one of the prizes that ranged from a cup of coffee to a car). An independent samples t-test with average cup size selected as the dependent variable (1 = small to 4 = extra-

large) revealed that participants in the uncertain promotion condition chose larger cup sizes ( $M = 2.08$ ,  $SD = .83$ ) compared to participants in the no uncertain promotion condition ( $M = 1.87$ ,  $SD = .62$ ),  $t(204) = 2.10$ ,  $p < .05$ ,  $d = .29$ . Consistent with the supersizing anecdote, this mean difference was driven predominantly by variations in the largest offering. Specifically, the extra-large cup was chosen by 8% of participants in the uncertain promotion condition compared to only 1.9% in the no uncertain promotion condition,  $\chi^2(1) = 4.16$ ,  $p < .05$ ,  $\phi = .14$ . Reliable choice shifts for other product sizes were not observed ( $ps > .12$ ). Hence, the results suggested that consumers are indeed more likely to supersize their product purchases during an uncertain reward campaign.

Larger products are usually more expensive than their smaller alternatives. Thus, one plausible explanation for this behavior is the somewhat rational belief that firms are housing larger, and thus more costly, prizes in the most profitable options. One way of ruling out this possibility is by holding prices constant across product sizes. As such, in Study 2, participants ( $N = 148$ ) were randomly assigned to one of two conditions (Uncertain Promotion vs. No Uncertain Promotion). All participants were told that, for a limited time, Starbucks was conducting a promotion where *all product sizes are equally priced*. An independent samples t-test with average cup size selected as the dependent variable (1 = Short to 4 = Venti) revealed that participants in the uncertain promotion condition chose larger product sizes ( $M = 3.39$ ,  $SD = .86$ ) compared to participants in the no uncertain promotion condition ( $M = 3.11$ ,  $SD = .95$ ),  $t(146) = 1.91$ ,  $p = .058$ ,  $d = .31$ . Follow-up contrasts confirmed that this effect occurred because participants were more likely to choose Venti in the uncertain promotion condition (59.5%) than in the no uncertain promotion condition (43.2%),  $\chi^2(1) = 3.90$ ,  $p < .05$ ,  $\phi = .16$ . Reliable choice shifts for other product sizes were not observed ( $ps > .25$ ). The results of study 2 suggest that the supersizing tendency during uncertain reward campaigns goes beyond just-world beliefs, perceptions of equity, or other more rational inferences based on price (e.g., ulterior motives).

If price inferences did not underscore the supersizing phenomenon, then it could be that consumers inherently associate larger products with greater chances of winning. Further, it was possible that this association was specific to the elusive grand prize. Indeed, prior literature suggests that consumers often focus on their odds of winning the grand prize, because nominal prizes are far too frequently won (Yan & Muthukrishnan, 2014). To test these possibilities, Study 3 employed a 2 (Prize: small vs. large)  $\times$  3 (Product Size: Small vs. Medium vs. Large) between-subjects factorial design. All participants ( $N = 240$ ) read that Lays was currently conducting an uncertain reward campaign. Participants were then shown all sizes of Lays chips included in the campaign (small, medium, and large), but were randomly asked to rate the likelihood of winning one prize with only one of the bags. A two-way ANOVA on likelihood revealed no difference across product sizes on perceived likelihood of winning the nominal prize ( $p = .99$ ). However, participants' perceived likelihood of winning the grand prize did vary by product size,  $F(2, 234) = 10.62$ ,  $p < .001$ ,  $\eta^2 = .08$ . As expected, participants believed the larger bag was more likely to win the grand prize ( $M = 6.29$ ,  $SD = 3.54$ ) relative to the small ( $M = 3.97$ ,  $SD = 2.68$ ),  $F(1, 234) = 13.09$ ,  $p < .001$ ,  $\eta^2 = .05$ , or medium bags ( $M = 3.56$ ,  $SD = 2.29$ ),  $F(1, 234)$



= 18.13,  $p < .001$ ,  $\eta^2 = .07$ . These results converged with studies 1 and 2 to show that supersizing corresponds with biased inferences of chance, and these inferences are restricted to the chance of winning the grand prize.

In our final study, we then turned to confirm that the phenomenon relates to consumers establishing a greater sense of control in the presence of the elusive and desirable grand prize. Participants ( $N = 300$ ) were randomly assigned to one of four conditions in a 2 (No Uncertain Promotion vs. Uncertain Promotion)  $\times$  2 (Power: High vs. Baseline) between subjects factorial design. The procedures, stimuli, and choice task were the same as study 1 with one exception. In an effort to extend beyond measuring our mediator, we introduced a pretested power manipulation before the main scenario (adapted from Galinsky et al., 2003). Because high feelings of power reduce consumers' motivation to acquire control (Inesi et al. 2012), we expected high power condition to serve as a boundary condition to supersizing phenomenon.

The results converged with our expectations. That is, participants in the baseline power condition selected larger product sizes on average in the uncertain promotion condition ( $M = 2.63$ ,  $SD = .90$ ) than in the no uncertain promotion condition ( $M = 2.33$ ,  $SD = .83$ ),  $F(1, 296) = 4.34$ ,  $p < .05$ ,  $\eta^2 = .014$ . Critically, this pattern was eliminated in the high power condition,  $p = .36$ . Similarly, participants in the baseline condition indicated feeling more in control when choosing a size during the uncertain promotion ( $M = 3.17$ ,  $SD = 1.39$ ) than when there was no uncertain promotion ( $M = 2.69$ ,  $SD = 1.47$ ),  $F(1, 296) = 4.65$ ,  $p < .05$ ,  $\eta^2 = .015$ . This pattern was eliminated in the high power condition,  $p = .16$ . Finally, we conducted a mediated moderation analysis (Hayes 2012; Model 8). Perceived control mediated size choices in the baseline condition (95% CI: .002, .129), but not in the high power condition (95% CI:  $-.096$ , .003). These results confirmed that consumers supersize as a way of enhancing control over a desirable but extremely unlikely outcome, which is eliminated when consumers' feeling of power is reinforced.

Promotional lotteries account for over \$1.8 billion in annual marketing expenditures in the U.S. alone (Smith, 2009). McDonald's *Monopoly* and Tim Hortons' *Roll-up-the-Rim* are but two examples of a prevalent industry practice. Our findings converge with anecdotal evidence to suggest that consumers do indeed tend to supersize their product choices during lottery promotions. Consistent with prior evidence suggesting a link between larger products and control (Dubois et al., 2011), we found that the act of supersizing elevates a sense of control in a scenario where people would otherwise have no power to control the odds.

Possessing a feeling of control has long been considered a fundamental human motivation. Given that the odds of winning the grand prize in any lottery is extraordinarily small, it is not surprising that people look to cues that they believe influences the outcomes beyond their reach. While the cues and superstitions that people look

to range from the subtle to the outlandish (Damisch et al., 2010), researchers have yet to explore how a variety of novel ways of entering a lottery might affect consumer beliefs about their chances. This represents a unique contribution of the current work. Rationally speaking, the decision of how to enter a lottery should not affect one's odds. And yet, if the goal is to gain a sense of control, supersizing may serve as a way of coping with the insurmountable odds associated with the desirable grand prize.

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# Green Experiences: Using Green Products Improves the Accompanying Consumption Experience

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## EXTENDED ABSTRACT

The current research examines how using green products (e.g., environmentally friendly headphones) influences the enjoyment of the accompanying consumption experience (e.g., listening to music). Results reveal that consumers enjoy accompanying experiences more with green (vs. conventional) products and feelings of warm glow drive this effect.

Green products are available to consumers in various product categories but research on how green products influence consumer behavior at the consumption stage is scarce. In order to predict how using green products would influence the consumption experience, we draw from research on warm glow.

Theory of warm glow giving posits that people feel good upon a prosocial behavior, including proenvironmental behavior (Andreoni 1990; Giebelhausen et al. 2016). One thing common in research on warm glow is that people make a conscious choice to behave in a prosocial manner (e.g., donation). Extending this stream of research, we suggest that simply using a green product, even if the product is given to consumer without choice, will elicit warm glow feelings. In case the green product (e.g., a pair of headphones) has an accompanying experience (e.g., listening to music), the warm glow feelings that arise due to using green products will enhance the enjoyment of the consumption experience.

In the first experiment, sixty undergraduate students participated in a music consumption study (43.3% females;  $M_{\text{age}} = 21.53$ ;  $SD = 2.80$ ) and listened to 45-second excerpts from three songs. Results revealed that participants who were told the headphones were produced from recycled materials enjoyed listening to songs more than those who did not receive such an information (1 = not at all enjoyable, 7 = enjoyable;  $M_{\text{green}} = 4.64$ ;  $SD = .84$  vs.  $M_{\text{conventional}} = 4.09$ ;  $SD = 1.02$ ;  $F(1, 58) = 5.33$ ;  $p = .025$ ;  $\eta_p^2 = .084$ ).

The second experiment was a short-essay task. Sixty five undergraduate students were given a pen to write a short essay on how they spend their spare time (49.2% females;  $M_{\text{age}} = 20.95$ ;  $SD = 2.18$ ). In the green product condition, participants were told that the pen was produced from recycled materials. In the comparison group, the pen was presented as the recipient of “The Most Practical Product of the Last Decade” award. After writing the short essay, enjoyment of writing (1 = not at all, 9 = very much) and feelings of warm glow ( $\alpha = .85$ ).

Results revealed that participants in the green pen condition ( $M = 5.55$ ;  $SD = 2.14$ ) enjoyed writing the short-essay,  $\eta_p^2 = .068$ ). Furthermore, the indirect effect of product type on enjoyment of experience through warm glow ratings revealed an indirect-only mediation ( $\beta_{\text{indirect}} = .75$ ;  $SE = .31$ ; 95% CI = [.26; 1.51]).

Experiment 3 tests whether the positive effect of using green (vs. conventional) on the enjoyment of the accompanying consumption experiences can be generalized to strength-related products. Eighty undergraduate students participated in a dishware sanitization task (40% females;  $M_{\text{age}} = 20.69$ ;  $SD = 2.37$ ) were given a dishware sanitizer. In the green product condition, participants learned that the dishware sanitizer is made with plant-based and biodegradable ingredients. Participants in the conventional product condition did not receive this piece of information. Next, participants sanitized dishware and reported how much they enjoyed cleaning the dishes (1 = not at all, 9 = very much) and warm glow ( $\alpha = .96$ ).

Participants who cleaned the tableware with the green sanitizing product ( $M = 5.78$ ,  $SD = 2.02$ ) enjoyed the experience more than those who used the conventional sanitizing product ( $M = 4.70$ ,  $SD = 2.37$ ;  $F(1, 78) = 4.78$ ,  $p = .032$ ,  $\eta_p^2 = .058$ ). Mediation analysis indicated an indirect-only mediation through feelings of warm glow ( $\beta_{\text{indirect}} = .70$ ,  $SE = .33$ , 95% CI = [.07; 1.38]).

Experiment 4 tests whether negative beliefs about green products serves as a boundary condition. One hundred and eighty-one undergraduate students were given a grip ball to do a set of hand exercises (54.7% females;  $M_{\text{age}} = 21.75$ ;  $SD = 3.53$ ). Prior to the hand exercises, half of the participants learned about a fictitious research report which found that green products have negligible environmental impact. Participants in the baseline condition did not receive this information. In the green product condition, participants were told that the grip ball was environmentally friendly. Participants in the conventional product condition did not receive such information. Next, participants did four hand exercises and reported enjoyment (1 = not at all, 9 = very much) and warm glow.

In the baseline condition, participants who used the green product ( $M = 6.15$ ;  $SD = 1.41$ ) enjoyed the hand exercise more than those who used the conventional one ( $M = 5.28$ ;  $SD = 1.62$ ;  $F(1, 177) = 6.40$ ;  $p = .012$ ,  $\eta_p^2 = .035$ ). However, among participants who were told that the environmental impact of green products is negligible, the enjoyment of the exercise did not vary as a function of product type ( $M_{\text{green}} = 5.10$  vs.  $M_{\text{conventional}} = 5.40$ ,  $F(1, 177) < .1$ ,  $p > .30$ ,  $\eta_p^2 < .01$ ). Furthermore, in the baseline condition, a significant indirect effect of warm glow was observed ( $\beta_{\text{indirect}} = .25$ ;  $SE = .11$ ; 95% CI [.04, .49]). In the negligible impact condition, the indirect effect of warm glow was absent ( $\beta_{\text{indirect}} = -.03$ ;  $SE = .12$ ; 95% CI [-.27, .20]).

The current research examines the effect of green products at consumption stage. More importantly, vast amount of research documents potential negative effects of green product attributes (Luchs et al. 2011; Newman et al. 2014). The current research presents a novel and positive effect of green products on the consumption experience and extends research on green products. The current research further contributes to research on warm glow by showing that even without making a conscious choice to engage in a prosocial behavior, using green products leads to warm glow. From a managerial standpoint, the current research shows that when it comes to products used to consume experiences, brands can benefit from going green.

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# Indigenous Trust and Readiness towards Development

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## EXTENDED ABSTRACT

The primary consumption of indigenous people across the world is related mostly to the jungle and its produce. The consumption practices that stem from this primary consumption and its relatedness to the jungle are vivid in most indigenous culture and practices. In other words, consumption is demonstrated by the active social clustering (Coleman & Williams, 2013)—the dynamics of the interactions between individuals and dyadic ties, and other social interactions between actors. The interaction of these will jointly develop the social identity and attachment.

According to Lichrou, O'Malley, and Patterson (2014) sense of place integrates place attachment and place meanings. The jungle becomes their sanctuary and living sources. The reliance on the jungle becomes inseparable from their lives. Scannell and Gifford (2017) asserted that most people have at least one place to which they are emotionally attached. Place attachment refers to the experience of long-term affective bond to a specific geographic area and the meaning assigned to that bond (Ramkissoon, Weiler, & Smith, 2012) and that place becomes one anchor of identity (Anton & Lawrence, 2014; Hay, 1998) and to regulate affect (Schmalz & Orth, 2012). But with the new developments, the urge to modernize the internal and remote areas becomes one of the development agendas.

The objective of this study is to explore the influence of place attachment (the emotional and functional ties that connect the indigenous communities to their home), trust towards development and the readiness of the community to embrace change. The study areas are non-tourist areas.

In Malaysia, the development of the lands of the indigenous communities has spelt out scepticism and distrust towards the main streams. The following excerpts painted the initial picture (Mah Meri), "My child, I hope that you are here with good intention..."

The impact of change (disruption) to place attachment has altered the bonds between person and location that are typically latent (Chen, Dwyer, & Firth, 2014; Devine-Wright, 2009). The Social Representations theory (Moscovici, 1988) is used to understand the study context—the emphasis placed by the disruption within the "common senses of the scientific inquiries" (a contradiction between scientific knowledge), and the consensual universe of social representation through power relations between different actors.

The respondents from this study are indigenous who were born and raised up in the remote areas. In order to ensure the reliability of the data collected, these indigenous must be either still staying in the remote areas and must have at least stayed in the remote areas for 15 years. Five of the ethnic group in Sarawak, Malaysia (Kayan, Penan, Kenyah, Iban and Kelabit indigenous ethnic groups) that the researchers visited is located far into the remote areas—five to eight hours of four-wheel rides into the bumpy forest tracks that are opened by timber loggers. The other four ethnic group in Peninsula Malaysia (Mah Meri, Kensiu, Temuan and Kintaq ethnic) are easily accessible through tar road.

There were two study phases in this study; study 1— basic questionnaire survey and study 2— phenomenology. A basic questionnaire on the place attachment was distributed to 525 respondents in these villages—place identity and place dependence (Williams, Patterson, Roggenbuck, & Watson, 1992; Williams & Vaske, 2003),

nature bonding (Kals, Schumacher, & Montada, 1999; Schultz, 2001), social bonding (Kyle, Graefe, & Manning, 2005), connections to family and friends (Raymond, 2009) and the life satisfaction scale (Diener, Emmons, Larsen, & Griffin, 1985), on a seven-point Likert scale (1 = "strongly disagree," 7 = "strongly agree").

From the data collected, Cronbach's alpha measurement for internal consistency was computed for the different dimensions. Reliability values for all dimensions were above .80. A simple ANOVA analysis to test the surveyed questionnaire (whether there are any differences among the indigenous groups). A test on the equality of means suggests that they are insignificant ( $p > .05$ ), hence there are no differences among the indigenous groups on their perceptions.

In study 2, the researchers spent about six days in each village or settlements. In each village or settlements, between 12 – 15 indigenous people were recruited to understand the study context. Altogether, 117 informants spoke about their life-story. The informants were asked about their life in the jungle, the symbiosis between them and the jungle, the disruption caused by external parties, and how they manage their life after a disruption. Since the researchers stayed with the indigenous, the interviews and dialogues take place throughout the stays and visits around the places in the villages.

Interview findings from 117 informants revealed that the indigenous community associates the jungle with their life. The consumption of the jungle produce has provided them with the strong attachment as their life lingers around the jungle. The following themes and categories were extracted from the analyses: Attachment; Lifestyle; Sustenance; Integration; Disruption; Coping; Readiness.

With the vast development and the philosophies of the government underpinning the economic and welfare booster of the indigenous communities, many plans to develop the remote areas and the communities have taken place. Though the planned development could be beneficial, for many tribal communities, the conceptualization and implementation of development are themselves disparate from the indigenous epistemologies and indigenous values and systems (Chino & DeBruyn, 2006). However, the indigenous communities have a different set of definition as opposed to those of the mainstream. The value system and the consumption practices of the indigenous communities are far underexplored. In most cases, the development mindsets are different from what the indigenous needs.

The limitation of this study lies in the original understanding of the indigenous practices and value system. Though the researchers have good exposure and sound knowledge on the indigenous communities, the underpinning indigenous values and narratives are never understood by external parties, which compromises the richness of the study.

This study will shed light on the mainstream and development planners to re-consider their ambitious development thrust unto the indigenous homes and jungle. The sensitivity of the indigenous communities and the environment should be fully understood before further adversities towards the wealth of the indigenous values and system vanish.

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# The Effect of Fertility on Women's Word-of-Mouth Behavior

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## EXTENDED ABSTRACT

The current research explores whether fertility influences women's desire to share word-of-mouth (WOM). We propose that women share more WOM near the fertile phase of the ovulatory cycle and do so with other women, not men. Sharing more near ovulation may function to form alliances with other women and mitigate mate competition.

The ovulatory cycle spans about 28 days and women can become pregnant only during the days of peak fertility near ovulation. Research finds that ovulation influences women's mating motivations and consequently women's behavior (Durante et al. 2011; Thornhill and Gangestad 2008). For instance, near ovulation, women are more sexually attracted to men who are socially dominant and have symmetrical, attractive faces (Durante et al. 2012; Gildersleeve, Haselton, and Fales 2014). And, fertility also enhances women's desire to compete with other women (Durante et al. 2014). For example, fertility enhances women's motivation to appear more attractive and dress sexier especially when there are many other desirable women in the local area (Durante et al. 2011).

Some research hints at the possibility that women may become more social at ovulation. Research finds that ovulating women are more likely to volunteer and have an increased desire to attend social events (Fessler 2003; Haselton and Gangestad 2006). But, it is not clear whether women share more WOM near ovulation and if so with whom. Because the first hurdle to attracting a high quality mate is to mitigate competition with rivals (Durante et al. 2014), we propose that an increase in WOM at ovulation may be related to competition, not courtship. If so, then women's WOM at ovulation should be directed toward women, not men. Finally, because WOM is a form of social grooming/bonding (Berger 2014; Dunbar 1998), and female non-human primates form alliances with select females to gain support in competitive interactions with rivals (Seyfarth 1980), we predicted that women's WOM at high fertility is likely related to alliance formation.

Study 1 was a field study and tracked women's Facebook activity across the cycle to test the following predictions. First, we predicted a positive association between fertility within the cycle and women's activity on social media. Second, we tested whether women's activity on social media was directed toward men or other women. Participants provided a screenshot of their Facebook activity log for a 30-day period and we tracked each woman's fertility by using hormone tests to detect ovulation. There was a positive association between fertility and social media activity ( $p = .03$ ). As fertility within the cycle increased, so too did women's activity on Facebook. Further analysis using the activity directed toward other users revealed a significant fertility by target gender interaction ( $p = .035$ ). There was a positive effect of fertility on Facebook activity directed toward other women ( $p = .024$ , Figure 1), not men ( $p = .43$ ). One limitation of the Facebook study is that there might be more females on Facebook (Lin and Lu 2011) and this may be the reason fertility was significantly related to communicating with other women, but not men. Thus, study 2 was designed to further test the boundary condition of target gender in an experiment using a large sample of women

Study 2 was designed to further investigate whether the fertility-regulated-increase in women's desire to share information is targeted toward other women, men, or both. This study used a forced-choice question to determine the gender of target person and a different method of assessing fertility status. Five hundred and twenty-one women (Mean age = 29.9) participated for payment via MTurk. Consistent with our prediction, a logit analysis with target gender and conception probability revealed a significant main effect of conception probability ( $\beta = -5.93$ ,  $z = -2.09$ ,  $p < 0.04$ ). In addition to a main effect of target gender, there was no effect of fertility on general sociability,  $p = .39$ , and no interactions emerged when sociability was entered into the full model. This provides additional evidence that the effect of fertility on WOM is more strongly related to intra-sexual competitive motivations at high fertility, as opposed to fertility activating a general desire to socialize with others.

Study 3 aimed to replicate the findings of Study 1 and Study 2 in an experimental design. We tested whether fertility increases women's desire to share information in a lab environment and used an online chat platform option for the communication tool (high vs. low fertility-confirmed via hormone tests). Participants indicated whether they wanted to share information about a product or service they recently bought in a live online chat with another woman. Within subject analysis showed that women were more interested in sharing at high versus low fertility ( $p = .006$ ).

Study 4 tested whether fertility-regulated WOM functions to form alliances with other women. To determine whether the effect is specific to mating contexts, Study 4 included both mating and non-mating experimental conditions. Participants imagined being at a party and having a conversation with two women—Sarah and Tracy—and one man. Half of the participants were told that Sarah and Tracy were fellow partygoers and that the man was their romantic partner (mating condition). The other half was told Sarah and Tracy were work colleagues and the man (Jon) was their supervisor (non-mating condition). In both situations, Sarah was the rival and Tracy the potential ally. In the non-mating condition, Sarah was up for the same promotion as the participant. In the mating condition, Sarah was flirting with the participant's partner. Participants then made two forced-choice decisions about who to share WOM with: Sarah or Tracy. There was a significant fertility by condition interaction ( $p = .007$ ). In the mating condition, women were significantly more likely to choose to share WOM with Tracy (non-rival choice) compared to Sarah (rival choice) ( $p = .0006$ ), suggesting that women are using WOM to form an alliance when faced with a mating-related threat at high fertility. There was no effect of fertility in the non-mating condition ( $p = .82$ ).

Four studies found that fertility positively influenced women's social media activity and desire to share WOM with other women, not men. The effect of fertility on WOM may function to build alliances with other women to ensure coalitionary support in mating-related competitive interactions. Our findings can offer guidelines for practitioners to optimize the benefits of WOM by personalizing the timing of the deals/campaigns in accordance with women's cycles. Ovulating women might be especially responsive to advertising, promotions, and messages that emphasize friendship and alliance messages relative to other women.

### Implications

Broadly, documenting a shift in women's tendency for WOM communication at the peak fertility has implications for understanding how mating goals in general affect women's information sharing behavior. The results offer important managerial insights regarding the role of hormonal changes on women's WOM behavior.

Our findings can offer guidelines for practitioners to optimize the benefits of WOM by personalizing the timing of the deals/campaigns in accordance with women's cycles. More than 200 fertility tracking apps are available in the market and they are downloaded by more than 200 million people. Companies can partner with these apps and use their data to track women's fertility. Additional to apps, big companies can use their own database to pattern women customers' shopping behavior and calculate their cycles by just tracking behavior change of the women. Ovulating women might be especially responsive to advertising, promotions, and messages that emphasize friendship and alliance messages relative to other women. For example, messages like "show how good friend you are" or "gain other women's trust" might be more impactful to catch their attention. In other words, companies can benefit from hormone cycles with manipulation of message content. Similarly, marketers may receive different responses from female consumers depending on where the latter are in their menstrual cycle. Although marketers are unable to recognize women's cycle information directly, they can serve promotional messages directly through various fertility tracking apps or use individual purchase histories to forecast cycle phase and adjust the timing of promotional mails/emails. To persuade female consumers more efficiently, marketers might send different types of promotion messages for different phases of the cycle.

Additional to promotions, since high fertile women have a tendency to share the news with other women, companies can ask female consumers to share their feedback or leave a review during their fertile period. Companies can create more buzz and better feedback system by managing their strategies according to the women cycles.

### Limitation and Future Studies

Not unlike other empirical research efforts, the results presented in this study are limited by a number of factors—many of which can be addressed in future studies. First, we do not know which type of WOM women would share during ovulation (e.g., negative or positive information). Second, why do women share more during ovulation? There are two potential reasons. First, it can be related to status orientation. High fertile women would like to show other women that "they are better" by sharing the information. The second possibility is that women can want to be friends with others and expand their network for future communication. They can be examined as a future study.

We did not examine how ovulation alters women's WOM behavior depending on their current relationship status. It will be an

intriguing question to test whether ovulation differently affects desire in information sharing behavior when women are single or in committed relationships.

Finally, to enhance ecological validity and to demonstrate in the real world the effect of women's fertility on WOM behavior, researchers might consider directly investigating real purchase secondary data. For example, women's responses to email promotions using various types of messages across the cycle can show the real world impact of the fertility. It is also possible to examine the relevant patterns of WOM behavior by observing a wide range of behaviors during their cycle. Women might post on social network sites about the brands and recommend brand pages to her friends more frequently near ovulation.

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# Cohesion or Coercion? Why Coordinated Behavior Backfires in Marketing Contexts

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## EXTENDED ABSTRACT

Consumers often see brands and other organizations in the marketplace engaging in various actions. Moreover, subordinate representatives of an overarching organization (e.g., sub-brands, product lines, branches, departments, etc.) can each engage in actions that may or may not be the same as other representatives from the same organization. For example, NFL teams have raised awareness for breast cancer for many years, and each team performed the same actions to promote this unified cause. However, in 2017, the campaign changed such that teams could elect to support different types of cancers—teams performed different actions. The present research asks which strategy consumers perceive to be more effective: Should organizational actors coordinate their actions, or should they engage in various actions?

Previous research in entitativity provides one potential answer. Entitativity refers to the extent to which individuals are perceived to form a single coherent group (Hamilton and Sherman 1996). This literature has demonstrated that when group members coordinate their actions, the group is perceived as more competent (Callahan and Ledgerwood 2016; Ip, Chiu, and Wan 2006). Thus, entitativity suggests that organizational actions should be coordinated, not varied.

However, I propose that consumers apply a different set of assumptions about the motivating force behind actions performed by organizational entities (vs. individual people): Individual people are assumed to have agency over their own actions; therefore, coordination is a signal of group cohesiveness and increases perceived competence (Ip et al. 2006). On the other hand, organizational actions are determined by superordinate levels of the hierarchy. Therefore, coordination may signal coercion rather than cohesiveness, whereas non-coordination may signal non-coercion—i.e., that subordinate entities have agency over their actions. If this is the case, observing varied (vs. coordinated) actions should increase the perceived impact of the actions.

I tested these predictions across four studies. Study 1 tests my main hypothesis using a three-cell design with  $N=106$  Mturk participants. I described a fictitious corporation comprised of four brands engaging in a charitable campaign. I manipulated whether each brand performed the same actions in this campaign (i.e., donating the same percentage and running the campaign during the same time period) or performed different actions (i.e., donating different percentages during a different time period). I also included a control condition that did not specify donation percentages or time frames. The dependent measure was the perceived impact of the campaign. Results showed significantly higher perceived impact of varied actions ( $M=4.85$ ) than coordinated actions ( $M=4.08$ ;  $p=.025$ ). The control condition was equivalent to the varied condition ( $M=4.74$ ).

Study 2 built on study 1 by using a different (non-numerical) manipulation of actions in a two-cell design with  $N=106$  undergraduates. I described a fictitious brand comprised of four sub-brands engaging in a philanthropic campaign. Each sub-brand donated the same percentage of revenue in each condition; however, in the coordinated action condition, all the money raised went to the same cause, whereas four different targets received donations in the varied action condition. I measured perceptions of the campaign's success as well as perceptions of each sub-brand's agency in the campaign. Results showed that varied actions ( $M=4.92$ ) significantly increased perceived success ( $M_{\text{coordinated}}=4.35$ ,  $p=.04$ ). I also found that varied (vs. coordinated) actions increased the perceived role of the sub-

brands in determining the details of the campaign ( $M_{\text{varied}}=5.48$  vs.  $M_{\text{coordinated}}=6.15$ ;  $p=.017$ ), that each sub-brand had more freedom ( $M_{\text{varied}}=3.04$  vs.  $M_{\text{coordinated}}=2.39$ ;  $p=.028$ ), and that each sub-brand contributed more to overall success ( $M_{\text{varied}}=4.37$  vs.  $M_{\text{coordinated}}=3.78$ ;  $p=.029$ ). Further, agency perceptions mediated the impact of varied (vs. coordinated) actions on perceived campaign success.

Study 3 extended the investigation of varied vs. coordinated actions beyond the donation context. I also aimed to rule out a potential alternative explanation for the above results, whereby consumers respond most favorably to scenarios that depict both a source of variability and a source of coordination (e.g., donating different amounts to the same cause, or vice versa). To rule this out, study 3 used a 3-cell design with  $N=179$  undergraduate business students in which I described university departments implementing a campaign to make campus greener: In the same-same condition, the same goal (increase recycling) was served by the same actions. In the same-different condition, this same goal was served by four different actions. In the different-different condition, different goals (recycling, energy use, water conservation, and emission reduction) were served by four different actions. The dependent measure was perceived impact of the campaign, and I again measured agency perceptions. Results showed that both the same-different ( $M=5.13$ ) and different-different ( $M=5.23$ ) conditions led to greater perceived impact than the same-same condition ( $M=4.41$ ,  $ps<.01$ ). This pattern was also found for agency perceptions, which mediated perceived impact.

My final study aimed to demonstrate when varied (vs. coordinated) actions will no longer improve perceived success of organizational actions by moderating the process. According to my conceptualization, if agency is signaled by cues other than varied/coordinated actions, variation should no longer improve perceptions. To test this, study 4 used a 2 (action: coordinated vs. varied)  $\times$  2 (agent: corporate vs. individual) between-subject design involving  $N=203$  Mturk participants. I manipulated coordinated vs. varied actions through a non-profit campaign, similar to studies 1 and 2. I manipulated the agent by describing who made the announcement about the campaign: In the corporate (individual) condition, the company's CEO (manager of each sub-brand) made the announcement. I again measured perceived impact and agency. Results showed a significant two-way interaction on both items ( $ps<.05$ ), such that varied (vs. coordinated) actions led to greater perceived impact and greater perceived agency in the corporate condition ( $ps<.05$ ) but not the individual condition ( $ps>.08$ ). Again, perceived agency mediated perceived impact. My studies demonstrate that coordination is not always a signal of cohesiveness, and lack thereof is not necessarily negative. These results contribute to research on branding and entitativity by showing that, in hierarchical organizational contexts, varied (vs. coordinated) actions signal agency and increase perceived impact. Further, these findings relate to a wide range of consumer research interests spanning such topics as branding, charitable behavior, entitativity, and organizational behavior.

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# Nostalgicising: A Performative Theory of Nostalgic Consumption

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## EXTENDED ABSTRACT

Nostalgia—commonly conceptualized as a longing for the past—plays an important role in shaping contemporary consumer behavior and market offerings (e.g., Belk, Ger, and Askegaard 2003; Brown, Kozinets, and Sherry 2003; Thompson and Tian 2008). However, purely retrospective nostalgia is difficult to frame in relation to marketing as a discipline, which is overall future-oriented by focusing on “unrealized potentialities” among consumers and ways to translate them into “personal needs and desires” (Zwick and Cayla 2011, 7) through branding, advertising, and other marketing mechanisms.

This conceptual paper aims to establish a performative theory of nostalgic consumption, which we term *nostalgicising*. We define *nostalgicising* as reflective (future-oriented) consumer nostalgia that is not innate or an emotion, but rather performatively enacted through five specific dimensions. Extant marketing and consumer research typically theorize that nostalgic consumption and consumers’ memory work, while occurring in the present, are retrospective in nature, and therefore inherently about the past. In contrast to this dominant view, we bridge Butler’s (1990) conceptualization of performativity with the age of crisis concept and Boym’s (2008) notion of reflective nostalgia to theorize how contemporary individuals are increasingly engaging in a performative consumption of nostalgia not to relive or remember a bygone past, but rather to playfully reflect on or reenact possible futures during a present time.

Boym (2001; 2008, 61) was the first to theorize reflective nostalgia as a playful, funny, and creative narrative that articulates “the relationship between past, present, and future.” Bradbury (2012, 341) subsequently noted that, “nostalgia is not only a longing for the way things were, but also a longing for futures that never came, or for horizons of possibilities that seem to have been foreclosed by the unfolding of events.” However, we know very little about what forms of reflectivity consumer nostalgia can take in the current age characterized by more intense and frequent global crises, ranging from coffee crises (Vega, Rosenquist, and Collins 2003) to trust crises (Humphreys and Thompson 2014). Hence, in extension, we ask: *What dimensions of reflectivity mediate nostalgic consumption in the age of crisis?*

To begin answering our research question, we first engaged in a qualitative meta-analysis of extant consumer culture theory research (e.g., Castilhos, Dolbec and Veresiu 2017; MacInnis 2011) on nostalgic consumption. Specifically, we coded 36 relevant articles for emerging themes and theoretical gaps. This allowed us to uncover what we believe is a sizeable gap in the literature, which has so far focused on either consumer-driven or producer-driven but past-oriented nostalgic consumption.

From a consumer-oriented perspective, nostalgic consumption has implied a “preference toward objects (people, places, or things) that were more common (popular, fashionable, or widely circulated) when one was younger [...] or even before birth” (Holbrook and Schindler 1991, 330). According to Belk (1988; 1990), consumers transcend their immediate confines by incorporating objects from their past and physical environment into their present identities. Researchers have demonstrated that there is something about the past that brings comfort (e.g., Rutherford and Shaw 2011). When individuals feel sad and powerless, they experience higher levels of nos-

talgia and prefer objects that provide short-term distraction from the present. Nostalgia can thus serve as a means of consumer escapism (Goulding 2000; Stewart 1988).

From a producer-oriented perspective, nostalgia presents numerous possibilities for the creation of unique market offerings. For instance, Callcott and Alvey (1991) illustrate how advertisers’ prime consumers’ personal memories and elicit nostalgia with the use of characters. Brown, Kozinets, and Sherry (2003) demonstrate that consumers resort to retro brands to connect to communities that once shared those brands, which has led Brown (2007) to develop a retro-dominant logic of marketing. Furthermore, nostalgia has been used in heritage attractions (Goulding 1999), in high street shopping (Maclaran and Brown 2001), and in cinematic experiences like remakes, sequels, and prequels (Brown 2001). From the perspective of producers or memory makers, consumers “interact with the cultural meanings of nostalgic brands and expand them into social universes composed of stories fuelled by the yearning for what is gone but not forgotten” (Giesler et al. 2014). Hence, more than one type of nostalgia exists.

Yet, the distinctions of consumer-driven or producer-driven nostalgic consumption summarized above all focus on the past-orientation of nostalgia rather than also including nostalgia’s future-facing potential. Using extant theory outside the field of marketing and consumer research, we offer an extension to the study of nostalgic consumption: reflective consumer nostalgia. As such, we are able to shift the focus to future-oriented nostalgic consumption. Following Butler’s (1990, 25) conceptualization of gender performativity, where “gender is always a doing, though not a doing by a subject who might be said to pre-exist the deed,” we argue that nostalgia is not a pre-existing (innate) emotion, but rather a narrative that emerges as individuals engage in doing the act of reflecting across five different dimensions which shape the construction of self in an age of crisis: language, space, social systems, community, and style. Lastly, we argue that reflective consumer nostalgia, rather than stressing continuity or flow of consumer time, plays an important structuring role in producing the social imaginary resources necessary for articulating a temporal rupture. That is, *nostalgicising* allows consumers to playfully engage with the future, while living in the present, using past-oriented market offerings.

We see reflective consumer nostalgia as making “a project of *oneself*” (Zwick and Cayla 2011, 7) by introducing new possibilities for the future. Thus, rather than merely being mobilized in regard to “specific preferences and limitations of the capitalist present” (Brunk, Giesler, and Hartman 2017, 2), reflective consumer nostalgia engages with the social imaginary of the future (Castoriadis 1987). This process plays a pivotal role by replenishing the symbolic resources available for “imaginative anticipation of, or speculation about, the future” (Campbell 1987, 83). As such, *nostalgicising* contributes to the work investigating the dimension of time in consumer behavior (e.g., Woermann and Rokka 2015). However, unlike Woermann and Rokka (2015) which emphasizes the present and continuity of time-flow, our study shows how the past can inform imagined futures and horizons of expectation.

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# Social Class and Prosocial Behaviors

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## EXTENDED ABSTRACT

Consumer researchers have long been interested in the association between social class and consumer preferences or “tastes” (Henry and Caldwell 2018; Martineau 1958). They have also shown interest in prosocial behavior and what influences prosociality (Goswami and Urmitsky 2016; Simpson, White, and Laran 2018). With inequality growing in many regions of the world (OECD 2015) “title” : “In it Together: Why Less Inequality Benefits All”, “type” : “book” }, “uris” : [ “http://www.mendeley.com/documents/?uuid=abd51e4f-a22a-49e1-b3a9-76b7169a303d” ] } ], “mendeley” : { “formattedCitation” : “(OECD 2015 and charity institutions increasingly competing for funds (Weerawardena, McDonald, and Mort 2010), understanding the role played by social class on prosocial acts becomes of major importance. In the present research, we examine how social class relates to prosociality.

Although psychologists and economists have recently delved into this topic, there are a few distinguishable gaps. First, the evidence is mixed and still incipient. While some have documented that those who have less give more (Chen, Zhu, and Chen 2013; Côté, House, and Willer 2015; Guinote et al. 2015; Piff et al. 2010) including many children left behind by parents who had migrated to urban areas for work, played the DG. Stickers comprised the resource, while recipients in the game were assumed to be either their friends or strangers, with the social distance (i.e., strangers compared to friends, others have proposed and shown that affluent people donate, help, and volunteer more than those with less resources (Benenson, Pascoe, and Radmore 2007; Gittell and Tebaldi 2006; Korndörfer, Egloff, and Schmukle 2015). Second, the vast majority of the studies have been conducted in nations where the levels of poverty and inequality are relatively low, which leaves open the question of how social class and prosociality would relate to one another in societies where extreme inequality prevails and resource scarcity can be shockingly high. Finally, the literature has paid little attention to the potential interactions between social class and type of prosocial behavior.

We address these gaps in a series of three field studies by examining the extent to which coming from the opposite ends of the socioeconomic spectrum in a highly unequal region influences different prosocial behaviors as well as the same prosocial behavior serving different purposes. Given the incipency of the phenomenon under investigation, the plausibility of the conflicting mechanisms, and the array of prosocial acts examined, we deliberately chose to follow an inductive path in study 1. More precise hypotheses are established prior to studies 2 and 3.

Study 1 examined the relationship between social class and prosociality on 13 behaviors originated from a qualitative pilot study ( $n=56$ ). Four hundred forty-six residents from wealthy (south zone) and poor (Favela da Maré) areas of Rio de Janeiro indicated how often they performed each of the 13 prosocial behaviors in the previous year, reported the frequency of opportunities and the amount of resources they had to perform these behaviors, and filled a socio-demographic questionnaire. A series of ordered logistic regressions indicate that social class is overwhelmingly negatively associated with prosociality. In fact, those occupying higher social classes reported behaving less prosocially in all behaviors, except for donating money and donating blood. While donating blood presented a consistently

positive relationship with social class, monetary donations were more nuanced. Although money donations increased with social class when no opportunity and resource controls were included, the relationship vanished when these two variables were accounted for.

The subsequent studies sought to conceptually replicate the findings from study 1 in a consequential scenario. Since it is difficult to assess all 13 behaviors, studies 2 and 3 allowed participants to help or to donate to a food donation cause and/or a blood donation cause. If the results obtained in study 1 held true, we would expect a negative relationship between social class and prosocial behavior when the cause was food-related, but a positive relationship when the cause was blood-related.

In study 2, higher- and lower-class individuals were offered the opportunity to expend their time/effort to help an NGO. Four hundred twenty-five high- and low-social class individuals completed a filler questionnaire and were then told that the purported study had come to an end. However, before they had the chance to leave, respondents learned that interviewers were also collecting information about blood and food donation on behalf of a partner NGO. Participants then indicated how many of 24 possible questions they would like to answer about each topic to help the institution. Unbeknownst to participants, this choice served as our dependent variable. The interaction between social class and type of donation was consistent with our prediction ( $\beta=-.77$ ,  $t(416)=-4.00$ ,  $p<.001$ ). Higher social class individuals responded less questions about food when compared to their lower-class counterparts ( $\beta=-.56$ ,  $t(416)=-2.03$ ,  $p=.043$ ), but the tendency reversed and failed to reach significance for blood donations ( $\beta=.21$ ,  $t(416)=.74$ ,  $p=.46$ ).

In study 2, higher- and lower-class individuals were offered the opportunity to donate money to food- and/or blood-related campaigns. Three hundred and four participants received five R\$2.00 bills in return for their participation in an unrelated study. Upon completion of the filler questionnaire, respondents learned that research assistants were collecting resources for two campaigns, one related to blood donation and the other to food donation. Participants were then given two envelopes and were instructed to allocate the money they were willing to donate (including any) using the adequate envelopes and then deposit them in an urn placed a few meters away. Again, the interaction between social class and type of donation confirmed our prediction ( $\beta=-2.17$ ,  $t(296)=-3.50$ ,  $p=.001$ ). Higher class individuals donated less money than their lower-class counterparts to a cause related to food donation ( $\beta=-1.12$ ,  $t(296)=-2.89$ ,  $p=.004$ ), but donated more money to a cause related to blood donation ( $\beta=1.04$ ,  $t(296)=2.20$ ,  $p=.028$ ).

This research demonstrates that despite the general negative trend, the relationship between social class and prosocial behavior may vary as a function of the behavior under analysis, the social cause one aims to help, and even the empirical approach (i.e., whether resources and opportunities for prosociality are considered). Taken together, these findings join a burgeoning, but still very limited, body of research that progressively reconciles previous conflicting results by showing that social class is imbued with both selfishness and generosity and the degree to which these contrasting inclinations are manifested across the social spectrum is highly context-dependent (Côté et al. 2015; Kraus and Callaghan 2016; Whillans, Caruso, and Dunn 2017) contexts that can foster a sense of entitlement among

higher-income individuals that, in turn, reduces their generosity. Analyzing results of a unique nationally representative survey that included a real-stakes giving opportunity (n = 1,498).

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# Small but Sincere: The Impact of Firm Size and Gratitude on the Effectiveness of Cause-Marketing Campaigns

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## EXTENDED ABSTRACT

Companies are increasingly forced to respond to various morality concerns of consumers and stakeholders to “do good” and behave ethically. Our study focuses on a specific strategy to do good, known as Cause-Marketing (CM). CM consists of “marketing activities that are characterized by an offer from the firm to contribute a specified amount to a designated philanthropic cause” (Varadarajan and Menon 1988, p. 60). CM enables consumers to contribute to a cause while the firm acts morally and gains profit (Pracejus and Olsen 2004).

CM seems a promising marketing strategy (Nielsen 2015). But is it effective irrespective of firm size? And what roles do perceived sincerity and feelings of gratitude play? The great majority of CM research has focused on big firms (File and Prince 1998; Lepoutre and Heene 2006), producing little insight into the effectiveness of CM campaigns for smaller firms. This gap in knowledge is particularly relevant as the proportion of firms that is small lies around 99% across Europe and the United States (European Commission, 2015; Grover and Suominen 2014). And even more important, research into the affective response of consumers to CM campaigns is lacking. The current research addresses both issues.

## Theoretical background

An obvious shortcoming of small compared to big businesses is the more limited cash budgets and access to external financial resources. This implies that, even if small businesses may want to engage in CM campaigns to support a philanthropic cause, they may need to dedicate their capital to more immediate needs.

Another shortcoming for small firms is their lack of visibility. When spending time and effort on social causes, they should relatively heavily invest in marketing expenditures to make consumers aware of their campaign. This means a further increase in costs for small firms, required to capitalize on their responsible actions (Spence, Jeurissen, and Rutherford 2000).

Taking these arguments together, we hypothesize that small firms, disadvantaged compared to big firms in terms of financial and human resources necessary to engage in charitable donations, are perceived as doing a bigger effort and hence are perceived as more sincere once they *do* contribute to a worthy cause. More specifically, we posit that consumers will infer from the company’s perceived effort put into contributing to a cause, the perceived sincerity of the company’s motives (Morales 2005). With higher levels of effort perceived as more sincere and trustworthy, signaling a real societal concern and genuine intention to support the cause.

We further argue that the perceived sincerity of a firm’s motives to engage in CM is particularly relevant for CM effectiveness as consumers who are skeptical about the company’s underlying motives to engage in the charitable behavior, will not experience feelings of gratitude, and so will not feel motivated to reciprocate the company for its efforts (McCullough et al., 2001; Morales, 2005).

Feelings of gratitude have been defined as a “positive emotion that typically flows from the perception that one has benefited from the costly, intentional, voluntary action of another person” (McCullough, Kimeldorf, and Cohen 2008, p. 4) intentional, voluntary effort on their behalf. Experiencing gratitude motivates beneficiaries to repay their benefactors and to extend generosity to third parties.

Expressions of gratitude also reinforce benefactors for their generosity. These social features distinguish gratitude from related emotions such as happiness and feelings of indebtedness. Evolutionary theories propose that gratitude is an adaptation for reciprocal altruism (the sequential exchange of costly benefits between nonrelatives. Gratitude motivates to behave pro-socially towards the benefactor (McCullough et al., 2001).

Feelings of gratitude arise even if consumers do not directly or tangibly benefit from the action (Fredrickson, 2004). Within the context of CM campaigns, the tangible benefit goes to the philanthropic cause. But on top of the firm’s contribution to the cause, we argue that consumers may be grateful towards companies engaging in CM campaigns as buying their products provides a way to contribute to the cause themselves and to satisfy their own social goals (Romani, Grappi, and Bagozzi 2013).

Our reasoning implies that, if we are right that smaller firms engaging in CM are perceived as doing a bigger effort than larger firms, and hence are perceived as more sincere, consumers will experience stronger feelings of gratitude towards small firms engaging in CM and hence are more likely to reciprocate by purchasing the CM-promoted product, translating into greater CM effectiveness for small compared to larger firms.

## Methods, Results and Discussion

In Experiment 1, a field study, we examined the impact of firm size (small/big/control) on CM effectiveness (actual purchase behavior of CM-promoted product) and the mediating role of feelings of gratitude. A mediation analysis (Hayes, 2013) confirmed that the influence of firm size on actual purchase behavior is mediated by feelings of gratitude. These findings directly support our hypotheses that the effectiveness of CM may be higher for small than for big firms, as consumers have greater feelings of gratitude towards small than towards big firms engaging in CM.

In Experiment 2 we delved deeper into the underlying reasons. Participants got a scenario describing a CM initiative. We expected and found that the effect of firm size (big/small) on CM effectiveness (purchase intention) is first mediated by perceived effort, then by perceived sincerity of motives and then by feelings of gratitude (Model 6, Hayes 2013; see Figure 1). The results confirmed our hypotheses. Compared to big firms, small firms engaging in CM are perceived as doing a bigger effort and hence score higher on perceived sincerity. As a result of these sincerity perceptions, consumers experience stronger feelings of gratitude towards small firms engaging in CM, translating into greater purchase intentions of CM-promoted products of small compared to big firms.

In conclusion, the current research is of academic and managerial relevance by being the first that examines the impact of firm size on CM effectiveness, identifying the important role of gratitude that consumers feel towards small firms for providing a charitable donation opportunity.

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# Unexpected Benefit Framing: Impact of Framing a Benefit as Unexpected on Product Desire

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## EXTENDED ABSTRACT

Companies commonly perform pre-launch product testing. During such product testing, brands could learn that the product can deliver originally unintended benefits. We explore how brands should frame such unexpectedly discovered benefits in their marketing communication. Should they frame such a benefit as unexpected or not?

Research on intentionality suggests that when consumers believe a product benefit was intentionally designed, as opposed to unexpectedly discovered, they should infer that the company has a higher ability and motivation to develop it (Malle and Knobe 1997). Thus, this research would suggest that unexpected framing should hurt consumer preferences. An alternate possibility, arising from research on reward motivation, is that unexpected framing could positively impact consumer preferences. Specifically, this research raises the possibility that when one is in a heightened motivation to seek rewards, a benefit framed as unexpected might act as a cue leading prospective consumers to anticipate other potential benefits from the product and, thereby, increase their desire to experience the product (Spanagel and Weiss 1999, McClure, Berns and Montague 2003).

In sum, while research on intentionality suggests that unexpected benefit framing should hurt consumer preferences, research on reward motivation suggests the opposite. The current research examines the two opposing predictions.

Study-1 was run in collaboration with a retailer on WeChat. Prospective customers on the retailer's mobile store were sent an advertisement for a sunscreen, positioned against a hedonic backdrop. Ad presented two benefits of the sunscreen—UVA-rays protection and even-toning. Prospective customers either received the version of the ad that framed even-toning as unexpected or the version that did not frame it as unexpected.

A logistic regression revealed that the purchase rate for the sunscreen spray was higher when unexpected framing was used (5.70%), compared with when it was not used (4.73%;  $Wald \chi^2 = 9.96, p = .002$ ). These findings, thus, support predictions arising from research on reward motivation—unexpected framing increased sales when the reward sensitivity was heightened (when the consumption-context was hedonic).

Study-2 examined the unexpected framing effect in both hedonic and utilitarian consumption contexts. Participants imagined that they were buying a sunscreen for either an upcoming vacation (hedonic-consumption context) or a business trip (utilitarian-consumption context; Wadhwa and Zhang 2015). Participants read description of a fictitious sunscreen brand, which communicated two benefits, UVA-rays protection and even-toning. Even-toning was framed either as unexpected or as expected. Participants indicated their WTP (in USD) for the sunscreen.

In the consumption-context hedonic condition, participants indicated a higher WTP when unexpected framing was used ( $M=11.54$ ), compared with when it was not used ( $M=8.11; p = .013$ ). No such difference was found for the utilitarian consumption-context ( $p = .34$ ). Thus, unexpected framing enhanced WTP when the consumption context was hedonic, but not when it was utilitarian.

Research suggests that those high, versus low, on behavioral activation system (BAS) exhibit heightened reward sensitivity (Carver

and White 1994). We argue that the unexpected framing effect should be demonstrated among those high on BAS, but not for those low on BAS. In Study-3, participants viewed an antioxidant ad, which presented two product benefits— supports healthy skin and healthy eye-function. Healthy eye-function benefit was either framed as unexpected or as expected.

Participants indicated their WTP for the supplement, and finally responded to the BAS-scale. A regression showed a significant two-way interaction between BAS and benefit-frame ( $B = 3.93, p = .011$ ). A spotlight analysis indicated that those high on BAS (+1SD) indicated higher WTP when unexpected framing was used than when it was not used ( $B = 4.79, p = .045$ ). Those low on BAS (-1SD) revealed a non-significant effect of the benefit-frame ( $p > .1$ ).

In Studies 1-3, the benefit framed as unexpected was congruent with the product category; that is, it was not unexpected, given the product-category. It is likely that the unexpected framing effect should be attenuated when the unexpected benefit is incongruent and, therefore, is already unexpected, given the product-category. We tested this prediction in Study-4.

Participants imagined that they were buying a body lotion for a vacation and saw description for a lotion brand; this description presented two benefits. While skin-firmness was presented across conditions, the second benefit was either even toning (congruent-benefit) or aids in sleeping better (incongruent-benefit). Additionally, either both the benefits were described as expected or one of the two benefits, even-toning in the congruent condition and sleep-aid in the incongruent condition, was framed as unexpected. Participants indicated their WTP for the lotion.

In the congruent-benefit conditions, participants indicated a higher WTP when unexpected framing was used ( $M=11.08$ ), compared with when it was not used ( $M=8.95; p = .052$ ). In the incongruent-benefit conditions, unexpected framing effect was eliminated ( $p > .12$ ). These findings show that unexpected framing is a more effective communication approach, but only when the unexpected benefit is congruent with the product-category.

Study-5 examined the impact of framing an undesirable characteristic (side effect) as unexpected on product desirability. We examined whether unexpected framing could negatively impact product desire for those who have a heightened sensitivity to losses (measured by the BIS scale; Carver and White 1994).

Participants read a description of a fictitious collagen-supplement brand, which informed participants of both the benefits and the potential side effects of the supplement. One of the side effects was either framed as unexpected or neither side-effect was framed as unexpected.

Participants indicated their likelihood to purchase the supplement and then responded to the BIS scale. A regression showed a significant interaction between BIS and side-effect frame ( $B = -.43, p = .071$ ). A spotlight analysis indicated that those high on BIS (+1SD) indicated lower likelihood to purchase the supplement when unexpected framing was used, compared with when it was not used ( $B = -.80, p = .042$ ). A similar spotlight analysis revealed a non-significant effect of the frame factor for those low on BIS ( $p > .5$ ). This study shows that framed a negative feature as unexpected can reduce

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product desirability, especially amongst those who have a heightened sensitivity to negative outcomes.

The current research delineates when framing a product benefit as unexpected versus not, a task that can be managed by marketers during the process of marketing communication, can enhance the potential consumers' desire.



# The Upside of Incompetence: How Discounting Luxury Affects Retailer Price Image

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## EXTENDED ABSTRACT

“Luxury” is typically defined partly by its premium pricing (Bain and Co. 2014; Grossman & Shapiro 1998; Kim & Ko 2010). Theories on luxury management emphasize that consumers draw inferences on the basis of the price of luxury offerings, and there may be a perceived skepticism when luxury products are sold at a lower price (Kapferer 2015, Uggla 2017).

While historically luxury items were rarely discounted, in recent times, retailers are breaking with tradition. For instance, both Macy’s and Lord & Taylor have recently announced plans to discount luxury cosmetics brands like Bobbi Brown and Estée Lauder across all stores (Kapner and Terlep, 2017). Likewise, in a different category, Carnival Cruise Lines has pursued a similar strategy in pricing offerings on its ships. Goods and services from “luxury” categories (e.g., steak & lobster) tend to be priced low relative to other cruise lines, where more pedestrian offerings (e.g., beach towels and sweatshirts) are comparable to competitors’ prices.

The purpose of this research is to investigate the effects of discounting luxury products, on the retailer’s overall reputation for pricing. Specifically, we examine whether discounting luxury offerings will reduce the retailer’s price image more than taking similar price reductions on non-luxury offerings.

We propose that discounting luxury items will indeed have a larger influence on price image, than discounts of the same size on non-luxury items. This prediction is based on the notion that, given the importance of premium prices in defining luxury, retailers that reduce the price of luxury items will be seen by consumers as less competent, because they don’t understand the value of their own offerings. Specifically, we propose that discounting on luxury (versus not luxury goods) will result in lower price image perceptions, which is mediated by a reduction in the perceived competence of the retailer. We tested these predictions in a series of five experiments across four distinct retail settings: a liquor store, a hair salon, a cruise line, and a mass retailer.

Our first experiment tested our prediction that discounted luxury goods and services are stronger signals of a lower price image than are similarly discounted non-luxury goods and services. The scenario for Experiment 1A was a hair salon, a service provider offering non-branded services, which were described in either luxury or non-luxury descriptive terms. We recruited participants for a paid online survey through Amazon Mechanical Turk. We randomly assigned participants to one of two conditions: discounted luxury goods or discounted non-luxury goods. Participants were given a hypothetical scenario in which they were told to imagine that they were visiting a new city and stopped into a local hair salon. They were shown a list of six services that the hair salon offered. Three of the services were luxury services, described using language meant to convey extravagance (hair rejuvenating indulgence regimen, relaxation & hydration scalp massage, balayage platinum smoothing treatment). Three of the services were non-luxury services, described using functional language (classic bang & neck cut, basic shampoo & style, standard woman’s cut & trim). Before selecting our stimuli, we performed a pretest of these hair salon services to measure perceived luxury. Results revealed that participants considered the luxury services to indeed be more of a luxury than the non-luxury services.

The six services and their prices were presented in a table, along with reference prices for the same services at the average hair salon. In the discounted luxury condition, the price of each of the 3 luxury services was less than the average salon prices for each luxury service, whereas for the discounted non-luxury condition, the price of each of the 3 non-luxury services was less than the average. In each group, the discounted prices were the same (i.e. \$17, \$19, \$24) and the non-discounted prices were the same (i.e. \$30, \$32, \$35). Thus, the total potential savings in each condition was the same. The order in which services were presented in the table was randomized across participants.

After reviewing the prices of the hair salon, all participants rated the overall price image on two items: “How would you rate the prices at this salon?” and “How would you evaluate the prices at this salon compared to other salons?” measured on a 10-point scale anchored on 1=inexpensive and 10=expensive. These questions were collapsed into a single measure of overall price image ( $\alpha = .826$ ). Throughout this research, this two-question index serves as the primary measure of price image.

As predicted, consumers in the discounted luxury condition formed a lower price image of the retailer than those in the discounted non-luxury condition. Consistent with this prediction, an analysis of variance including discounted luxury vs. discounted non-luxury as the predictor variable and overall price image as the dependent variable revealed that participants in the discounted luxury condition had a lower price image of the hair salon than participants in the discounted non-luxury condition ( $M_{lux} = 3.79$  vs.  $M_{nonlux} = 4.58$ ;  $F(1, 94) = 4.7, p = .03$ ).

This finding was replicated in Experiment 1B, in the scenario of a cruise line that sold non-branded products from both luxury and non-luxury categories. Three of the items were luxury offerings (i.e. lobster dinner, 3-course steakhouse dinner, bottle of champagne). Three of the items were non-luxury offerings (i.e. cruising tote bag, beach towel, souvenir sweatshirt). In each group, the discounted prices were the same (i.e. \$20, \$26, \$35) and the non-discounted prices were the same (i.e. \$45, \$50, \$60). Consistent with our results from Study 1A, data revealed that participants in the discounted luxury condition had a lower price image of the cruise line than participants in the discounted non-luxury condition ( $M_{lux} = 4.08$  vs.  $M_{nonlux} = 4.95$ ;  $F(1, 99) = 9.211, p = .003$ ).

The objective of Study 2 was to replicate our main effect in a different domain and to test the psychological phenomenon behind it. We further examined the impact of discounting luxury by using the hedonic category of liquor. An inherent part of luxury is the hedonic nature of the products. Indeed, alcohol purchase or consumption is predominantly related to pleasure, rather than utility. For the stimuli in Experiment 2, we test to see if the luxury vs. non-luxury brands within this category would still signal a lower price image. In this experiment, participants were shown six liquor options, described by brand name, size, and price. Three of the brands were luxury offerings (i.e. Veuve Clicquot champagne, Grey Goose vodka, and St. Germain Elderflower liqueur). Three of the brands were non-luxury offerings (Popov Vodka, Everclear Grain alcohol, and Pabst Blue Ribbon). Pretests and a manipulation check confirmed that these brands were appropriately categorized as luxury and non-luxury.

In each group, the discounted prices were the same (i.e. \$16, \$18, \$21) and the non-discounted prices were the same (i.e. \$26, \$30, \$36). Bottle sizes were manipulated to ensure appropriate pricing to marketplace standards across discounted luxury and discounted non-luxury conditions. For example, a 375 ml bottle of Veuve Clicquot champagne and a 1.5 L bottle of Popov vodka were both \$30.

Consistent with our predictions, an analysis of variance including discounted luxury vs. discounted non-luxury as the predictor variable and overall price image as the dependent variable revealed that participants in the discounted luxury condition had a lower price image of the liquor store than participants in the discounted non-luxury condition ( $M_{lux} = 4.07$  vs.  $M_{nonlux} = 4.59$ ;  $F(1, 144) = 4.76$ ,  $p = .031$ ).

Subsequently, we measured perceived competence using an index of 3 questions based on specific personality traits from Aaker's (1997) brand personality scale. The 3 questions measured on 1-10 Likert scales were: (1) "How intelligently do you think this retailer is managing prices?" (2) "What do you think of this retailer's strategy?" and (3) "What do you think of this store's owner?" After reverse coding the answers to #1, the 3 questions were collapsed into a simple measure of overall perceived competence ( $\alpha = .89$ ). The data revealed that perceptions of competence significantly mediated the relationship between our conditions (discounted luxury/discounted non-luxury) and overall price image. In a bootstrap analysis, we found that the 95% bias-corrected confidence interval for the overall size of the indirect effect excluded zero (95% CI = .0755 to .4555), suggesting a significant indirect effect. Our mediation analysis demonstrated that the overall price image of the retailer was indeed mediated by the perceived competence of the retailer.

Experiment 3 featured a 2 (time duration: short term vs. long term) x 2 (discounted group: luxury vs. non-luxury) between-subjects design. Participants were shown 6 prices from a hypothetical department store that carried both luxury (e.g. Versace jacket) and non-luxury (e.g. Rug Doctor vacuum) goods. In each group, the discounted prices were the same (i.e. \$335, \$400, \$550) and the non-discounted prices were the same (i.e. \$670, \$800, \$1100). One objective of Experiment 3 was to see if the duration of the discount (short vs. long term) would impact the inferences of price image. In the short-term condition, the discount was available for only a limited time, while in the long-term condition, the discount was discussed as being part of a permanent pricing strategy for the retailer. As it turned out, the length of the discount did not affect participants price image perceptions: short vs. long term pricing strategies were not significantly different ( $M_{short} = 4.59$  vs.  $M_{long} = 4.46$ ;  $F(1, 266) = .367$ ,  $p = .545$ ).

Experiment 3 replicated the central finding of the previous experiments: discounting luxury items resulted in a lower overall price

image than did discounts of the same size on non-luxury items ( $M_{lux} = 4.11$  vs.  $M_{nonlux} = 4.95$ ;  $F(1, 266) = 15.122$ ,  $p = .00$ ). This experiment also replicated and extended the mediation results from Experiment 2. The results showed a significant indirect effect for a mediation path through perceived competence and perceived discount size: discounted luxury items (vs. non-luxury items) resulted in a decrease in perceived competence of the retailer, which in turn increased the size of the perceived discount at the retailer, ultimately leading to a lower price image.

This research contributes to the literature on behavioral pricing by identifying discounted luxury as a category with a disproportionate influence on a retailer's price image. For retailers looking for efficient ways to lower their price image, this research suggests that discounting luxury items may be an effective strategy. Using a serial mediation model, we found that perceived competence causes the price discounts to seem larger, resulting in a lower retailer price image. However, this strategy comes with a cost to the retailer: reductions in the retailer's perceived competence in response to these discounts.

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# Perceptions of Epistemic vs. Aleatory Uncertainty Affect Stock Investment

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## EXTENDED ABSTRACT

The decision to invest in a stock entails uncertainty. Prior work shows that people intuitively distinguish two independent dimensions of uncertainty: (i) “epistemic” uncertainty that is seen as inherently knowable, given sufficient information; and (ii) “aleatory” uncertainty that is seen as inherently random. We hypothesized that: (1) as investors perceive more epistemic uncertainty in stocks, they will be more sensitive to their own level of ignorance, and will manage this uncertainty by seeking expert advice; and (2) as investors perceive more aleatory uncertainty in stocks, they will be more sensitive to their exposure to risk, and will manage this uncertainty by diversifying their portfolios. We tested these predictions using four incentive-compatible lab studies, one survey of self-reported investment behaviors from lay investors, and one survey of practicing financial advisors.

In Study 1A, 354 investors with at least \$1,000 in stock investments assessed their perceptions of stock market uncertainty using the Epistemic-Aleatory Rating Scale (EARS; Fox et al., 2018) and reported their own investment behaviors. Confirming our predictions, investors who perceive stock market uncertainty to be more epistemic were more likely to pay for financial advice and traded stocks more frequently. In contrast, investors who perceive stock uncertainty as more aleatory held less concentrated portfolios (i.e. a greater number of distinct stocks).

Study 1B further examines the perceptions of uncertainty across experts and lay investors. To do this, we compared perceptions of uncertainty of lay investors in study 1A to those of 37 practicing financial advisors (recruited through an executive education program at UCLA) who also evaluated stock market investing using the EARS. In a separate sample t-test we find that financial advisors perceived lower epistemic uncertainty in stock investing, compared to non-professional investors. However, perceptions of aleatory uncertainty did not differ between financial advisors and non-professional investors. This result suggests that less experienced investors may be overestimating the predictability of the stock market.

In Study 2, we recruited 201 participants from a Qualtrics panel, who read the quarterly earnings release for two companies. We experimentally manipulated epistemic uncertainty by having participants consider future company performance by elaborating on either a single outcome (singular reasoning) or a set of possible alternative outcomes (distributional reasoning), (Tannenbaum, Fox, and Ülkümen, 2017). Participants then estimated the revenues of these companies in the same quarter following year, and place 90% confidence intervals around their estimates. We had the participants rate their uncertainty about the following year revenue using the EARS. Next, we asked participants to imagine investing \$100 dollars between the two companies. Some participants were randomly selected to receive the actual payout of their investment decisions after six months.

Confirming our prediction, participants primed with aleatory uncertainty provided wider confidence intervals, than those primed with epistemic uncertainty participants. Also as predicted, participants primed with aleatory uncertainty concentrated their investments less than participants primed with epistemic uncertainty.

In Study 3, we manipulated perceptions of stock uncertainty by asking participants to read a short article about the importance of knowledge in investing (which enhanced perceived epistemic uncertainty) or how experts are often incorrect (which diminished perceived epistemic uncertainty). Next, as part of an ostensibly different study, participants invested \$50 over the next 6 months across three unfamiliar stocks. Participants then were offered research reports on the three companies for \$2, which would be deducted from the value of their investments at the end of 6 months. Finally, participants made an investment allocation across the three companies. As predicted, priming participants with higher (vs. lower) epistemic uncertainty led them to be more (less) likely to pay for financial information. Moreover, perceived epistemic uncertainty partially mediated this relationship, whereas aleatory uncertainty did not.

In Study 4, we predicted that investors would be more sensitive to financial information to the extent that they perceived stock uncertainty to be epistemic (but not aleatory). Participants indicated whether they thought Apple stock in 6 months would be: (1) above its current price of \$140 or (2) the same or below as its current price of \$140, and then chose between: (a) \$50 for sure, or (b) \$150 if their prediction about Apple is correct. Next, participants were presented with a real research report predicting that Apple stock would appreciate in the coming months, and then repeated their Apple forecast and investment choice. As predicted, company information had greater impact on willingness to invest in Apple among participants who rated stock uncertainty as more epistemic; meanwhile, aleatory uncertainty had no such effect.

In Study 5, we explored the impact of perceived aleatory uncertainty on behavior. We first assessed risk preference by asking participants to choose among chance gambles. We next presented participants one-paragraph descriptions of eight companies (from Reuters), then asked them to assess uncertainty concerning each stock’s return over the coming week on the EARS. Finally, participants predicted whether each stock would appreciate more or less than the S&P 500 over the coming week, and chose between: (a) \$30 for sure, or (b) \$90 if their stock forecast is correct. As predicted, willingness to accept investment prospects significantly increased with the interaction between rated aleatoriness of stocks and the participant’s risk tolerance; meanwhile there was no significant interaction between rated epistemicness and risk tolerance. This finding suggests that to the extent that an investor sees stock movements as random, her willingness to bet on stock movements more closely resembles her preference to bet on chance outcomes.

In sum, we find that investment behaviors are influenced by investors’ subjective perception of the two independent dimensions of uncertainty. Our results across six studies show that investors who believe that stock returns are relatively more epistemic seek information and expert advice to manage their uncertainty, whereas investors who believe that stock returns are relatively more aleatory diversify their assets to manage their uncertainty. These findings hint at the possibility that shifting beliefs about epistemic and aleatory market uncertainty may prove to be a useful intervention for improving investment decisions.

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# To Trace is to Trust: From Product Traceability to Brand Trust

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## EXTENDED ABSTRACT

As consumers become more conscious of and concerned with the ingredients that constitute their products and how their purchases can impact the environment, they are paying more attention to the origin of their products and the process by which these products are made. The present paper examines how merely labelling products as “traceable” to their origin can help brands establish their transparency and build trust between consumers and brands.

The concept of tracing products to their origin has gained traction over the last two decades (e.g., knowing where/how the product was made; van Rijswijk and Frewer 2008). Although traceability can evoke thoughts of safety and quality to consumers (van Rijswijk et al. 2008), the ability to trace products does not necessarily provide consumers with actual safety information or the exact production process (Hobbs et al., 2005). Currently, there is little research in the marketing domain of how consumers react to traceability labels and how brands should make use of these labels to build relationships with consumers.

Individuals infer that their relationship with a partner is more intimate and close when personal information is divulged (human-to-human interactions: Aron et al. 1997; Laurenceau et al. 1998; human-to-computer: Moon 2013). Similarly, the presence of a traceability label signals the willingness of a brand to disclose information that is typically kept private, allowing consumers to infer that they may have a closer and more trusting relationship with the brand. Further, research on signaling has indicated that consumers infer low store price from price-matching policies (Srivastava and Lurie 2001), suggesting that a mere signal in the absence of factual information can still induce positive evaluations. In addition, consumers feel more confident about products when they know they can retrieve information about them from the Internet (Bhargave et al. 2016). Hence, we propose that in the presence of a traceable label, which gives consumers the option to retrieve information about production origin online, consumers would infer greater transparency of the production process, more positive qualities about the brand and its products, even in the absence of actual information. Five experiments were conducted to confirm this predicted effect.

Experiment 1 tests how the traceability label, in the absence of actual production information, can affect quality perceptions of the brand. Further, it tests how a traceability label which does not convey any ethical information measures up against an ethical label like fair trade. Participants read about a chocolate brand and were assigned to one of three conditions: control (no production information), traceable label (label-only, signaling that tracing is a possibility), and fair trade label. The brand was rated on its trustworthiness, honesty, transparency, and social responsibility. Participants in both treatment conditions reported significantly higher brand trust scores compared with the control condition; in addition, participants viewed the traceable brand just as trustworthy as the fair trade brand.

Experiment 2a and 2b examine how providing traceable *negative* information affects trust and whether or not having a traceable label can mitigate the negative effects of poor production processes. In Experiment 2a, participants read about a milk brand and were assigned to one of four conditions: control, traceable label (label-only), positive traceable information, and negative traceable information. In the latter two conditions, participants saw the traceable label and

actually “traced” production/origin information about the milk; the information consisted of positive or negative facts about the production process. The brand was rated on its trustworthiness. The presence of the traceable label improved trust ratings compared to control, with or without positive production information, suggesting that participants infer positive production processes in the presence of a traceable label, even without factual evidence. Negative information decreased trust compared with the trace label and positive-trace conditions; however, the negative-trace condition did not significantly differ from the control condition, suggesting that providing negative information about production practices under the label of traceability does not decrease trust compared with giving no information at all.

Experiment 2b used a 2 traceability label (absent vs. present) x 2 valence of information (positive vs. negative) between subjects design. All participants received information about the milk brand’s production process that was either positive (above standard) or negative (below standard). Half of the participants saw a traceability label *before* the production information. The other half received the production information without the traceable label. Participants rated the brand on its trustworthiness. Adding a traceable label to the positive information did not change trust ratings; however, when the production information was negative, preceding the negative information with a traceable label increased trust ratings compared with showing the negative information alone.

Experiment 3 investigates if traceability increases consumers’ willingness to reciprocate by sharing their own information with the brand, through increased brand trust. Participants read about a chocolate brand, and the chocolate was either traceable or not. Participants perceived the brand offering traceability as more trustworthy and they were more willing to share their personal information with the traceable brand. Level of trust mediated the relationship between presence of traceability and reciprocation.

Experiment 4 examines whether the mere presence of traceability can improve overall product evaluation, through increased brand trust. Participants read about a baking soda brand, and the baking soda was either traceable or not. Participants perceived the brand as more trustworthy and the product as more desirable when the baking soda was traceable. Level of trust mediated the relationship between presence of traceability and product evaluation.

Overall, although the mere presence of traceability is not associated with any specific ethical practice, consumers infer that the willingness of a brand to potentially disclose private information must signal transparent and socially responsible practices, similar to actual ethical labels such as fair trade. Brands that employ traceability labels indicate to consumers that they can retrieve production information on-demand, and hence, the mere presence of the label is enough to evoke trust within consumers. Our research sheds insight into the consumer inference process and offers practical recommendations to brands on strengthening their relationships with their customers.

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# Show Me More! Powerlessness Drives Variety Seeking

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## EXTENDED ABSTRACT

People play different power roles every day. A stern boss who runs a company may be a docile son in the presence of his parents; a tender wife at home can turn into a tough professor when supervising her students. The rapid switch of power state leads to an interesting and important research question, i.e., the downstream consequences of power on human behaviors. Yet, little research speaks to the potential effect of power on variety seeking behavior, leaving an intriguing question unexplored.

We propose that feeling powerless will enhance variety-seeking behavior and that need for autonomy accounts for this effect. Prior research provides initial theoretical support for these hypotheses. For example, researchers consistently find that feeling powerless is aversive (e.g., Keltner, Gruenfeld, and Anderson 2003; Rucker and Galinsky 2008). In particular, Lammers et al. (2016) show that powerless experiences threaten individuals' perceived autonomy and freedom. Furthermore, Levav and Zhu (2009) document that freedom deprivation leads to variety seeking. We conducted five studies to test these hypotheses.

In Study 1, 77 consumers were randomly assigned to high versus low power conditions. First, they recalled an experience in which they had or lacked power (Galinsky, Gruenfeld, and Magee 2003). Then we measured need for autonomy. After that, participants were told to imagine they would be served one box of chocolate in the following 5 weeks and decide which one they would like to have for each week (Huang and Wyer 2015). Results revealed that low-power participants sought more variety than high-power ones ( $F(1, 75) = 4.78, p < .05$ ). Furthermore, a 5,000 bootstrap revealed a significant indirect effect via need for autonomy, 95% CI = [-.26, -.01].

In Study 2, 48 consumers were randomly assigned to high versus low power conditions. In this study, we adopted a more subtle manipulation of power (Chen, Lee-Chai, and Bargh 2001), whereby participants either sat in a tall chair (high power condition) or on an ottoman (low power condition). Then they completed a survey that included questions measuring a general interest in variety seeking (Fishbach, Ratner, and Zhang 2011). Specifically, participants indicated whether they preferred the same or different products in various consumption situations. Results revealed that low-power participants sought more variety than high-power ones ( $F(1, 46) = 3.87, p = .05$ ).

In Study 3, 62 undergraduate students were randomly assigned to high versus low power conditions. Another manipulation of power was adopted (Jin, He, and Zhang 2014). Specifically, each participant was told that he or she was best suited for the role of manager (high power) or subordinate (low power). Then they were asked to choose their gifts for participating in the experiment. We provided four flavors of lollipops as gifts and they could choose three lollipops of any flavors (Chen, Zheng, and Zhang 2015). Again, results revealed that low-power participants sought more variety than high-power ones ( $F(1, 60) = 3.32, p = .07$ ).

139 undergraduate students participated in Study 4. They were randomly assigned to the cells of a 3 (power: high vs. low vs. control)  $\times$  2 (need for autonomy: satiated vs. unmet) between-subjects design. In the high (low) power condition, participants were told to imagine being a boss (employee) at a company (Rucker, Dubois, and Galinsky 2011). Then participants in the satiated condition were told to imagine: It is a social norm to wear black clothes. However,

you like blue and thus often wear blue ones (Warren and Campbell, 2014). We followed Levav and Zhu (2009) to measure variety seeking by asking participants to indicate their likelihood of donating to unfamiliar charities.

A two-way ANOVA yielded a significant interaction effect ( $F(2,133) = 3.12, p < .05$ ). A contrast analysis revealed significant differences in the need for autonomy unmet condition ( $F(2,133) = 5.68, p < .001$ ), such that low power participants had a higher variety seeking intention compared with those in the high and control power conditions. In contrast, variety seeking behavior did not vary across different power levels when need for autonomy was satiated.

Study 5 provides evidence using scanner data. The data comes from Nielsen Scanner Panel data for one year on two product categories: Yogurt and Laundry Detergent. We used occupation information as the indicator of power (Rucker, Galinsky, and Dubois 2012). To classify variety seekers, we followed Trivedi and Morgan (2003) by computing the number of distinct brands that the panelists purchased.

The results showed that in high power occupations, there were more low variety seekers compared to high variety ones (55.71 % vs. 43.06 % in Yogurt; 54 % vs. 38.3 % in Laundry Detergent) while in low power occupations, there were more high variety seekers compared to low variety ones (31.94 % vs. 20 % in Yogurt; 51.06 % vs. 32 % in Laundry Detergent). We then estimated an ordered logit model and found a significant impact of high versus low power occupations (.55,  $p < .10$  for Yogurt; .62,  $p < .05$  for Laundry Detergent).

The findings from the current research carry important theoretical contributions. First, while much contemporary literature examines the interpersonal consequences of power, the current research is one of a burgeoning stream of studies that investigate how power exerts an influence on intrapersonal consumption behavior. Second, we add to the literature on compensatory consumption by demonstrating how variety seeking serves as a subtle way to deflect powerless state. Third, our research contributes to the variety seeking literature by documenting consumers' power state as a new psychological determinant of variety seeking behavior.

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# Dimming the Light Offers A Creative Lens: The Impact of Ambient Illuminance on Creativity Assessment

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## EXTENDED ABSTRACT

Creative ideas are prevalent in everyday consumption. The creative professionals always hope that consumers could understand and acknowledge the creativity displayed in their work. But is it always the case? In other words, can consumers usually get the “Aha!” moment when viewing a creative work? Unfortunately, creativity is only in the eye of the beholder. As consumers are not directly involved in the creation process, oftentimes they cannot share the perspectives of the creators and appreciate their creativity (West, Kover, & Caruana, 2008).

This has raised a fundamental yet important question: How to make consumers assess creativity in a more effective way? Creative assessment is the attempt to identify or recognize creative characteristics in the assessment target (Hennessey & Amabile, 1999). While existing research has suggested some solutions such as inviting consumers into the creation process (Kover, et al., 1997), it usually requires vast investment in labor and finance. Given that contextual variables are usually inexpensive and easy to control, if researchers can start to identify ambient factors that impact consumers' creativity assessment, it would offer valuable insights into how to help consumers appreciate innovation, and ultimately enhance their product desirability and purchase intention (Horn & Salvendy, 2009). The current research aims to address this void by being the first work to identify ambient illuminance as a contextual variable to influence consumers' creative assessment.

The central thesis is that dim (vs. bright) illuminance reduces individual's inhibition, which subsequently leads to higher creativity assessments. When the illuminance is dim (vs. bright), the mind is less alert to distinguish between differential concepts, and thus less likely to filter and restrain (i.e., inhibit) irrelevant thoughts or concepts. Prior research has provided support for this argument. For example, it has been shown that darkness induces a sense of illusory anonymity thereby reducing inhibition (Zhong et al., 2010). Research on sleep behaviors also suggests that dim illuminance helps sleepiness (Lowden, Åkerstedt, & Wibom, 2004) by slowing down physiological reactions in terms of heart rate, body temperature, and cortisol production, which are highly correlated with alertness and inhibition (Lockley et al., 2006). We next argue that such reduced inhibition subsequently enhances creativity assessment. This is because reduced inhibition enables people to loosen the boundaries between concepts and consequently embrace less filtering and more open-minded processing (Enright & Beech, 1993; Green & Williams, 1999). As a result, when consumers are presented with creative ideas, they likely do not consider these concepts isolated and distinct. Rather, they are able to recognize and understand the underlying remote connections between those distal concepts. Such comprehension of the latent inter-conceptual links enables them to give higher creativity ratings of the assessment target. A set of three studies provides support for our hypotheses.

Study 1 demonstrates the main effect of ambient illuminance on creativity assessment. The ambient illuminance was manipulated by the number of lights in the room. Specifically, in the dim (bright) condition, the room was lit by 2 (20) fluorescent light tubes mounted to the ceiling, with the total luminance of 150 (1500) lux. Partici-

pants were presented with a survey packet containing five print advertisements, one per page in random order. They were asked to rate the creativity of the advertisements. As hypothesized, we found that those in the dim (vs. bright) condition assessed the presented advertisements more creative.

Study 2 examined the underlying process by testing the mediating role of inhibition. Participants completed the study in either a dimly (150 lux) or a brightly (1500 lux) lit room. To measure inhibition, they were asked to complete Hayling's sentence completion test (Burgess & Shallice, 1996; Kemps & Wilsdon, 2010). Specifically, participants were presented with two sets of sentences in which the last word was omitted. For each sentence, there was a high probability of one particular response (e.g., “George must keep his dog on a \_\_\_\_\_”). In the first set, participants were asked to provide a response that would complete the sentence in a reasonable way (e.g., “leash”). By contrast, in the second set, they were asked to provide a word that made no sense (e.g., “book”). That is, they must inhibit the rational response that easily comes to mind to have a correct answer. Participants were instructed to respond as quickly as possible within 60 seconds for each set. Hence, participants' inhibition level was scored as the ratio of the number of correctly completed sentences in the second set (i.e., nonsensical responses) on the number of correctly completed sentences in the first set (i.e., reasonable responses), controlling for the individual difference in response rate. A higher score indicated greater inhibition (Kemps & Wilsdon, 2010). Next, all participants assessed 10 novel products on how creative they thought they were. As expected, those in the dim (vs. bright) condition rated the products more creative. Further, their inhibition score mediated the effect of illuminance on creativity assessment.

Finally, Study 3 offered additional evidence of the underlying process by examining the joint effect of illuminance and inhibition (measured as trait Openness to Experience) on creativity assessment. Participants first completed the Openness to Experience scale (John & Srivastava 1999) in a room with typical illuminance (450 Lux). Next, they were led to a room where illuminance was either dim or bright. Here they completed a product evaluation task, in which they indicated willingness to buy a new and innovative product over a traditional one for five pairs of products, a behavioral measure of creativity assessment. We found that individuals who were high in openness (i.e., chronically low on inhibition) showed higher willingness to buy innovative products irrespective of the illuminance condition. However, replicating results from previous studies, dim (vs. bright) illuminance induced higher likelihood of buying innovative products for low openness (i.e., chronically high on inhibition) individuals.

Taken together, this research advances prior work by demonstrating the impact of illuminance on consumer's creativity assessment and providing evidence of the underlying mechanism. Our findings also have important practical implications for creative professionals and marketers selling novel and innovative products.

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# Restrained by Resources: The Joint Effect of Scarcity Cues and Childhood Socioeconomic Status (SES) on Consumer Preference for Feasibility

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## EXTENDED ABSTRACT

Consumers' current socioeconomic status (SES) has been widely acknowledged as an important factor that affects various aspects of their behavior, such as aggression (Greitemeyer and Sagieglou 2016), prosocial behavior (Piff et al., 2010) and variety-seeking (Yoon and Kim 2017). However, scant marketing literature examines whether and how consumers' childhood SES affects their behavior. Compared to consumers' current SES, childhood SES represents consumers' early life environments and functions more like a latent factor. Thus, once activated by situational factors, the behavior patterns that people have formed in childhood are likely to affect their decision-making regardless of their current SES. Therefore, it is important to put childhood SES in the spotlight and to examine its interactive effect with important situational factors in shaping consumer behavior.

To address this void, we study the interplay of childhood SES and resource scarcity cues. Specifically, drawing from research on scarcity cues (Mehta and Zhu 2016; Roux, Goldsmith, and Bonezzi 2015), life history theory (Griskevicius et al. 2013; Laran and Salerno 2013; Mittal and Griskevicius 2014), and construal level theory (Liberman and Trope 1998), we propose and demonstrate that the combination of low childhood SES and resource scarcity cues leads to a low construal level and thus propels consumer preference for feasibility in product choices.

Study 1 consisted of a three-level between-subjects design (resource availability: scarcity vs. abundance vs. control) with childhood SES measured continuously. Results suggested that, for participants with lower childhood SES (-1 SD below mean), scarcity cues (vs. the control condition) increased their preference for feasibility. No significant difference was found between the abundance and control conditions. In contrast, for those with higher childhood SES (+1 SD above mean), there was no significant difference in preference for feasibility among the three conditions. As indicated by Study 1, there was no significant difference between the control and abundance conditions and that our effect was driven by scarcity. Thus, we did not include the control condition in other studies.

Study 2 utilized counterfeit products to represent products with feasibility (Jiang and Cova 2012). Results revealed a significant interaction between childhood SES and resource availability. Floodlight analysis indicated that participants who scored lower than 4.64 on childhood SES ( $B_{JN} = .49$ ,  $SE = .25$ ,  $p = .05$ ) were more likely to purchase counterfeit products after exposure to scarcity cues than after exposure to abundance cues.

Study 3 examined the underlying mechanism for the interactive effect. The results revealed a significant moderated mediation. Among those with a relatively low childhood SES (-1 SD below mean), scarcity cues primed them with a relatively low construal level, which in turn increased their preference for feasibility. Among

those with a relatively high childhood SES (+1 SD above mean), construal level did not mediate the effect of scarcity cues on product preference.

Study 4 further tested the mediation role of construal level by directly manipulating construal level. Taking low construal level condition as the base group, analysis revealed a significant three-way interaction among resource availability, childhood SES and construal level. Specifically, in the control condition, we replicated the previous interaction effect. In the low construal level condition, only the main effect of scarcity cues was significant. However, in the high construal level condition, scarcity cues led people with low childhood SES to prefer low feasibility. These results speak to the important role of construal level in driving low childhood-SES consumers' preference after exposure to scarcity cues.

Across four experiments, we examined how childhood SES and resource scarcity cues jointly affect consumers' construal level and their subsequent product choices. This research contributes to research on childhood SES, construal level theory, and resource scarcity cues.

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# Foods for Sharing: The Social Value of Handmade Foods

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## EXTENDED ABSTRACT

Mass-manufactured foods are ubiquitous in busy daily life. However, consumers still search for food products with handmade feature (Pieniak, Perezcueto, and Verbeke 2009). Market surveys and academic research indicate that handmade products are more attractive than machine-made ones (Fuchs, Schreier, and Osselaer 2015; Ga et al. 2013). Why are handmade foods so popular?

Numerous research have documented the necessity of involving interpersonal relationship in food choices research. Food is widely regarded as a means of expression and a hallmark of social relationships (Cramer, Greene, and Walters 2011). The type of food we select and the amount of food we consume reflects social relationships (White and Dahl 2006) and social motives (Meiselman 2008) when we eat with others. For example, when women have relationship formation motives, their food choices are susceptible to men's choice (Hasford, Kidwell, and Lopez-Kidwell 2018). While men are influenced by females' choices when they have relationship maintenance motives (Hasford et al. 2018). Choosing handmade foods may serve as a cue to signal social motives, since handmade products are imbued with love, which assists people in conveying affection (Fuchs et al. 2015).

In the present research, we propose that the social motives to initiate or maintain a close relationship may direct people to choose handmade foods over machine-made foods. The current article contributes to our understanding of how social motives influence consumers' predilection for handmade foods and beverages. We find that, consumers prefer handmade foods when they have motives to form a relationship with a new acquaintance or maintain a relationship with a familiar person. In addition, the current article provides insights for advertisers and managers in promoting handmade foods and beverages, and implications that could improve consumers' well-being in social life.

*Hypothesis 1 Consumers prefer handmade foods and beverages to machine-made foods and beverages when they eat with others.*

*Hypothesis 2 (formation motives) The social motive to form a relationship with a new acquaintance will increase the preference towards handmade foods and beverages compared with machine-made.*

*Hypothesis 3 (maintenance motives) The social motive to maintain a close relationship will increase their preferences towards handmade foods and beverages compared with machine-made foods and beverages.*

Study 1 experimentally manipulated the foods production modes (handmade vs. machine-made) to test consumers' commensal intention. We chose nine common foods and beverages with handmade and machine-made feature: beer, burgers, chips, chocolate, coffee, cookie, ice cream, nougat and pizza. Participants (N = 782) from MTurk were randomly assigned to handmade foods condition

or machine-made foods condition. In each condition, three of the nine foods and beverages were randomly presented. They firstly reported the hunger level, then estimated the price of a unit of foods or beverages in dollar and answered whether they would like to eat/drink with others with a binary decision: yes or no. Results showed that participants were more willing to eat with others if handmade foods were available. In addition, people gave higher price estimation for handmade foods than machine-made foods. We also found the dominate process of sentimental value that led to willingness to eat with others, rather than quality and price.

Study 2 aimed to test the handmade effects according to maintenance motives. We manipulated relationship familiarity as a proxy for maintenance motives (Hasford et al. 2018). Participants were 35 male and 28 female students. The experiment was a mixed-design with eating companions (familiar person vs. unfamiliar person) as a between-subject factor, types of coffee (pour over vs. machine-made) as a within-subject factor. They were randomly assigned to one condition (with familiar vs. unfamiliar person) to imagine a chat with an acquaintance in a coffee house, and they could choose to buy pour over coffee, machine-made coffee or neither. The number of coffee types chosen by participants was significantly different across two conditions. According to adjusted standardized residuals from the Post Hoc testing, when with a familiar person, participants are more likely to choose pour over coffee, on the contrary, with an unfamiliar person, they were more likely to choose machine-made coffee (H3).

Study 3 sought to detect the social value of handmade foods and beverages according to formation motives. We induced explicit social motive to provide the process evidence. The experiment was a 2 (social motives: with vs. without, between)  $\times$  2 (process type: handmade vs. manufactured, within)  $\times$  2 (snack type: candy, cookie, within) mixed design. The dependent variable was purchase intention. Participants were 46 male and 63 female students. They imagined that they had high tea in a café together with a new acquaintance. In social motive condition, they were informed to initiate a relationship, where in no social motive condition, such information was not given. Participants in both conditions read the menu and indicated their intention to purchase cookies and candy with a 7-point scale separately. The interaction between process type and social motive was significant. In social motive condition, participants had significant higher intentions to purchase handmade snacks compared with machine-made snacks (H2). While in no social motive condition, participants showed significant higher intentions to purchase machine-made snacks.

Foods and beverages labelled as handmade are more popular than machine-made in social interaction. We are probably the first to address how individuals' social motives influence food choices process mode (handmade vs. machine-made) preferences. When having meals with acquaintances with whom people prefer to form or maintain a relationship, they would prefer handmade foods. For consumer well-beings, handmade foods signal social motivations to co-eaters, which facilitates an enjoyable part of our daily experiences in the company of other people, reduces loneliness and improves mental and emotional well-being. In practical, we suggest that companies and restaurants can use our findings to advertise handmade foods in social interaction contexts that encourages consumers to share and interact with others, which could boost sales.



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# Cultural Values and Consumers' Brand Preference

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## EXTENDED ABSTRACT

Consumers routinely need to choose between mass-market (e.g., Häagen-Dazs) and niche brands (e.g., Halo Top), yet little research has examined the factors that influence such choices (Dalgic and Leeuw 1994). Can consumers' cultural background and orientation affect their choices? How and why? Are there any strategies firms may use to influence consumers' choices? In the current research, we propose that power distance belief (henceforth, PDB) is associated with greater risk aversion and, hence, a greater preference for mass-market over niche brands.

PDB is defined as the degree to which individuals accept and endorse hierarchy and inequalities in power (Hofstede 1984, 2001; Zhang, Winterich, and Mittal 2010). Research suggests that that people in high (vs. low) PDB societies are more likely to stay within their comfort zone and cling to the familiar (Hofstede 1984, 2001; Carl 2004). Therefore, we expected high (vs. low) PDB consumers to be more risk averse.

Risk aversion refers to one's tendency to avoid uncertainty rather than avoid loss, and a risk-averse person avoids a gamble in favor of a sure thing (Isen, Nygren, and Ashby 1988; Kahneman and Tversky 2013). Mass-market brands are seen as tried and tested by the market, and are accepted by a majority of consumers (Desarbo et al. 2002; Raj 1985; Kim and Chung 1997). We suggest that mass-market brands are perceived to be less risky because following the crowd appears less risky, compared to following a new path (Devenow and Welch 1996; Olsen 1996). Following the same logic for mass-market brands, niche brands that lack the endorsement of the majority may be perceived as risky (Munshi 2004; Huang and Chen 2006; Desarbo et al. 2002). Because risk-averse (vs. risk-taking) consumers have been found to take fewer risks associated with products (Grewal, Gotlieb, and Marmorstein 1994; Kahn and Sarin 1988; Mandel 2003), we propose that high (vs. low) PDB consumers would prefer mass-market brands to niche brands because they are more risk averse.

Furthermore, because the risk associated with a brand or a product can change depending on its use (Dowling and Staelin 1994; Campbell and Goodstein 2001), we suggest that product usage moderates the effect of PDB on brand preference. Specifically, we suggest that high (vs. low) PDB consumers prefer mass-market to niche brands in low or moderate product-usage risk contexts. However, in high product-usage risk contexts, low PDB consumers also become risk-averse and their preference for mass-market brands increases, compared to baseline conditions. In contrast, because high PDB consumers are risk averse to begin with, they should not become more risk averse when the product usage indicates risk (i.e., ceiling effect).

A multi-method approach was used to establish reliability and generalizability across four studies. Our pilot study used a secondary dataset from the footwear industry in 42 countries and revealed that countries high (vs. low) in PDB have a greater market share of mass-market, compared to niche, brands. Study 1 further ascertained the link between consumers' PDB and their preference for mass-market versus niche brands in the lab. We also gained confidence in the causal role of PDB by manipulated it in this study. A GLM revealed that the PDB significantly affected consumers' brand preference ( $F(1,144) = 4.37, p < .04$ ). A follow-up independent t-test suggested

that high (vs. low) PDB consumers preferred mass-market to niche brands ( $M_{\text{low-PDB}} = 2.39, M_{\text{high-PDB}} = 2.96; t(144) = -2.02; p < .05$ ).

Study 2 examined the mechanism underlying the relationship between PDB and brand preference. First, the effect of PDB on brand preference was significant and positive ( $\beta = .17, t(320) = 3.97, p < .001$ ), which suggested that high (vs. low) power distance consumers preferred mass-market to niche brands. Next, a bootstrapping procedure with 10,000 iterations (Zhao, Lynch, and Chen 2010) showed that the mean indirect effect of PDB on brand preference through risk aversion was negative and significant ( $\beta = -.03, SE = .01, CI95 = -.06, -.01$ ) as predicted.

Study 3 assessed a boundary condition based on product-usage context – high or moderate. A linear regression model revealed significant main effects of PDB and product usage contexts ( $ps < .05$ ). More importantly, the interaction effect of PDB x product usage contexts was also significant ( $\beta = -.27, t(240) = -2.29, p < .03$ ). A follow-up analysis (Johnson and Neyman 1936; Spiller et al. 2013) revealed that there was a significant positive effect of product usage context on brand preference for participants whose PDB score was less than 2.91 ( $B_{JN} = .33, SE = .17, p = .05$ ), but not for those whose PDB score was more than 2.91. Hence, low PDB consumers' preference for mass-market (vs. niche brands) significantly increased in the high product-usage risk contexts, compared to the moderate risk contexts. However, high PDB consumers' brand preferences did not change by varying the risk involved in product usage context, supporting H3.

The current research offers several theoretical and managerial contributions. We provide novel insights on how respondents' cultural orientation, specifically their PDB, influences preference for mass-market versus niche brands. We also shed light on the underlying mechanism by showing that consumers high (vs. low) in PDB prefer mass-market to niche brands due to a greater risk aversion. In addition, we highlight a boundary condition that identifies when low PDB consumers switch their preference to mass-market, instead of niche, brands. Our findings have implications for brand managers' promotion efforts by providing insights for firms targeting consumers who are more receptive to either mass-market or niche brands based on their PDB. Second, managers may prime consumers to be risk-averse or risk seeking which in turn is expected to influence brand preference. Third, firms can vary the product usage contexts to make some types of consumers to switch from niche to mass-market brands.

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# Contagion and Product Physicality: A Study of Consumer Response to Recycled-content Products.

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## EXTENDED ABSTRACT

The purchase of recycled-content products poses dilemmas for consumers. Consumers may want to preserve the environment, but simultaneously can be concerned about potential contamination resulting from prior use. We focus on understanding how prior history of recycled-content products might affect consumer perceptions and consumption of recycled goods. Specifically, we attempt to answer the following questions about consumer perceptions of recycled-content products using contagion theory. To what extent do consumers devalue certain recycled-content products, but appreciate others? To what extent do consumers perceive an essence transfer from old materials to new products—that is, would a recycled-content product inherit some internal characteristics or properties from its original materials? What are the product factors that amplify or dampen a perceived essence transfer in a current consumption context?

Prior research has suggested the importance of physical interactions in activating contagion (e.g., Newman, Diesendruck, and Bloom 2011). However, most scholars have studied physical contact as a dichotomous variable and assumed that contagion is dose-insensitive to contact (Rozin and Nemeroff 2002). By focusing on how consumers infer the amount of physical contact from product physicality and functions, we explore the relationship between consumers' anticipated physical contact and the prevailing contagion on recycled-content products. We argue that consumers should perceive greater contagion from recycled materials that have more physical contact with past users than from materials that have minimal physical contact with past users. Also, we extend this discussion to the way in which the implied physicality of recycled-content products informs consumers of the magnitude of contagion. We suggest that consumers infer different degrees of physical contact from products with different forms. For example, consumers may perceive greater physical contact with a pair of gloves that cover the entire hand than a pair of potholders which touches only the palm of the hand. We suggest that consumers should be more attentive to contagion cues when the use of a product suggests having more (vs. less) physical contact.

To test our hypotheses, we conducted three studies ( $N_1 = 132$ ;  $N_2 = 326$ ,  $N_3 = 144$ ). Study 1 and study 2 were conducted online using MTurk. Study 3 was conducted in a controlled laboratory setting. Textile recycling (i.e., recycling of linen products) was chosen as the context because it enabled us to identify: 1) a more (vs. less) desirable supplier of materials (e.g., 5-star hotel vs. a 2-star hotel); 2) recycled source material with more (vs. less) previous body contact (e.g., bed sheets vs. curtains); 3) recycled products with more (vs. less) physical body contact with the consumer (e.g., winter gloves vs. pot holder). From a managerial perspective, it is also notable that recycling of linen products becomes important because of growing expenditures on textile wastes (e.g., U.S. spent \$523 million land-filling textile waste in 2013). After reading a shopping scenario on textile recycling, participants completed several measures including purchase intention toward recycled-linen products.

The findings indicate that consumers engage in a contagion-oriented thinking process when purchasing recycled-content products that are associated with a negative context (i.e., contamination or

transfer of undesirable essence). In study 1, we showed that participants were more likely to purchase recycled-content products made with materials from a more (vs. less) desirable source ( $F(1, 128) = 8.03$ ,  $p < .1$ ). Also, participants were more likely to purchase recycled-linen products made with recycled materials that had less contact with past users than those that had more contact with past users ( $F(1, 128) = 2.80$ ,  $p < .1$ ). In study 2, we replicated the effect of physical contact with past users ( $F(1,317) = 5.62$ ,  $p < .05$ ). More importantly, we demonstrated that consumers were more likely to purchase recycled-linen products that would incur less (vs. more) physical contact with their bodies ( $F(1,317) = 4.85$ ,  $p < .05$ ). Moreover, our analysis suggests that disgust is a key mechanism underlying these effects. In study 3, we sought to test the strength of these effects in a context where consumers are interacting with actual products (e.g., dusting cloths vs. dusting gloves). We replicated prior findings and found a significant interaction effect between the degree of physical contact with past users and the degree of physical contact with current users ( $F(1,138) = 3.95$ ,  $p < .05$ ). That is, when a product is made with used, recycled materials, consumers are more likely to purchase a product that would incur less (vs. more) physical contact with their bodies during product consumption.

Prior research has suggested that consumers are more critical of recycled-content products than conventional products. We attempt to understand these attitudes through the theory of contagion. We argue that the contagion effect, derived from consumers' magical beliefs that certain essences can transfer from one to another, may explain consumer negativity toward certain recycled-content products. More importantly, we argue that when purchasing recycled-content products, consumers tend to engage in a unique evaluation process that involves both contagion-related constructs (i.e., disgust) and heuristics for conventional purchases (i.e., quality perceptions). Our research makes two contributions to the existing contagion literature. First, whereas most of the past literature has assumed that the contagion effect is insensitive to the degree of physical contact, we have demonstrated that consumer perception of contagion varies with the degree of physical contact. For example, we showed that the small difference in physical contact between wearing a pair of gloves versus using a pair of potholders facilitated different degrees of disgust among consumers. Second, we have explored how aspects of a product's physicality such as forms may influence the magnitude of the contagion effect. We expect that business managers and policy makers may find our research helpful because we have identified ways to potentially manage consumers' response to recycled-content products through the amount of perceived essence transfer.

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# Product Retention (vs. Acquisition) Choices and Preference for Person-Related Features

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## EXTENDED ABSTRACT

People regularly make choices about products they already own, such as which of two sneakers bought through Zappos.com to retain. However, decision research has focused on situations where choice precedes ownership, or *acquisition*, whereas situations where choice follows ownership, or *retention*, remain understudied.

Previous research finds that people use ownership as a source of information to categorize objects relative to the category of “self” (Weiss and Johar 2013; Weiss and Johar 2016); simply thinking of an item as owned (unowned) fosters item classification in (outside of) the self (Turk et al. 2011). Relatedly, classifying an item in a category makes it easier to process category-applicable (vs. -inapplicable) features of the item (Barsalou 1982; Medin 1989). Building on these findings, we suggest that simply thinking about items as already (vs. not yet) owned (and thus classifying these items as “self”) would allow one’s self-concept to facilitate the processing of information about certain item features. Specifically features like “resilience” or “daringness” that commonly apply to describe people, or *person-related* features, would become easier to process and understand. Consequently, because the information that people process more (vs. less) easily has greater impact on choice (Schwarz 2004), people may afford greater decision-weight to person-related features when people think about items as already (vs. not yet) owned, specifically when making a retention (vs. acquisition) choice. Notably, such fluency advantage in retention (vs. acquisition) choices is *not* predicted for features like “portability” or “smoothness,” which primarily are applied to describing products, or *product-related* features.

In our conceptualization, the predicted effect of thinking of items as already (vs. not-yet) owned are driven by the use of the self as an organizing category for material objects (Weiss and Johar 2018). The effect therefore should appear (disappear) when consumers (do not) mentally construe the self in terms of the objects it includes. Recent research shows that priming *product-independent* identities attenuates usage of the self as a category for objects (Weiss 2018). An identity is product-independent if carrying out that identity does *not* rely on any product. For example, carrying out the identities of “musicophile” or “walker” only requires using the physical senses (e.g., one’s hearing to enjoy music) or the physical body (e.g., one’s legs to engage in walking). This independence on the use of products render these identities *product-independent*. Conversely, carrying out the identities of “audiophile” or “hiker” necessitates specialized gear (e.g., hi-fi headphones to appreciate sound or hiking boots to hike), rendering these identities product-dependent. Thus, we predicted the effect of choice-frame to disappear following the activation of product-independent (vs. product-dependent) identities. Relatedly, self-important (vs. unimportant) identities are more integral to the self-concept (Reed II 2004) and thus can better support the utilization of the self-concept for processing information. Therefore, we expected the predicted effects to manifest mainly among individuals who consider the focal product-dependent identity as self-important.

Four studies supported the above predictions. In study 1 [2(primed-identity) x 2(search-cue-frame), between-subjects], participants in the product-independent (product-dependent) identity prime wrote two things about themselves that reflect their musicophile (audiophile) side. Participants in the already (vs. not-yet) owned frame condition imagined that they received (considered) two sets of high-quality headphones but could only keep (acquire) one. Participants then played an *incentive-compatible* word-puzzle

game that contained a total of 12 features, six person-related (e.g., “intuitive,” “smart”) and six product-related (“portable,” “smooth”). Participants did not receive the list of words to be found rather had to find as many words as they can within a 60 seconds. To test whether person-related features are easier to process for items consumers think of as already (vs. not-yet) owned, participants were asked to search words using a provided search cue, specifically the headphones that participants initially thought of either as already or as not-yet owned. Finally, all participants rated the self-importance of the identity “audiophile.” Consistent with predictions, data analysis showed a marginally significant 2-way interaction between search-cue frame and identity: framing the search cue (i.e., the headphones) as already (vs. not-yet) owned increased the number of person-related words found, but only when the primed identity was audiophile. This 2-way interaction was qualified by the importance of the identity audiophile, yielding a significant 3-way interaction. Specifically, the two-way interaction pattern described above appeared only when the identity “audiophile” was self-important.

Next, to test the predicted effects on decision weight, in Study 2a [2 (primed-identity) x 2 (choice-frame), between-subjects], participants in the product-independent (product-dependent) identity prime wrote two things about themselves that reflect their hiker (walker) side. Participants in the retention (acquisition) choice frame imagined buying (considering) two pairs of high-quality shoes, with the intent to keep (acquire) and use one of them. Participants then allocated 30 points among attributes according to their importance in choosing shoes. Two of the attributes were person-related (e.g., “outdoorsiness,” “daringness”) and two product-related (e.g., “smoothness,” “compactness”). Consistent with predictions, data analysis showed a significant 2-way interaction between choice frame and primed identity. Specifically, framing choice as retention (vs. acquisition) increased the importance of person-related features, but only when the primed identity was hiker. Study 2b replicated these results in a lab study that manipulated real (rather than imagined) ownership with a different product category (winter hats).

Next, to test the predicted effects on choice, in Study 3, the identity “audiophile” was primed for all participants. Choice frame was manipulated using study 2a’s manipulation. Participants were then presented with the rating of two headphones along 4 attributes, two person-related and two product-related. Ratings created a tradeoff between the product-related and the person-related attributes (i.e., one set of headphones was rated higher on the person-related features and the other on the product-related features). Participants in the retention (acquisition) choice frame chose which headphones to keep (buy). Finally, all participants rated the self-importance of the identity “audiophile.” Consistent with predictions, data analysis showed that framing choice as retention (vs. acquisition) increased choice in the headphones with higher ratings on person-related features. This effect mainly appeared when the identity “audiophile” was self-important, yielding a significant 2-way interaction. Implications for ownership research and marketing practice are discussed.

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# Growing Up Rich and Insecure Makes Objects Seem Human: Childhood Material and Social Environments Predict Anthropomorphism

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## EXTENDED ABSTRACT

The socioeconomic environments in which people grow up have a lasting influence on how they think and behave. Of unique interest to this research, social class can influence people's preferred strategies of coping with environmental threats and stressors. In particular, people who grow up wealthy are taught to prioritize the self over community, independence over interdependence, and autonomy over relatedness (see Markus and Kitayama 2003 for a review), and their preferred coping strategies reflect these lessons. But, what if these same people also grow up with unmet relationship needs? How do they simultaneously protect their prized autonomy and fulfil their need for relatedness—a motivational quandary that, theoretically, does not exist for people growing up with fewer material resources and more community-oriented models of agency?

Here, we propose that *anthropomorphism may be an especially attractive coping strategy for people who grew up wealthy and insecure in their personal relationships*. Anthropomorphism refers to the attribution of human-like characteristics, motivations, or mental states to nonhuman entities (for a review, see Epley, Waytz, and Cacioppo 2007). From gadgets to brands, people frequently treat nonhuman agents as human-like. Although anthropomorphized objects may seem like inferior relationship partners because they lack human interaction, research has shown that engaging with anthropomorphized objects can not only help people cope with unmet social needs (Chen, Wan, and Levy 2017; Mourey, Olson, and Yoon 2017), but also, some people may actually prefer relationships with objects precisely because they do not require human intimacy (Price and Arnould 1999; Thomson and Johnson 2006; Whelan et al. 2016).

To test this proposition, we investigate the interactive effects of childhood SES and attachment style, which reflects how (in)secure people felt in their relationships with their primary caregivers, on anthropomorphism. Specifically, we hypothesize that people who grew up wealthy and insecurely attached will be the most likely to anthropomorphize. **Study 1** provides initial support for this hypothesis. American adults participated in an online survey. The study began with the Individual Differences in Anthropomorphism Questionnaire (Waytz, Cacioppo, and Epley 2010). Next, participants completed the Experiences in Close Relationships Scale, which examines attachment styles as a function of two dimensions: *anxiety* and *avoidance* (ECR-S; Wei et al. 2007). When individuals are low on both dimensions, they have a *secure* attachment style; when individuals are high in one or both dimensions, they have an *insecure* attachment style.

The study concluded with childhood and current family income. Analyses revealed the predicted three-way interaction between childhood family income, anxiety, and avoidance: childhood family income positively predicted anthropomorphism for those with insecure attachment styles (i.e., when anxiety and avoidance were both high and/or at the mean).

**Study 2** used a longitudinal design to replicate and extend these findings. In particular, we examined whether the increase in anthropomorphism among participants with wealthy childhoods and insecure attachment styles subsequently predicted the likelihood that consumers include important brands as part of their self-concept.

American adults participated in a two-part online survey. Part 1 of the survey consisted of the anxiety and avoidance scales used in study 1 and established three-item measures of childhood and current SES (Griskevicius et al. 2011). Approximately one week later, participants completed the gadget task (Epley et al. 2008), which measures the anthropomorphism of four gadgets, and the Brand Engagement in Self-Concept scale (BESC; Sprott, Czellar, and Spangenberg 2009). Analyses revealed the predicted three-way interaction between childhood SES, anxiety, and avoidance: when participants had insecure attachment styles, childhood SES positively predicted their tendency to anthropomorphize, which subsequently increased the likelihood that they include brands in their self-concept.

**Study 3** sought evidence for our proposed mechanism by examining if the effect of childhood SES is mediated by the extent to which people's parents adopted a family communication style that emphasized the importance of personal autonomy (i.e., a concept-oriented communication style; Grougiou and Moschis 2015; Moschis 1985). American adults participated in a two-part online survey. Part 1 consisted of our predictor variables: the childhood SES, current SES, anxiety, and avoidance scales used in study 2, as well as a four-item measure of concept-oriented communication style (Baker et al. 2016). Approximately one week later, participants completed the gadget task (Epley et al. 2008). Analyses revealed that concept-oriented communication style significantly mediated the effect of childhood SES: when participants had insecure attachment styles, the effect of childhood SES on anthropomorphism via concept-oriented communication style was significant.

These findings make a number of contributions. First, we contribute to a growing body of work examining how childhood SES influences adult consumer behavior (Ahuvia and Wong 2002; Connell, Brucks, and Nielsen 2014; Mittal and Griskevicius 2016; Richins and Chaplin 2015; Whelan and Hingston 2018). To the best of our knowledge, not only are we the first to show that anthropomorphic tendencies vary depending on people's childhood socioeconomic environments, we are also the first to empirically investigate the interactive effect of childhood SES and attachment style on adult psychology. In addition, we answer calls to go beyond childhood SES as "merely a proxy measure" (Mittal and Griskevicius 2014, 633; Whelan and Hingston 2018) and demonstrate that the effect of childhood SES on people's tendency to anthropomorphize is mediated by the extent to which their parents adopted a family communication style that emphasized the importance of personal autonomy.

Last, our findings contribute to growing interest in the root causes of individual differences in anthropomorphic tendencies. To date, most anthropomorphism research has focused on either the extent to which specific nonhuman agents are anthropomorphized, the accuracy of anthropomorphic inferences in describing these agents, or the consequences of anthropomorphism (Waytz, Morewedge, et al. 2010). Consequently, "the psychological determinants that explain and predict variability in the tendency to anthropomorphize" have remained largely unaddressed (Waytz, Morewedge, et al. 2010, 411). Accordingly, our findings suggest that individual differences in the tendency to anthropomorphize arise from differences in childhood material and social environments. Indeed, it's difficult to imagine two more proximal causes.

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# Paying to Purchase a Conversation Topic

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## EXTENDED ABSTRACT

People want to express themselves (Berger and Heath 2008), and signaling research has found that they use products to do so (Escalas and Bettman 2003). However, sometimes people do not want to silently signal to others, they want to talk to them (Kahneman et al. 2004). Can products also play a role in facilitating conversation? Initial evidence suggests they can; displaying some self-relevant products (conversation pieces) increases the likelihood that their owner will have an enjoyable conversation (Wiener, Bettman, and Luce 2015). In this investigation, we look at whether consumers predict that non-self-relevant products can also facilitate conversation, and when they will pay a premium to purchase products that might do so.

We investigate this issue by examining consumers' likelihood to purchase expensive products that are associated with product related stories, such as those about the product's history or making. Importantly, the stories are about the products, rather than the purchaser, and are not self-relevant. We predict that people will pay a premium for a story-associated product if they think they can use it to facilitate conversation.

Conversation facilitation is not the only reason people might pay more for a product with a story. People perceive products with stories more positively (van Laer, Ludwig, and Escalas 2017) and as more authentic (Newman and Dhar 2014). Therefore, we include a situation moderator in all studies: whether the situation allows participants to use the product to facilitate conversation. In studies 1 and 2, we manipulate whether they will use it alone or socially, and in study 3 we manipulate whether they can mention it. We predict that people are more likely to purchase expensive products with stories when they can use them to facilitate conversation than when they cannot.

Study 1 examines whether people are more likely to purchase an expensive product with an interesting story associated with it when they will have the opportunity to use it in a social situation than when they will not. Study 1 ( $n = 245$ ) had a 2 (social v. alone)  $\times$  2 (interesting story v. boring story) between-subjects design. Participants read that they had moved to a new city and were either going to a potluck to meet new people or spending the night alone. Then all participants chose between purchasing a \$21.00 cake with an interesting (boring) story or a \$15.00 cake with no story. In all studies, the interesting story is about the history of their new city—an appealing, but not self-relevant, topic.

There was a marginal interaction between the situation and whether the expensive product had an interesting story ( $p = .074$ ). When the expensive cake had an interesting story, 55% of participants in the social condition, but only 24% percent of participants in the alone condition, purchased it ( $p < .0001$ ). When it had a boring story, there was no effect of situation on purchase (social = 37%, alone = 28%;  $p = .27$ ), suggesting that interesting stories are more valuable in social situations.

In study 2 we replicate the results of study 1 with a different story manipulation and look for mediation. We predict that the additional value of a product with a story in a social situation comes from its ability to facilitate conversation. Therefore participants should predict that they would tell the stories associated with the product in the social situation, and this prediction should mediate the effect of the interaction on likelihood to purchase the expensive product.

Study 2 ( $n = 664$ ) had a 2 (social v. alone)  $\times$  2 (interesting story v. no story) between-subjects design. Study 2 was nearly identical to

study 1, but the expensive cake had either an interesting story or no story. All participants indicated on an 11-point scale how likely they would be to buy the expensive cake. They then answered our key mediator indicating how likely they would be to “tell people some stories about the cake I bought.”

There was a significant interaction between the situation and whether the expensive product had a story ( $p = .036$ ). When the cake had a story, participants were more likely to purchase it in the social condition than alone condition ( $p = .001$ ); there was no effect for situation when it had no story ( $p = .80$ ). The proposed mediator, likelihood to tell stories about the product, showed the same pattern ( $p = .019$ ), and the index of moderated mediation was significant ( $b = -.35$ ; 95% CI  $[-.70--.08]$ ). Likelihood to tell stories mediated the effect of situation on likelihood to purchase the expensive cake when it had a story ( $b = -.21$ ; 95% CI  $[-.45--.02]$ ), but not when it did not ( $b = .14$ ; 95% CI  $[-.06-.36]$ ). Study 2 shows that people's predictions that they would tell others the product's stories are important in leading to their purchase of expensive, story-associated products.

Study 3 replicates the interaction with a cleaner manipulation of the situation. Study 3 ( $n = 453$ ) had a 2 (product-mention allowed or forbidden)  $\times$  2 (interesting story v. no story) between-subjects design. Study 3 was similar to study 2, but for the situation manipulation, all participants attended the potluck, and the potluck rules did or did not allow talking about what you brought. Again participants chose between purchasing an expensive cake with an interesting (no) story or an inexpensive cake with no story on the scale used in study 2.

There was a significant interaction between the situation and whether the expensive cake had a story ( $p < .0001$ ): being allowed to talk about their potluck contribution increased likelihood to purchase the expensive cake when the expensive cake had a story ( $p < .0001$ ), but not when it did not ( $p = .24$ ).

In three studies, we show that people are willing to pay a premium to purchase products that are associated with interesting, conversation-facilitating stories when they can use the product in a social situation, providing preliminary evidence that the ability to foster, even non-self-relevant, conversations is a source of value to consumers.

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# A Model of Consumer Self-Regulation Failure

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## EXTENDED ABSTRACT

Self-regulation is fundamental to consumers' ability to achieve their goals. Most existing self-regulation models focus on the psychological processes that promote goal-consistent behavior. These models often assume that when individuals are motivated and have the ability to regulate their behavior, they are more likely to act consistently with their goals (Shiv and Fedorikhin 1999). However, there is abundant evidence that external factors can lead to self-regulation failures, even when consumers are sufficiently motivated and have the ability to self-regulate. Thus, a more complete model of consumer self-regulation is needed to account for how consumers respond to external factors.

The current research introduces a model of consumer self-regulation failure that explains how external factors shape consumers' ability to act consistent with their goals and when these factors are more likely to undermine self-regulation. The model proposes that many self-regulation failures occur because two processes involved in self-regulation (performance monitoring and the inhibition of behavior) make consumers more likely to rely on external cues.

A key process involved in self-regulation is performance monitoring, which involves a comparison of behavior (past or current) with a desired end state (Carver and Scheier 1990). During this process, however, consumers may disengage from the goal, if they perceive that the goal has been achieved or violated in some way. While consumers often determine goal achievement or failure by explicitly tracking their goal performance, consumers also rely on external cues associated with goal achievement and failure. Thus, when these cues are present, people who are more engaged in performance monitoring during efforts at self-regulation should act more inconsistently with their goals.

Even when consumers are sufficiently motivated to pursue their goals, effective self-regulation requires the inhibition of responses that undermine goal pursuit. When consumers inhibit alternatives that are inconsistent with a goal, they are more likely to behave consistently with the goal (Förster and Liberman 2007). However, the process of inhibiting behavior may also undermine self-regulation because inhibition not only makes consumers more sensitive to threats, but it also makes them more sensitive to rewards. Thus, self-regulation efforts should be more likely to fail when external factors either reduce the perception of threat or increase consumers' attention to rewards.

The purpose of study 1 was to demonstrate that performance monitoring makes consumers more susceptible to cues associated with goal failure. This was investigated by examining how the presence of credit card debt, which is associated with goal failure (Wilcox et al. 2011), influences spending. Whether or not consumer had credit card debt was made salient to them prior to participating in an auction where they submitted bids on products. The extent to which they engaged in performance monitoring during the auction was then measured. As expected, participants who were highly focused on performance monitoring who had debt submitted higher bids than those who did not have debt. Spending did not differ between those who did (vs. did not) for those who were less focused on performance monitoring.

The objective of study 2 was to demonstrate that performance monitoring makes consumers more susceptible to cues of goal achievement. Specifically, it examined whether performance monitoring would moderate consumers' response to incidental pride,

which has been shown to induce a sense of goal achievement that reduces self-regulation (Wilcox et al. 2011). Participants wrote about a "pride" experience or their typical day (control group). They then participated in the same auction as study 1. As predicted, participants who experienced pride submitted higher bids than the control group when they were highly focused on performance monitoring. Pride did not influence spending for those who were less focused on performance monitoring.

Study 3 sought to demonstrate that the inhibition of behavior makes consumers more susceptible to external cues that reduce the perception of goal threat. Based on previous research which finds that using a currency with a small nominal value is less threatening to spending goals (Raghubir and Srivastava 2002), it was predicted that when consumers used a currency with small (large) nominal value they would be less (more) likely to regulate their spending, an effect that would be strongest for participants focused on inhibiting their behavior. Participants submitted bids in an auction using a new currency where the nominal value was set at either a multiple (large nominal value) or a fraction (small nominal value) of the US dollar. As expected, participants submitted higher bids when the nominal value was small (vs. large) when they were highly focused on inhibiting their behavior. Spending did not differ between conditions for those who were less focused on inhibition.

Study 4 sought to demonstrate that the more focused consumers are on inhibiting their behavior, the more likely their self-regulation will be undermined by reward cues. Based on previous research that demonstrates that the decision to reject (vs. choose) options makes people more likely to elaborate on hedonic features during a decision (Dhar and Wertenbroch 2000), it was predicted that consumers would be more likely to select a higher priced option with more hedonic benefits when they rejected (vs. chose), an effect strongest for participants highly focused on inhibiting their behavior. Participants made a decision between two apartments to rent: one that was affordable, but not close to entertainment options and one that was more expensive, but close to entertainment options. Participants in the rejection (choice) condition were asked to decide which apartment to reject (choose). As predicted, participants were more likely to select the more expensive, but hedonically rewarding apartment when they rejected (vs. chose), but this effect primarily emerged for consumers who were highly focused on inhibiting their behavior.

This research contributes to existing models of self-regulation by integrating situational factors and the decision context into self-regulatory efforts. While other models suggest that external factors can reduce consumers' ability to regulate their behavior, many of these models focus on external constraints on mental resources. The current model suggests that in addition to the amount of resources consumers have available, their interpretation of the environment also plays a critical role in self-regulation efforts.

## INTRODUCTION

Self-regulation is fundamental to consumers' ability to achieve their goals. It allows them to save for retirement, adhere to social standards and maintain their health (Fishbach and Shah 2006). Self-regulation failures are associated with a number of harmful behaviors including overspending, unhealthy eating and procrastination. Thus, understanding the factors that lead consumers to fail to regulate their behavior is important because self-regulation is a significant mechanism for maintaining well-being.

Most existing self-regulation models focus on the psychological processes that promote goal-consistent behavior. These models often assume that when individuals are motivated and have the ability to regulate their behavior, they are more likely to act consistently with their goals (e.g., Baumeister, Vohs and Tice 2007; Shiv and Fedorikhin 1999). However, there is abundant evidence that external factors can lead to self-regulation failures, even when consumers are sufficiently motivated and have the ability to self-regulate (e.g., Fishbach and Dhar 2005). Thus, a more complete model of consumer self-regulation is needed to account for how consumers respond to external factors.

The current research introduces a model of consumer self-regulation failure that explains how external factors shape consumers' ability to act consistent with their goals and when these factors are more likely to undermine self-regulation.

## A MODEL OF CONSUMER SELF-REGULATION FAILURE

### *The Model*

As Figure 1 shows, a precondition for self-regulation is that consumers must perceive a conflict between a goal and a competing alternative (Myrseth and Fishbach 2009). Whether it is the consideration of a temptation or the presence of alternative goals, goal conflict initiates the need for self-regulation.

Once consumers experience goal conflict, the model proposes that consumers' behavior is influenced by two self-regulatory processes: performance monitoring and the inhibition of behavior. Performance monitoring refers to the monitor of past and current behavior relative to a standard to ensure that behavior is consistent with a focal goal (Carver and Scheier 1990). Inhibition of behavior refers to the suppression of responses (e.g., thoughts and actions) that threaten goal pursuit (Förster and Liberman 2007). If individuals monitor their performance and inhibit their behavior, this often results in goal-consistent behavior.

Environmental factors and decision context factors, however, can undermine self-regulation by serving as external cues. These factors result in goal-inconsistent behavior by serving as cues of goal achievement, goal failure, goal threat and reward. Performance monitoring makes consumers more likely to rely on cues related to goal attainment and goal failure. The inhibition of behavior makes consumers more reliant on cues related to goal threat and reward.

In sum, the model proposes that many self-regulation failures occur because two processes involved in self-regulation (performance monitoring and the inhibition of behavior) make consumers more likely to rely on external cues. Testable hypotheses are developed next.

### *Performance Monitoring*

A key process involved in performance monitoring is the detection of goal discrepancies, which involves a comparison of behavior (past or current) with a desired end state. When consumers detect that their behavior is discrepant with their goals, they adjust their behavior to ensure that it is consistent with their goals. During this process, however, consumers may disengage from the goal, if they perceive that the goal has been achieved or violated in some way.

Consumers often determine goal achievement or failure by explicitly tracking their goal performance. However, research demonstrates that consumers also rely on external cues associated with goal achievement and failure. For instance, consumers are less likely to regulate their behavior when they derive a sense of achievement from environmental and decision context factors such as acts of charity (Khan and Dhar 2006) and the composition of a choice set (Wilcox et al.

2009). Similarly, environmental factors associated with goal failure, such as missing deadlines (Soman and Cheema 2004), can undermine self-regulation. Moreover, simply anticipating failure due to environmental factors can undermine self-regulation (Bandura 1986).

The implication of these findings is that performance monitoring should make consumers more likely to rely on external cues associated with goal achievement and goal failure. Thus, when these cues are present, people who are more engaged in performance monitoring during efforts at self-regulation should act more inconsistently with their goals. While this proposition has not been empirically tested, indirect support comes from research demonstrating that consumers high in self-control, who should be more focused on monitoring their behavior, are more susceptible to external factors associated with goal achievement and goal failure (Wilcox et al. 2009; Wilcox et al. 2011).

*Hypothesis 1*    *The more focused consumers are on performance monitoring during efforts at self-regulation, the more likely their self-regulation will be undermined by external cues associated with goal achievement.*

*Hypothesis 2*    *The more focused consumers are on performance monitoring during efforts at self-regulation, the more likely their self-regulation will be undermined by external cues associated with goal failure.*

### *Inhibition of Behavior*

Even when consumers are sufficiently motivated to pursue their goals, effective self-regulation requires the inhibition of responses that undermine goal pursuit. Inhibition involves directing attention away from information that might interfere with the pursuit of a focal goal (Förster and Liberman 2007). When consumers inhibit alternatives that are inconsistent with a goal, they are more likely to behave consistently with the goal.

However, the process of inhibiting behavior may also undermine self-regulation because inhibition not only makes consumers more sensitive to threats, but it also more sensitive to rewards (Gendall et al. 1998; Jappe et al. 2011). Thus, self-regulation efforts should be more likely to fail when external factors either reduce the perception of threat or increase consumers' attention to rewards. Consistent with this perspective research finds that chronic dieters, who tend to be more focused on inhibiting food responses, are more likely to overeat in the presence of external cues, such as smaller package sizes (Scott et al. 2008), indicating that a food item is less threatening. Additionally, chronic dieters have been shown to be less likely to regulate their food intake because of more accessible thoughts about food (Gendall et al. 1998).

*Hypothesis 3*    *The more focused consumers are on inhibiting their behavior during efforts at self-regulation, the more likely their self-regulation will be undermined by external cues that reduce the perception of goal threat.*

*Hypothesis 4*    *The more focused consumers are on inhibiting their behavior during efforts at self-regulation, the more likely their self-regulation will be undermined by external cues associated with rewards.*



## STUDY 1

The purpose of study 1 was to demonstrate that performance monitoring makes consumers more susceptible to cues associated with goal failure (H1). This was investigated by examining how the presence of credit card debt, which is associated goal failure (Wilcox et al. 2011), influences spending.

### *Participants and procedure*

153 participants from an online panel were recruited for a small payment ( $M_{\text{Age}} = 36$ ; 46% female). After completing several demographic questions, participants were asked to indicate whether they currently had credit card debt (yes/no). Thus, goal failure was made salient before participants attempted to regulate their spending. Afterwards, participants were instructed that the purpose of the study was to test a new auction web site and that they would be making actual bids on products. They then submitted bids on two products: a digital camera and a fitness tracker.

Afterwards, performance monitoring was measured on a two-item scale that asked participants the extent to which they monitored their performance [progress] relative to their spending goals while making their bids (1 = "not at all" and 7 = "very much",  $r = .75$ ). Inhibition of behavior was then measured on a two-item scale by having them indicate how focused they were on inhibiting [controlling] their behavior while making their bids (1 = "not at all" and 7 = "very much",  $r = .84$ ). Inhibition of behavior was measured to rule out the possibility that other processes involved in self-regulation may moderate consumers' response to goal failure.

### *Results*

The predicted debt by performance monitoring interaction was significant ( $t(149) = 2.14, p = .03$ ). Consistent with hypothesis 1, a floodlight analysis found that participants who had debt submitted higher bids than those who did not have debt for performance monitoring scores above 4.49. Spending did not differ between those who did (vs. did not) have debt for scores below this threshold. A similar analysis with inhibition of behavior did not find that it moderated the effect of debt on spending (interaction:  $t(149) = .62, p = .54$ ).

## STUDY 2

The objective of study 2 was to demonstrate that performance monitoring makes consumers more susceptible to cues of goal achievement (H2). Specifically, it examined whether performance monitoring would moderate consumers response to incidental pride, which has been shown to induce a sense of goal achievement that reduces self-regulation (Wilcox et al. 2011).

### *Participants and procedure*

150 participants from an online panel were recruited ( $M_{\text{Age}} = 35$ ; 45% female). Participants were instructed that they would be participating in two unrelated studies. The first study manipulated pride by having participants write about a "pride" experience or their typical day (control group). The second study was the same auction from study 1 that included the same measures of performance monitoring ( $r = .73$ ) and inhibition of behavior ( $r = .86$ ).

### *Results*

The predicted pride by performance monitoring interaction was significant ( $t(146) = 2.06, p = .04$ ). In support of hypothesis 2, a floodlight analysis found that participants who experienced pride submitted higher bids than those in the control group for performance monitoring scores above 4.43. Spending did not differ between those who did (vs. did not) experience pride for any score below this threshold. The inhibition of behavior did not moderate the effect of pride on spending (interaction:  $t(146) = -.20, p = .84$ ).

## STUDY 3

Study 3 sought to demonstrate that the inhibition of behavior makes consumers more susceptible to external cues that reduce the perception of goal threat (H3). Based on previous research which finds that using a currency with a small nominal value is less threatening to spending goals (Raghubir and Srivastava 2002), it was predicted that when consumers used a currency with small (large) nominal value they would be less (more) likely to regulate their spending, an effect that would be strongest for participants focused on inhibiting their behavior.

### *Participants and Procedure*

152 participants from an online panel were recruited for a small payment ( $M_{\text{Age}} = 36$ ; 49% female). Participants were instructed that they would be testing a new auction web site that would require them to make bids using a new currency where the nominal value was set at either a multiple (large nominal value) or a fraction (small nominal value) of the US dollar. Participants then placed bids on the same products and completed the same measures of performance monitoring ( $r = .76$ ) and inhibition of behavior ( $r = .85$ ) as previous studies.

### *Results*

The predicted nominal value by inhibition of behavior interaction was significant ( $t(148) = 2.54, p = .01$ ). Supporting hypothesis 3, a floodlight analysis found that participants submitted higher bids when the nominal value was small (vs. large) for inhibition of behavior scores above 5.41. Spending did not differ between nominal value conditions for any score below this threshold. Performance monitoring did not moderate the effect of the nominal value on spending (interaction:  $t(148) = -.51, p = .61$ ).

## STUDY 4

Study 4 sought to demonstrate that the more focused consumers are on inhibiting their behavior, the more likely their self-regulation will be undermined by reward cues (H4). Based on previous research that demonstrates that the decision to reject (vs. choose) options makes people more likely to elaborate on hedonic features during a decision (Dhar and Wertenbroch 2000), it was predicted that consumers would be more likely to select a higher priced option with more hedonic benefits when they rejected (vs. chose). However, this effect was predicted to be strongest for participants highly focused on inhibiting their behavior.

### *Participants and Procedure*

200 participants from an online panel were recruited for a small payment ( $M_{\text{Age}} = 37$ ; 44% female). Participants were instructed that they were deciding between two apartments to rent: one that was affordable, but not close to entertainment options and one that was more expensive, but close to entertainment options. Participants in the rejection (choice) condition were then asked to decide which apartment to reject (choose). Participants then completed the same measures of performance monitoring ( $r = .74$ ) and inhibition of behavior ( $r = .87$ ) as previous studies.

### *Results*

The predicted decision framing by inhibition of behavior interaction was significant (Wald  $\chi^2 = 22.40, p < .001$ ). In support of hypothesis 4, a floodlight analysis found that participants were more likely to select the more expensive, but hedonically rewarding apartment when they rejected (vs. chose) for any inhibition of behavior scores above 4.59. Selection of the expensive apartment did not differ between nominal value conditions for any score below this threshold. Performance monitoring did not moderate the effect

of the framing of the decision on spending (interaction: Wald  $\chi^2 = 1.24, p = .27$ ).

## DISCUSSION

This research introduces and tests a model of self-regulation failure that explains how external factors influence consumers' efforts to regulate their behavior. The model proposes that environmental factors and decision context factors can undermine self-regulation by serving as external cues for goal achievement, goal failure, goal threat and rewards. The results of four studies demonstrates that self-regulation failures often occur because two key processes that typically facilitate self-regulation, performance monitoring and the inhibition of behavior, make consumers more likely to rely on these external cues.

This model contributes to existing models of self-regulation by integrating situational factors and the decision context into self-regulatory efforts. While other models suggest that external factors can reduce consumers' ability to regulate their behavior, many of these model focus on external constraints on mental resources. The current model suggests that in addition to the amount of resources consumers have available, their interpretation of the environment also play a critical role in self-regulation efforts.

This research has implications for policy makers and companies who want to facilitate Self-regulation by suggesting ways to improve consumers' ability to stick to their goals. If self-regulatory efforts are shaped by how consumers think about their environment, self-regulation efforts should be improved by designing interventions that train consumers on more effective ways to respond to their environment.

One limitation of this research is that it only examines consumers' response to goal conflict in situations that involve tradeoffs between temptations and long-term goals. However, this model should also apply to other self-regulation contexts where goal conflict does not necessarily involve temptation. Nevertheless, future research is necessary to explore whether the same predictions hold in other self-regulation contexts.

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# Is Warm Always Trusting? The Effect of Seasonality on Trustworthiness

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## EXTENDED ABSTRACT

Sensory marketing has shown that non-conscious triggers and sensory experiences influence consumers' perceptions, judgments, and behaviors (Krishna 2012). The current work focuses on temperature and how it subsequently affects perceptions of trustworthiness. Past research often suggests warm (vs. cold) ambient temperatures increase feelings of social proximity (IJzerman and Semin 2009), and more directly, that warm temperatures increase interpersonal trust (Kang et al. 2011).

We contend that ambient temperature is only part of the story. We incorporate research on thermoregulation, the need to maintain a core internal temperature for survival (Tavassoli 2009). Bruno, Melnyk, and Volckner (2017) found that when consumers were physically cold (warm) they perceived emotionally warm (cold) stimuli more positively. Thus, although past research has focused on ambient temperature in an absolute sense, it has yet to examine the effect in a relative sense (e.g., interaction of seasonality and indoor temperature). In the context of evaluating trust in service providers, we demonstrate that an unexpected ambient indoor temperature that contrasts with the temperature outside affects consumers' trust.

## STUDY 1: LONGITUDINAL STUDY

Study 1 was conducted longitudinally to investigate whether trust and inside temperature are affected by the summer season. Using the same MTurk participants over time allowed us to ensure that temperature variations were consistent within person. We predicted that, in contrast to prior research, consumers would be more trusting when it is colder inside.

The study was conducted over a two-month period (June-August). The initial survey was sent to 600 participants and 221 remained at its conclusion (42% female, median age=34). Five consumer scenarios, all focusing on service providers, were randomly presented to each participant, approximately every two weeks. Participants rated how trustworthy the representative in the scenario appeared and the actual inside temperature of their current location.

A fixed effects regression found a marginally significant *negative* relationship between trust and inside temperature ( $b = -0.02, p = .065$ ). This finding provides preliminary evidence that during the summertime, when it is colder inside, individuals are more trusting of service providers.

## STUDY 2: SEASONALITY, TEMPERATURE, AND TRUST AT THE DENTIST

Study 2 examined the interaction between seasonality and inside temperature in a medical domain. We designed an experiment which varied the temperature inside a dentist's office and the season. We predicted that if the inside temperature at the dental office did not stabilize a person's core temperature, trust in the dentist would be lower.

Students ( $n = 234$ , 47% female, median age=19) completed the study. Six participants failed an attention check, leaving 228 participants. In a 2 (inside temperature: warm, cold) x 2 (season: summer, winter) design, participants imagined they were heading to their dental cleaning. The waiting room was described as either very warm or freezing cold.

Participants then completed trust measures modified from Mayer and Davis (1999) on three dimensions: ability, benevolence, and integrity. Participants rated each statement on a 7-point scale (1 = strongly disagree, 7 = strongly agree). Finally, we asked two manipulation check questions, which confirmed the success of the temperature manipulation.

An average trust score was calculated: ability ( $\alpha = .980$ ), benevolence ( $\alpha = .976$ ), and integrity ( $\alpha = .821$ ). Neither the main effect of temperature ( $F(3, 222) = 1.055, p = .369$ ) nor season ( $F(3, 222) = .370, p = .774$ ) was significant. There was a marginally significant interaction between temperature and season on overall trust,  $F(3, 222) = 2.12, p = .098$ . Importantly, ability, benevolence, and integrity individually all showed a significant temperature by season interaction: ability,  $F(1, 224) = 4.83, p = .029$ , benevolence  $F(1, 224) = 6.17, p = .014$ , and integrity  $F(1, 224) = 4.77, p = .03$ .

In winter, trust did not differ whether it was warm or cold inside. However, in summer, trust ratings were significantly higher when it was cold inside the office compared to warm: ability ( $M_w = 4.61, M_c = 5.10, p = .02$ ), benevolence ( $M_w = 4.13, M_c = 4.74, p = .007$ ), and integrity ( $M_w = 3.98, M_c = 4.53, p = .006$ ). This contradicts prior research findings – here, cold temperatures in the summertime led to higher trust ratings.

## STUDY 3: SEASONALITY, TEMPERATURE, AND TRUST AT A RESTAURANT

Similar to the design of study 2, temperature inside a restaurant was manipulated. We predicted that trust would be highest when the inside temperature met the expectations of the consumer, subconsciously aiding thermoregulation.

MTurk participants ( $n = 244$ , 50% female, median age=36) were randomly assigned to one of four conditions – season (summer/winter) and inside temperature (cold/warm) in a 2x2. As in study 2, participants completed trust measures modified from Mayer and Davis (1999). A manipulation check question confirmed the manipulation.

An average trust score was calculated for ability ( $\alpha = .894$ ), benevolence ( $\alpha = .908$ ), and integrity ( $\alpha = .790$ ). A 2(temperature: warm vs. cold) x 2(season: summer vs. winter) on the three trust measures indicated a marginal main effect of temperature ( $F(3, 238) = 2.24, p = .08$ ). The main effect of season was not significant ( $F(3, 238) = 1.48, p = .22$ ). These main effects were qualified by a significant interaction between temperature and season,  $F(3, 238) = 3.65, p = .01$ . Each element of trust had a significant temperature by season interaction: ability  $F(1, 240) = 7.58, p = .006$ , benevolence  $F(1, 240) = 10.52, p = .001$ , and integrity  $F(1, 240) = 9.99, p = .002$ . In the summer, there was not a significant difference when the restaurant was warm or cold. However, in winter, the trust measures were significantly affected by indoor temperature. Trust was higher when it was warm inside the restaurant compared to cold: ability ( $M_w = 5.13, M_c = 4.37, p < .001$ ), benevolence ( $M_w = 4.65, M_c = 3.79, p < .001$ ), and integrity ( $M_w = 4.43, M_c = 3.79, p < .001$ ). In this domain, the findings are consistent with prior research that warm temperatures engender feelings of trust. However, we did not find this to be true in the summer scenario. These findings broaden our understanding of temperature and trust – warm does not always positively boost trust.

## DISCUSSION

While previous research has consistently demonstrated a positive relationship between warmth and closeness/trust, we show that a boundary exists. The trustworthiness of a retailer/service provider is reduced when season and inside temperature are not what the consumer expects.

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# “I Desire A Brand When I See How They are Different from Me”: Differential Effects of Blatant and Subtle Brand Rejection

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## EXTENDED ABSTRACT

People choose brands to express their self-concepts (Carroll and Ahuvia, 2006, pp. 82). When the brand they aspire to does not consider them as valuable consumers, they feel being rejected. In this work, we conceptualize two forms of communication strategies of brand segmentation—blatant and subtle mode of brand rejection and distinguish their effects on consumers' brand desire.

In prior work, blatant prejudice is to avoid any contact with out-group members, whereas subtle prejudice is to emphasize cultural differences between groups (e.g., Hamburger and Hewstone, 1997). We conceptualize Blatant Brand Rejection (BBR) as a market segmentation that emphasizes consumers are “not good enough,” and consumers get a direct and explicit signal that they are not wanted by this brand as one of its important consumers. Subtle Brand Rejection (SBR), by contrast, emphasizes the brand's target consumers, and consumers get an indirect, concealed, and implicit signal that they are different from the target consumers.

Both SBR and BBR reject “unwanted” brand recipients, but we argue that they have different effects on consumers' psychological and behavioral reactions. When consumers pursue a brand but encounter BBR, the explicit signal is a threat to their positive self-concept, activating defense mechanism (Baumeister, Dale and Sommer, 1998) and making consumers to avoid the rejecting brand. Whereas, encountering a subtle mode of rejection from a brand, consumers tend to compare themselves with the target consumers. When the target consumers are perceived to be a higher standard, this aspiration effect motivates consumers to (1) decrease the “distance” (e.g., Van, Pecher, and Zwaan, 2008), and (2) work harder to join the group of target consumers (e.g., Park, Young and Eastwick, 2015).

However, this positive effect of SBR is contingent on the attainability of group standards (Dyczewski and Markman, 2011). When the perceived attainability of becoming a group member is low, a sense of self efficacy and self control is threatened (Coffee, Rees and Haslam, 2009). This threat will reduce their brand desire as defense mechanism. Therefore, we hypothesize that

*Hypothesis 1* SBR (vs. BBR) will increase (vs. decrease) brand desire of a rejecting brand, when the brand is perceived to be attainable. The positive effect of SBR is mitigated when consumers perceive the rejecting brand is unattainable.

*Hypothesis 2* SBR (vs. BBR) will increase (vs. decrease) brand desire of a rejecting brand, when the brand is perceived to be attainable, mediated by their increased (vs. decreased) belonging needs to the target consumers.

Study 1. It is a 3 (BBR vs. SBR vs. neutral) by 2 (perceived attainability: high vs. low) between subject study. 297 university students (Mage = 20.6, Male: 50.5%) were recruited in an online study. A hotel brand unknown to subjects is adopted. In the BBR condition: “Based on our analysis of your information, unfortunately, you are not a target consumer of Banyan Tree Restaurant & Hotel.” In the SBR condition, participants were shown some information about

Banyan Tree's target consumers, which was pretested to be different from the university students. In the control condition, participants were told to complete a questionnaire. Next, all participants were measured their brand desire (Gountas, et al., 2012), perceived attainability of the rejecting brand, manipulation check and demographic questions.

Compared with the control group, both BBR and SBR make participants feel they are being rejected ( $M_{BBR} = 3.95$ ,  $M_{control} = 2.37$ ,  $p < .000$ ;  $M_{SBR} = 3.19$ ,  $M_{control} = 2.37$ ,  $F(1, 198) = 21.45$ ,  $p < .000$ ). BBR is perceived as more explicit than SBR, ( $M_{BBR} = 4.67$ ,  $M_{SBR} = 3.26$ ,  $p < .000$ ). Interaction results supporting our hypothesis 1, that the effect of brand rejection on brand desire is moderated by perceived attainability ( $t = -1.99$ ,  $p < .05$ ).

Study 2. First, 284 American participants ( $M_{age} = 38$ , Male: 40%) recruited online were told that Parliament Pub is a local political-themed pub for the \_\_\_\_ Party (this blank was customized based on participants' choice about their supporting Party). Second, participants were randomly assigned to complete one of two surveys relevant to their volunteer (vs. work) experience with the \_\_\_\_ Party. A pretest revealed that to have volunteer (vs. work) experience for a Party was considered more attainable ( $M_{volunteer} = 5.92$ ,  $M_{work} = 5.10$ ,  $p < .000$ ). After that, participants were then randomly assigned to one of three conditions: BBR, SBR, or control, as similarly manipulated in Study 1. Finally, brand desire, Want-to-Pay (WTP), manipulation check, and demographic questions were measured.

When the rejecting brand was perceived as attainable (vs. unattainable), SBR (vs. BBR) led to an increased brand desire ( $M_{SBR} = 5.17$ ,  $M_{BBR} = 3.45$ ,  $t = -3.37$ ,  $p < .001$ ) and WTP ( $M(\log WTP)_{SBR} = 1.57$ ,  $M(\log WTP)_{BBR} = 1.09$ ,  $t = -2.17$ ,  $p < .05$ ). Furthermore, the attainable (vs. unattainable) SBR even generated more brand desire and WTP than control group ( $M_{SBR} = 5.17$ ,  $M_{control} = 4.32$ ,  $t = -2.20$ ,  $p < .05$ ;  $M(\log WTP)_{SBR} = 1.57$ ,  $M(\log WTP)_{control} = 1.15$ ,  $t = -3.13$ ,  $p < .005$ ).

Study 3. To test the mediation effect of need for belongingness, this study replicated study 2 except that the control condition was dropped and another variable—measurement order—was added. We predicted that participants whose brand desire was measured first would show the same results as in Study 2, while participants whose belonging needs were measured first would have no increase in brand desire (White, Argo, and Sengupta, 2012), because the activated belongingness to other groups is one coping mechanism of threat (Knowles and Gardner, 2008) and the affirmation of self-concept (Cohen et al., 2000). Results supported the hypothesis that the brand desire of consumers who experiencing attainable SBR decreased significantly when belong need was measured first than when it was measured after brand desire ( $F(1, 98) = 7.08$ ,  $p < .01$ ). The opposite pattern was observed when belong need was measured after brand desire ( $M_{SBR} = 4.77$ ,  $M_{BBR} = 2.98$ ,  $p < .000$ ). The results of Want-to-Pay (WTP) indicated a similar pattern. Therefore, belong needs mediate the interaction effect of mode of rejection and perceived attainability on brand desire and WTP.

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# The Slippery Slope of Green Consumption: The Nonlinear Effects of Social Class

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## EXTENDED ABSTRACT

As environmental issues grow increasingly acute, more research is needed to understand the impact of individuals' behaviors on sustainability. Given that green consumption can reflect status differentiation (Griskevicius et al. 2010), and social class serves as a dimension of consumer distinctiveness (Grier and Deshpandé 2001), we propose that social class, as a means of consumer differentiation, will influence their propensity for green consumption.

Social class is defined as a combination of individuals' material resources (i.e., income, education, and job status), and self-perceptions of their own rank in the society vis-à-vis others (Kraus et al. 2012). It has profound psychological and cultural effect on individuals' feelings, thoughts, and behaviors (Grossmann and Huynh 2013). However, scant research has examined how social class shapes consumer behaviors (Shavitt et al. 2016; Yoon and Kim 2018).

The present research proposes a nonlinear (i.e., inverted U-shaped) effect of social class on green consumption, such that individuals at the middle position of the class continuum show greater green propensity than those at the lower or upper position (H1). Although striving for a higher social rank is a fundamental motive for individuals, the means for rank advancement differ (Belmi and Laurin 2016). Specifically, lower-class individuals believe that they need to make prosocial contributions to advance their status, and are thus driven by social acceptance for green consumption (H2a). However, as the intrinsic benefits associated with social hierarchy grow exponentially, individuals proximal to the top attach more importance to justifying their advantaged standing using ideological means such as essentialism. Essentialism refers to the belief that social class category is predetermined and immutable, and such ideology helps to justify disparities in social rank (Kraus and Keltner 2013). Thus, we propose that essentialism would demotivate individuals from engaging in green consumption (H2b). Finally, we propose that individuals' belief in a just world (BJW) moderates the nonlinear effect of social class on green consumption (H3). BJW refers to the belief that the world is a just place where people deserve what they get and get what they deserve (Lerner 1980). We suggest that high BJW promotes individuals' acquiescence of perceived differences in social class, which attenuates the nonlinear effects of social class difference on green consumption.

We tested our hypotheses in four experiments. **Experiment 1** examined the main effect of social class (H1). **Experiment 1** used a 3 (primed social class: lower vs. middle vs. upper)  $\times$  2 (product greenness: green vs. regular) between-participants design. A 3  $\times$  2 ANOVA revealed only a significant interaction effect of social class and product greenness ( $p < .05$ ). Decomposing the interaction showed that social class significantly influenced purchase intentions for the green product ( $p < .05$ ), but not for the regular product ( $p > .20$ ). Importantly, polynomial contrast showed a significant quadratic effect of social class on purchase intention for the green product ( $p < .001$ ), but no linear effect ( $p > .50$ ). Specifically, participants in middle-class condition showed higher purchase intention for the green product than those in the lower-class ( $p < .05$ ) and upper-class conditions ( $p < .05$ ). In contrast, the three class conditions were not significantly different in purchase intentions for the regular product (all  $ps > .14$ ). Thus, H1 was supported. For all studies, controlling for the objective social class indicators (i.e., income, education) and other covariates

(e.g., political ideology, religiosity, and ethnicity) did not change the results.

**Experiment 2** provided process evidence for the nonlinear mediation effect of social acceptance at the lower level of social class (H2a). It used a one factor (product greenness: regular vs. green) between-participants design. Social class was measured as a continuous variable. A moderated hierarchical regression analysis showed a significant and negative quadratic-by-linear effect of  $SC^2 \times$  product greenness on purchase intention ( $\beta = -.72, p < .05$ ) after controlling for the effects of the linear terms and covariates. Decomposing the quadratic-by-linear interaction showed that the nonlinear effect of social class was significant and negative for the green product ( $\beta = -.37, p < .01$ ), but not significant for the regular product ( $p > .50$ ). MEDCURVE analysis (Hayes and Preacher 2010) revealed a significant and negative effect of the quadratic term ( $SC^2$ ) on social acceptance ( $b = -.24, p < .05$ ), which was positively related to purchase intention ( $b = .25, p < .01$ ). Analyses of the instantaneous indirect effect ( $\theta$ ) at lower (-1 SD) and higher (+1 SD) levels of social class revealed that social acceptance could explain the positive effect at the lower level of social class ( $\theta = .21, 95\% CI = .057, .476$ ), but not at the higher level of social class ( $95\% CI = -.092, .112$ ), which supported H2a.

**Experiment 3** examined the mediating effect of essentialism at the higher level of social class (H2b). It used a one factor (product greenness: regular vs. green) within-participant design. Social class was measured as a continuous variable using subjective SES. Regression with both linear and quadratic terms ( $SES$  and  $SES^2$ ) in the equation showed a significant and negative effect of  $SES^2$  on preference for green product ( $SES: \beta = .08, p > .14, SES^2: \beta = -.14, p < .05$ ). MEDCURVE analysis revealed a significant and positive effect of  $SES^2$  on essentialism ( $b = .04, p < .05$ ), which was negatively related to preference for the green product ( $b = -.23, p < .05$ ). Analyses of the instantaneous indirect effect showed that essentialism could explain the negative effect at the higher level of social class ( $\theta = -.05, 95\% CI = -.128, -.008$ ), but not at the lower level of social class ( $95\% CI = -.170, .064$ ), supporting H2b.

**Experiment 4** tested the overall model and the moderating effect of BJW using a similar design as experiment 3. Moderated regression results revealed a significant and negative effect of  $SES^2$  ( $\beta = -.20, p < .01$ ), and a significant and positive quadratic-by-linear effect of  $SES^2 \times$  BJW on preference for the green product ( $\beta = .20, p < .05$ ). Further analysis of the quadratic-by-linear interaction indicated that the effect of  $SES^2$  was significant at low BJW ( $b = -.19, p < .001$ ), but not at high BJW ( $p > .50$ ). Thus, H1 and H3 were supported. MEDCURVE analyses showed that social acceptance could explain the positive effect at the lower level of social class ( $\theta = .04, 95\% CI = .000, .111$ ) while essentialism could explain the negative effect at the higher level of social class ( $\theta = -.05, 95\% CI = -.104, -.001$ ), supporting H2a and H2b.

Taken together, four experiments using varying products and designs provided consistent evidence for the nonlinear effect of social class on green consumption, as explained by social acceptance and essentialism, and moderated by BJW. This curvilinear result can help reconcile conflicting findings in the literature based on the two-level approach. In particular, it addresses the middle class, an under-theorized social category, which is a powerful category for self-iden-

tification and plays an important role in economic growth, political transformation, and social restructuring in many societies. In sum, our findings contribute to the literature on consumer differentiation, social class and sustainable consumption, as well as have important practical implications.

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# Do You Trust the System? Interaction Effect between Perceived Economic Mobility and Socioeconomic Status on Fair Market Ideology and Consumer Responses

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## EXTENDED ABSTRACT

The increasing inequality of wealth in modern societies may limit the ability of low socioeconomic status (SES) consumers to achieve a higher SES. Although there have been extensive studies on inequality and SES in the fields of psychology and economics, scant research has examined how consumer SES and perceived economic mobility (PEM) jointly influence decisions (Yoon and Kim 2016, 2018).

On the basis of system justification theory, the author predicts that high-PEM consumers have a higher degree of fair market ideology (FMI) than other consumers (Jost et al. 2003). High FMI leads to various responses, including higher price–quality relationship beliefs and even the rejection of government health policies. FMI, defined as the tendency to view market-based processes and outcomes as legitimate and just, is a cognitive underpinning of economic system justification. People with high FMI have a high propensity to defend and justify the existing economic system. The author argued that consumers with high PEM would report higher FMI than those with low PEM, because consumers with high PEM rely on the current economic system to provide resources and opportunities to move upward in the economic hierarchy. This argument is consistent with recent findings in social psychology (Day and Fiske 2017).

In the current study, it was predicted that the effect of PEM on FMI would be stronger for consumers with a low SES. This is because, compared with high-SES consumers, low-SES consumers have fewer resources with which they can secure future wellbeing. The current social system largely determines whether they can achieve a higher SES. If they have the opportunity to move upward, they should tend to justify the system and even accept social inequality. PEM should not be a concern for high-SES consumers, because they have sufficient financial resources. A series of studies tested our predictions and provided supporting evidence.

In the pilot studies, participants from Taiwan and the United States completed an online questionnaire. Regression analyses revealed a consistent pattern in both samples. Supporting our hypothesis, PEM had a positive effect on FMI. Moreover, these effects were qualified by a significant PEM–SES interaction. Further analyses indicated that for low-SES consumers, PEM had a positive effect on FMI; however, PEM did not affect high-SES consumers.

In Study 1, Taiwanese consumers were randomly assigned to either a high-PEM or low-PEM condition. Participants first read the statement “Everyone has a fair chance at moving up the economic ladder.” Participants in the high (low) PEM conditions respectively wrote three arguments in support of (against) this statement. Participants then reported their price–quality relationship belief, FMI, childhood SES, and current SES. A regression analysis indicated a significant PEM–SES interaction. For low-SES consumers, PEM positively affected the perception of a price–quality relationship. However, the effect of PEM was not observed for high-SES consumers. A significant PEM–SES interaction was also revealed in relation to FMI. For only low-SES consumers, PEM positively affected FMI. The results of a bootstrap analysis confirmed the indirect path from PEM through FMI to the price–quality relationship belief.

In Study 2, the author predicted that high-PEM consumers would affect consumer’s willingness to support underdog brands. The author also predicted that this effect would be stronger for low-SES

consumers and mediated by FMI. To test our prediction, adult U.S. consumers were randomly assigned to either a high-PEM or low-PEM condition. In the high-PEM and low-PEM conditions, participants read an article that compellingly presented arguments for high and low economic mobility in the United States, respectively. The articles were similar in length and style. After reading the article, participants were asked to choose between purchasing coffee from Starbucks or an independent coffee shop. Regression analyses provided supporting evidence. Using FMI as the dependent variable, the results replicated the findings observed in previous studies. A bootstrap analysis supported the indirect path from PEM through FMI to the tendency to support underdogs support.

In the literature, it has been suggested that a consumer’s attitude toward consumer-related policy is affected by system confidence (Shepherd, Chartrand, and Fitzsimons 2015). For participants with a high degree of system confidence, policy arguments that appeal to the dominant U.S. social ideology (i.e., power) will be more persuasive than arguments appealing to universalism; simply supporting these arguments may diminish consumer wellbeing. Therefore, we predicted that high-PEM consumers would evaluate power appeal arguments as being more persuasive than their low-PEM counterparts would. Adult U.S. participants were first asked to evaluate the persuasiveness of an argument against a ban on trans fats by the U.S. Food and Drug Administration. After reading the argument, participants used seven items to evaluate the argument’s persuasiveness. Regression analyses suggested that PEM had a positive effect on persuasiveness. We also observed a marginally significant PEM–SES interaction. For low-SES consumers, PEM positively affected persuasiveness; however, PEM had no effect on persuasiveness for high-SES consumers. The relationship between PEM and persuasiveness was mediated by FMI.

Our research contributes to the literature in several ways. First, we demonstrated that consumer PEM and SES are critical but underexplored factors influencing consumer decisions through assessing FMI as a novel psychological consequence. Second, the findings of Study 1 and 2 have crucial implications for practitioners. When using price to signal product quality, high-PEM consumers are the better target group, and practitioners should design marketing messages to enhance consumers’ PEM. Moreover, our findings contribute to social mobility literature by demonstrating that high-PEM consumers not only rationalize inequality but may also reject consumer-related policies if they believe that these policies are against the dominant social ideology. Future research should determine which factors eliminate the effect of FMI on policy rejection.

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# Why Do People Who Have More Enjoy Horror More?

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## EXTENDED ABSTRACT

From horror films and TV series to haunted house attractions and terrifying Halloween goods, people consume a wide variety of horror-related experiences and products. In fact, the market demand for horror consumption has been rising in the past decades, making the genre of horror one of the most widely consumed form of entertainment. Yet, the extant understanding of this type of consumption remains relatively limited (Andrade and Cohen 2007). For example, when might consumers be more or less likely to engage in horror consumption? What might underlie such difference in preference? Our research seeks to help answer these questions.

Recent research suggests that consumers frequently experience perceived scarcity (vs. abundance) in resources such as goods and wealth (e.g., Booth 1984; Mullainathan and Shafir 2013; Shah, Mullainathan, and Shafir 2012; Roux, Goldsmith, and Bonezzi 2015; Zhu and Ratner 2015; see Cannon, Goldsmith, and Roux 2018 for a review). Such differences in perceived resource availability can trigger a generalized mindset, impacting subsequent consumer behavior in unrelated contexts (e.g., Mehta and Zhu 2015; Roux et al. 2015). Complementing and extending these prior findings, the current research explores how and why consumers' activated resource availability mindset can shape their preference for counterhedonic consumption. We propose that consumers with a resource abundance (vs. scarcity) mindset tend to have a higher preference for consuming horror. This occurs because resource abundance (scarcity) mindset increases (decreases) one's sense of control, which serves as a type of 'protective frame'—the feeling that danger and threat one is experiencing will not cause actual harm (Apter 1992; Andrade and Cohen 2007)—and hence allows consumers to experience more pleasure when consuming horror.

In four experimental studies, we test our propositions in a variety of consumption contexts. In study 1, using an established procedure (Roux et al. 2015), participants were primed with a resource abundance, scarcity, or control mindset. All participants were then presented with a poster ad for a haunted house experience, and were asked to indicate how much they would enjoy visiting the haunted house. Supporting our proposition, those primed with a resource abundance/control (vs. scarcity) mindset reported higher enjoyment ratings. This occurred even though a pretest showed that the particular priming procedure we used did not lead to significantly different affective reactions (a pattern consistent with prior research [e.g., Mehta and Zhu 2015; Roux et al. 2015]). Thus, potential affective differences induced by the mindset manipulation might not easily account for the results.

In study 2, participants were first primed with either a resource abundance or scarcity mindset. In a randomized order, they watched and rated two movie clips—one from the horror film *The Conjuring 2* and the other from the comedy-adventure film *Finding Dory*. Following Andrade and Cohen (2007), participants were asked to indicate how much positive and negative emotions they experienced when viewing each of the clips. For the horror film clip, participants primed with a resource abundance (vs. scarcity) mindset experienced more positive emotions when viewing the clip, but their experience of negative emotions did not differ. For the comedy clip, however, no difference was found for either the positive or negative emotions. These results thus further supported our propositions and showed that

potential affective differences due to the mindset manipulation we used, might not easily explicate the pattern of results we observed.

Studies 3 and 4 tested our proposed sense-of-control based mechanism. In study 3, participants primed with a resource abundance (vs. scarcity) mindset indicated an increased sense of control, which mediated the higher likelihood that they would consume a haunted house experience. Study 4 directly manipulated participants' sense of control and showed that the advantage of resource abundance (vs. scarcity) mindset on horror consumption was eliminated after participants' sense of control was reduced via a control deprivation manipulation (Whitson and Galinsky 2008).

Our research findings contribute to the literature in multiple ways. First, complementing the extant research on consumption of experiences that engender negative emotions (Andrade and Cohen 2007; Scott et al. 2017), we show that resource availability mindset can shape consumers' preference for horror-related experiences and products. Our findings also add to this literature by demonstrating that consumers' sense of control serves as an important type of 'protective frame,' enabling them to derive more pleasure from consuming horror. That is, activating a resource abundance (scarcity) mindset can increase (decrease) sense of control, thereby boosting (dampening) consumers' preference for horror consumption. Moreover, our research adds to the growing stream of research on the impact of resource scarcity versus abundance on consumer behavior (e.g., Cannon et al. 2018; Mehta and Zhu 2016; Shah et al. 2012; Roux et al. 2015; Zhu and Ratner 2015) by offering further evidence of how situationally induced resource availability mindset can subsequently shape consumers' preference for products and experiences in unrelated contexts.

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# Material Gifts as Relationship Mnemonics: Why More Material Gifts Are Given Than Wanted?

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## EXTENDED ABSTRACT

How do people choose material and experiential purchases when these purchases are intended as gifts for others? Following van Boven and Gilovich's (2003) initial distinction between material and experiential purchases centering on "people's intentions when investing in their happiness", the present research examines how people's interpersonal motives affect their choice between material gifts and experiential gifts.

Although recent research supports the superior effectiveness of experiential gifts at inducing receiver's satisfaction (Chun and Hiang 2016) and fortifying relationship between the receiver and the giver (Chan and Mogilner 2017), givers may not have such foresight. In particular, material gifts may appear more suitable than experiential gifts to symbolize the giver's ingratiating action as a physical, visible and durable mnemonic in the receiver's surroundings. This mnemonic, however, may be viewed in different light by a giver versus a receiver. In social reciprocation, people tend to egocentrically believe that their salient input to a favor can induce feelings of appreciation, whereas receivers tend to overlook the others' input and focus on the benefits that they can derive from the favor (Flynn and Adams 2009; Zhang and Epley 2009). Moreover, when reminded of the others' favor, the receiver tends to feel indebted, pressured, and obliged to reciprocate, a sentiment not as desirable as the giver may believe (Belk and Coon 1993; Greenberg 1980; Emerson 1976). Therefore, we theorize that givers tend to endow receivers with more material gifts (vs. experiential gifts) than receivers want them, because givers overestimate the extent to which material gifts facilitate bonding as mnemonics of their kind act, compared with receivers' prediction. We present five studies and a registered replication to test these predictions.

**Study 1** is an incentive-compatible study with 2 (giver vs. receiver) between-subjects conditions. Students ( $N = 216$ ) were randomly paired up. After a brief interaction, those randomly assigned to the giver condition were told that they could choose one of two options as an extra reward for their partner whereas their partner was separately asked to indicate their preference between the same options. The choice was between a mini postcard and a mini movie featuring the same cartoon characters, rated as a typical material gift and a typical experiential gift, and pretested to be similar in most aspects (e.g., desirability, attractiveness, perceived cost). Givers were more likely to choose the postcard over the movie compared with receivers (postcard choice: giver 66.4% vs. receiver 48.6%;  $\chi^2 = 6.94$ ,  $p = .009$ ).

**Study 2a** has the same 2 (giver vs. receiver) between-subjects conditions. First, we asked MTurkers ( $N = 149$ ) to list the name of an acquaintance that they would like to bond with, then list a life achievement important to the acquaintance and a life achievement important to themselves. After that, we randomly assigned participants into the giver or receiver conditions and asked them to list a gift that they would like to give to or receive from the listed friend, to celebrate the desired life achievement. Participants then indicated whether the gift was a material gift or experiential gift and briefly described it. Two independent coders rated the gift descriptions on two separate scales to determine the extent to which a gift was intended for possession (5-point scale), and the extent to which it was

intended for consumption (5-point scale), respectively. Their ratings were highly correlated and thus averaged for each scale. Givers and receivers' own categorization of gifts indicated that more givers listed a material gift than receivers did (48.6% vs. 31.2%;  $\chi^2 = 4.73$ ,  $p = .044$ ). Coders' ratings of the gift descriptions further suggest that gifts listed by givers were intended for possession to a greater extent than those by receivers ( $M_{giver} = 2.83$ ,  $SD = 1.46$  vs.  $M_{receiver} = 2.22$ ,  $SD = 1.38$ ;  $t(145) = 2.63$ ,  $p = .010$ ), while intended for consumption to a lesser extent than those by receivers ( $M_{giver} = 3.88$ ,  $SD = 1.17$  vs.  $M_{receiver} = 4.25$ ,  $SD = 1.03$ ),  $t(145) = -2.03$ ,  $p = .045$ ). These findings suggest two parallel causes contributing to the overall giver-receiver preference discrepancy between material and experiential gifts: givers had a stronger preference to endow material possessions than receivers wanted them, consistent with the mnemonic account; at the same time, givers had a weaker preference to give experiences than receivers wanted them, consistent with recent theorizing that givers often perceive higher social risk to choose experiential gifts to match receivers' uncertain preferences (Goodman and Lim 2018). All of these results were replicated in **Study 2b**, a registered replication ( $N = 276$ ).

In **Studies 3 and 4**, we further examined the psychological processes underlying the mnemonic account. We found a mediation in Study 4 ( $N = 490$ ) with perspective (giver vs. receiver) as the independent variable, difference in predicted bonding instrumentality of gifts as the mediating variable, and gift choice as the dependent variable (indirect effect = .57,  $SE = .28$ , 95% CI = [.04, 1.14]). We further manipulated motivation to bond in Study 4 ( $N = 445$ ) and found that a lower level of motivation to bond attenuated givers' overestimation of the relative bonding instrumentality of material gifts and mitigated their relative preference for the material gift ( $F(1, 441) = 3.37$ ,  $p = .067$ ).

Last, we examined a practically relevant boundary condition in **Study 5** ( $N = 183$ ). The mnemonic account predicts that givers desire to be thought of frequently yet would avoid being associated with negative events in receivers' memory. Consistent with this prediction, we found that the giver-receiver preference discrepancy was mitigated when the gift was to be associated with a negative life event instead of a positive one. A two-way ANOVA revealed the predicted interaction between perspective and event valence ( $F(1, 179) = 8.80$ ,  $p = .003$ ).

In sum, this research demonstrates that the trade-off underlying an interpersonal decision between material and experiential purchases systematically differs from that underlying an otherwise identical self-oriented decision. In particular, unlike what givers wish, their strong desire to bond may color their judgment and yield rather counterproductive bonding consequences.

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# Consumer's Local-Global Identity and Price-Quality Associations

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## EXTENDED ABSTRACT

Previous literature documents multiple factors that influence consumers' price-quality associations (PQA)—their tendency to use price as an indicator of perceived quality, including prior knowledge (Monroe 2003), product information (Kardes et al. 2004), and cultural background (Lalwani and Shavitt 2013). However, no research has examined the effect of local-global identity on PQA. Extending prior research, we investigate the role of local-global identity in influencing PQA.

Individuals whose local identity is salient ('locals') are faithful and respectful of local traditions, and identify with local community, whereas those with a salient global identity ('globals') favor globalization, and view the world as a "global village" (Ng and Batra 2017). We expect that locals and globals differ in perceived quality difference among brands in the marketplace which, in turn, affects PQA. Suppose the comparison objects are two alarm clocks. When global identity is high (vs. low), individuals focus on standardization and see things as homogeneous and similar to each other, leading to lower perceived quality differences between the alarm clocks. Further, if the brands are perceived as similar in quality, consumers less likely use any cues (e.g., price) to distinguish between them, thereby reducing PQA. Specifically, perceived similarity between themselves and others helps globals iron out the differences across people and drives them to focus not on specific attributes, but rather on "a general way of making sense of the world" (Oyserman 2009, p. 256).

However, when local identity is high (vs. low), individuals "zoom in" on the two alarm clocks and focus on finer details, which subjectively increases perceived dissimilarity between these two clocks. Indeed, perceived difference makes locals rely more on the distinction between themselves and others and leads them to focus on specific elements and direct experiences to make sense of the world (Ng and Batra 2017). When evaluating products, the focus on dissimilarities leads locals to use price—one of the most direct and obvious cue for brand comparison (Lalwani and Forcum 2013)—to distinguish among brands, thereby increasing their PQA.

We test our hypothesis via a field study and two lab experiments. Study 1 was conducted in a large shopping mall with real consumers ( $N=164$ ). Respondents were given a brochure either describing "Think Local Movement" or "Think Global Movement," which served as local and global identity manipulation, respectively (Gao, Zhang and Mittal 2017). Afterwards, participants rated quality, reliability, and dependability (1=Very Low and 7=Very High; Lalwani and Shavitt 2013) of three shoes that differed in prices. These three items ( $\alpha's>.89$ ) were averaged to form quality evaluation. The correlation between retail price and subjective quality evaluation for the shoes was calculated and served as the dependent variable PQA. As predicted, participants in the local (vs. global) identity condition had significantly higher PQA ( $M_{Local}=.68, M_{Global}=.40; t(162)=2.98, p<.01$ ).

Study 2 ( $N=122$ ) featured a 2 (identity: local vs. global)  $\times$  2 (price: high vs. low) between-subjects design. Local-global identity was manipulated through sentences unscrambling task (Zhang and Khare 2009). Afterwards, participants read information about three brands each of alarm clocks and microwaves: the target brand and two other comparison brands, which provided baseline price information (Lalwani and Shavitt 2013). Participants were randomly as-

signed to either high or low price condition, using identical product descriptions. The target brand was priced the highest (lowest) in the high (low) price condition, with equal price difference toward the other two baseline brands. After reading brand descriptions, participants rated the target brand on the three-item quality measures as in Study 1 ( $\alpha's>.85$ ). These three items were averaged to form a quality index. A 2 (identity)  $\times$  2 (price) ANOVA with the quality index as the dependent variable revealed a significant identity  $\times$  price two-way interaction ( $F(1,118)=4.82, p<.05$ ). As expected, locals rated the target brand as having higher quality in the high ( $M=4.99$ ) than in the low ( $M=3.97, t(61)=4.70, p<.01$ ) price condition. In contrast, for globals, the quality ratings did not vary across two price conditions ( $M_{Low}=.424, M_{High}=.454; t(57)=1.25, p=.22$ ).

Finally, Study 3 ( $N=277$ ) adopted a 2 (identity: local vs. global)  $\times$  2 (price: high vs. low)  $\times$  2 (product type: services vs. goods) between-subjects design to examine the moderating role of product type. Given that services are intangible and heterogeneous, perceived quality difference of services is by nature greater than that of physical goods (Lovell and Gummesson 2004). The greater variation in the quality of services (vs. goods) should increase globals' PQA—whose baseline tendency to differentiate brands (and hence, PQA) is low and has greater potential for increase. In contrast, since locals' tendency to differentiate brands (and hence, PQA) is already high, there is little room to increase it further ("ceiling effect"). As a result, they should exhibit little change in PQA when evaluating services (vs. physical goods). As expected, globals exhibited PQA when evaluating services ( $M_{Low Price}=.442, M_{High Price}=.515; t(62)=3.01, p<.01$ ) but not physical goods ( $M_{Low Price}=.474, M_{High Price}=.458; t(66)=-.79, p=.43$ ), whereas locals had PQA when evaluating both services and physical goods ( $p's<.05$ ).

This research contributes to the literature in two significant ways. First, it represents a first attempt to explicitly examine the effect of local-global identity on PQA. Second, it is also a pioneer to uncover perceived quality difference as a new qualitative difference between local and global identity.

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# The Impact of Price and Size Comparisons on Consumer Perception and Choice

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## EXTENDED ABSTRACT

In packaged-goods retailing, manufacturers and retailers seek to set price levels and select package sizes such that their products are optimally competitive. In doing so they can choose to differentiate on price or on product size. For example, suppose Kraft offers a 330 ml bottle of salad dressing for \$2.51, implying a unit cost of \$0.76 per 100 ml. When a higher positioned competitor such as Praise aims to offer its product at the higher unit cost of \$0.84 per 100 ml, it can either offer a similar sized package at the higher price of \$2.76 or resize its product to 300 ml and match Kraft's price of \$2.51. In both cases Praise's unit cost stays at \$0.84 as intended and the difference between the Kraft and Praise products can be deemed economically equivalent. We define the two situations as the two comparison modes: price comparison (PC) mode and size comparison (SC) mode.

In the context of promotions, prior research has identified that, while a bonus pack and a price discount both represent a saving, consumers generally tend to prefer a bonus pack over an economically equivalent price discount (Diamond and Sanyal 1990). The monetary cost being zero for a bonus pack makes that it is processed independently of its price and so is perceived as a pure gain. In contrast, a price discount is more likely to be integrated into the regular price and is perceived as a reduction in loss (Chandran and Morwitz 2006). A pure gain looms larger than a reduction in loss on the value function, this results in a preference towards a bonus pack over a price discount in most instances.

Extending and generalizing the theorizing to our price-size comparison context, on the value function, a price difference elicits an incremental change (or a decremental change which is directionally opposite but magnitudinally the same as an incremental change) in loss whereas a size difference elicits a pure change in loss or gain. According to the principle of diminishing sensitivity in prospect theory, an incremental change is further away from the reference point, resulting in a lower sensitivity to the change than that of a pure change, which is adjacent to the reference point. In turn, due to their positions on the value function, pure changes generally loom larger than economically equivalent incremental changes. We therefore predict that consumers perceive a greater difference in value when two products differ in size (i.e., SC mode) than when they differ on price (i.e., PC mode). We call this the price size comparison (PSC) effect.

A series of experimental studies examine how differences in price or size affect consumer value perceptions and choices when purchasing grocery products. Studies 1 aimed to provide initial evidence for the proposed PSC effect. The study comprised a 2 (mode: PC vs. SC)  $\times$  2 (magnitude of difference: small vs. large) between-subjects design. Every participant saw a pair of unbranded biscuits either with a small (approximately 5%) or with a large (approximately 18%) difference in the retail prices or sizes of the options. Participants evaluated the magnitude of the value difference between the two product options on a seven-point bipolar scale with two items ( $r = .75$ ) (i.e., "how do you rate the difference between these two products in terms of value: 1 = small difference between products, 7 = large difference between products; 1 = narrow value range, 7 = wide value range"). Results showed that a comparison on size results in a greater perceived value difference between product options than a comparison on price.

Study 2a and 2b aimed to test numerosity (Pandelaere, Briers, and Lembregts 2011) as an alternative explanation for the PSC effect by expressively varying the numerosity of package size and the numerosity of price. In study 2a, in the SC mode, the size difference was either numerically larger (e.g., 1900 ml – 1800 ml = 100 ml) or smaller (e.g., 1.9 liter – 1.8 liter = 0.1 liter) than the price difference in the PC mode (e.g., \$8.54 – \$8.09 = \$0.45). In study 2b, prices are framed either in dollars (e.g., \$2.01 vs. \$2.45) or in Indonesian Rupiahs (e.g., Rp20,100 vs. Rp24,500) thus price differences are numerically either smaller or larger than the size difference (e.g., 160g vs. 195g). Results showed that value differences were perceived as larger in the SC mode than in the PC mode, this effect on perceived value difference did not interact with the comparison mode thus numerosity can be excluded as an alternative account underlying the PSC effect.

Study 3 tested if computational ease (Thomas and Morwitz 2009) is a possible alternative explanation by manipulating the ease of comparing price differences and size differences. Results showed that the ease of computation had neither a main effect nor an interaction with comparison mode thus computational ease is rejected as an alternative account underlying the PSC effect.

Study 4a revealed a downstream consequence of the PSC effect on product choice. Results showed that the probability of choosing the low-end option was higher in the SC condition (i.e., the choice share of the larger package size option) than in the PC condition (i.e., choice share of the lower price option). The effect of comparison mode on choice is mediated by perceived value difference. Study 4b demonstrated that the PSC effect on choice holds even in the presence of unit price information.

The price or size comparison effect on consumer responses is of direct and significant interest especially to marketers concerned with inter-brand competition. Owing to consumers' greater susceptibility to size differences, a more beneficial approach to the pricing of a brand with a low-end positioning may be to carry the same price as the competing brand but provide more product volume. On the other hand, for a brand with a high-end positioning a more appropriate strategy is to offer a package that is of equal size as the competing brand, avoiding any adverse feelings associated with size loss, and instead differentiating the product by charging a higher price.

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# Feature a Benefactor or a Victim? How Charity Appeals with Different Protagonist Foci Affect Donation Behavior

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## EXTENDED ABSTRACT

Charities often emphasize victims' plight in their appeals (e.g., an emaciated, hunger-stricken child featured in UNICEF's ads) and extensive donation research focuses on studying victim appeals. However, victim appeals have their limitations. Factors such as donors' emotional exhaustion (Ein-Gar and Levontin 2013) or donors' perceptions of justice (Lee, Winterich, and Ross 2014) tend to weaken the effectiveness of victim appeals. Crucially, when charity recipients are out-group members, even charity appeals featuring an identified victim lose their effectiveness (e.g., Kogut and Ritov 2007).

In this paper, therefore, we consider featuring an alternative protagonist in the charity appeal, especially when soliciting donations for out-group members. Instead of a distressed victim, a charity can feature a person who renders help to the needy to accomplish the charity's mission—a benefactor. In practice, some charities have already been featuring a benefactor in their appeals. For example, *United Way*, in early 2017 launched a docu-series named "The Hero Effect," in which each episode features an ordinary citizen having a life-changing impact on an individual or a community. Yet, little is known about whether the benefactor appeal is more effective than the victim appeal in eliciting charitable donations, and if so, when and why.

We suggest that while both a victim and a benefactor appeal can be useful in soliciting donations, these two appeals operate by evoking different emotions. A victim appeal often induce negative emotion, making people feel sorry, sad, or even upset about the victim's distressful situation, in an attempt to trigger donors' charitable actions. In contrast, we posit that a benefactor appeal can evoke a specific positive moral emotion—moral elevation, the warm, uplifting feelings that people experience when witnessing others' moral excellence (Haidt 2000), which trigger people's desire to do a charitable act for others. We further propose that the effectiveness of a benefactor appeal, relative to a victim appeal, depending on the charity recipients' group membership. When recipients are in-group members, people's donation intentions are less likely to be influenced by the charity appeal protagonist. However, when recipients are out-group members, featuring a benefactor should be more effective as the benefactor appeal leads people to focus on their own desire to be a better person by helping others, not the victim's distressful situation.

We further suggest that the group membership of the benefactor also influences the effectiveness of benefactor appeals. We specifically theorize that this is because the benefactor's group membership influences the extent to which people act upon the emotion evoked by the benefactor—moral elevation, which affects their donation behavior.

We test our hypotheses in five experiments. In experiment 1A (N=81), we test the main effect of protagonist focus on charitable donation and the underlying mechanism. Participants were randomly assigned to one of the two conditions—a charity appeal featuring either a benefactor or a victim. Results showed that participants indicated higher donation likelihood to the benefactor appeal than the victim appeal ( $p < .05$ , two-tailed).

Using PROCESS (model 4; Hayes 2013) with 10,000 bootstrapped samples, the indirect effect of charity appeal focus on donation amount was mediated by moral elevation (95% Bootstrap CI: .45, 1.54). Overall, the results support that a benefactor appeal can

be more effective than a victim appeal and the effect is driven by moral elevation.

In experiment 1B (N=81), we intend to replicate the effect by designing a new set of stimuli. Participants were randomly assigned to read either a benefactor appeal or a victim appeal. The charity provides vision care to out-group recipients (African victims). Replicating the results from experiment 1A, participants who read the benefactor appeal were more willing to donate than those who read the victim appeal ( $p < .05$ , two-tailed). Mediation analysis based on 10,000 bootstraps (Hayes 2017, model 4) showed that the indirect effect of moral elevation was significant (95% bootstrap CI: -1.36, -.40). These results provides further evidence that a benefactor appeal can promote charitable giving because of moral elevation.

In experiment 2 (N=124), we examine the moderating effect of charity recipients' group membership. This experiment employs a 2 (charity appeal: benefactor vs. victim) X 2 (recipients' group membership: in-group vs. out-group) and participants were randomly assigned into one of the four conditions. As predicted, results showed a significant interaction ( $p = .05$ , two-tailed). Pairwise comparisons revealed that, when recipients were out-group members, participants who read the benefactor appeal were more willing to donate than those who read the victim appeal ( $p = .03$ , two-tailed). On the other hand, when recipients were in-group members, both appeals elicited similar levels of donation intention ( $p = .59$ ).

In experiment 3 (N=612), we included two more conditions where an out-group benefactor helps in-group/out-group recipients. We used a 3 (charity appeal: in-group benefactor vs. victim vs. out-group benefactor) X 2 (recipients' group membership: in-group vs. out-group) between-subjects design. As predicted, results showed a significant two-way interaction ( $p = .02$ , two-tailed). In pairwise comparisons, when the recipients were out-group members, donation likelihood was higher for the in-group benefactor appeal than the victim appeal and the out-group benefactor appeal (all  $p$ s < .03, two-tailed), though both the in-group and out-group benefactor appeals led to similar levels of moral elevation ( $p > .04$ ). On the other hand, when the recipients were in-group members, no donation intention difference was found among the three appeals (all  $p$ s > .18, two-tailed).

In experiment 4 (N=166), we focus on the out-group recipients conditions and investigated the underlying mechanism of the benefactor's group membership on donation. Participants were randomly assigned to read one of the three charity appeals featuring a victim, an in-group benefactor, or an out-group benefactor. Results showed that an out-group benefactor appeal, though elicited similar levels of moral elevation as an in-group benefactor appeal ( $p > .10$ ), led to donation amount ( $p = .02$ ). Mediation analysis revealed a significant indirect effect of feeling versus reasoning based decision process (95% bootstrap CI: .02, .18), such that people who read the out-group (vs. in-group) benefactor appeal relied less on their feeling (vs. reasoning), resulting in lower donation amount.

Taken together, we develop a theoretical framework on when and why a benefactor appeal elicits more donations. Five studies involving both behavioral intention and real donation measures test and confirm the theoretical model. We contribute to research on charitable donation, moral elevation and demonstrate to charities that a benefactor appeal can be effective in promoting donations.

# Charity Begins at Home: How Incremental Theory Enhances or Reduces Charitable Giving

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## EXTENDED ABSTRACT

People's generosity declines with the self-other distance (Dovidio et al. 1997; Jones and Rachlin 2006). While the negative impact of distance on prosocial outcome is well understood, can the perception of distance between self and others chronically differ? In this research, we demonstrate that subscribing to incremental theory (vs. entity theory) leads to higher charitable intention, and such effect arises because the beneficiaries viewed as changeable, as in the lenses of incremental theorists, feel closer to the self.

Individuals differ in the extent to which they view human qualities as malleable (Dweck, Chiu, and Hong 1995). While *incremental theorists* believe that people can change and improve who they are, *entity theorists* view others to be consistent across time and situation. Consequently, incremental theorists' impressions of others constitute the contextualized factors (e.g., situation and needs), whereas entity theorists seek to assess the unchanging, global traits (e.g., personality and ability) of others (Molden, Plaks, and Dweck 2006). Such low- (vs. high-) level focus is known to embody the construal of proximate (vs. distant) others (Nussbaum, Trope, and Liberman 2003; Rim, Uleman, and Trope 2009). In the similar vein, entity theorists were shown to endorse the stereotypes more readily (Hong et al. 2004), and incremental theorists accord more individuating elements to out-group members (Levy, Chiu, and Hong 2006). All evidence taken together suggests that compared to incremental theorists, entity theorists have a clearer demarcation between self and other, which is a traditional hallmark of social distance (Liviatan, Trope, and Liberman 2008).

We test the proposed mechanism in two ways, one via direct measures of social distance (study 2) and the other via moderation by campaign goal progress (studies 3 and 4). Because whether one will pursue a collective goal (i.e., donation campaign) is an interactive effect of one's sense of closeness with its beneficiaries and, importantly, the perceived goal progress (Fishbach, Henderson, and Koo 2011; Williams and Karau 1991), we expect a moderating role of donation goal progress in the link between the donors' implicit self-theories and their intention to contribute. Specifically, individuals who view the victims as remote are more likely to question if the campaign is worth joining and thus become more motivated if the accumulated progress is high rather than low. However, ones who feel closer to victims and thus already consider the donation campaign as worthwhile will be more driven when the progress is unsatisfactory (Fishbach, Koo, and Finkelstein 2014; Williams and Karau 1991). Drawing on the motivation literature, we propose and observe a reversed effect such that a high-progress campaign leads the entity theorists to become more charitable than their incremental counterparts.

Study 1 (n=120) provided initial confirmation of the main effect of incremental theory on donation. Participants' chronic incremental theory significantly increased their intention to donate to help Sierra Leone ( $b = .26, t = 2.36, p = .02$ ). In study 2, participants (n = 178) were asked the amount they were willing to give out of \$100 to a Nepal earthquake relief. Perceived social distance was measured ("How distant/close do you feel to people of Nepal?" and "Despite the fact that Nepal earthquake did not affect me, I can identify with the people in Nepal"; reverse-coded). Positive effect of incremental theory on donation was replicated ( $b = .08, t = 2.47, p = .01$ ). Social distance predicted willingness to donate ( $b = .72, t = 7.23, CI_{95\%}: .53 \text{ to } .92, p < .001$ ), reducing the incremental theory effect on donation to nonsignificance ( $b = .05, t = .58, CI_{95\%}: -.12 \text{ to } .22$ ).

Finally, we investigated the moderating role of campaign goal progress, both when perceived (study 3) and manipulated (study 4). In study 3, participants (n = 181) read a donation appeal with a goal amount but no progress indicator and then estimated the donation goal progress. Theory priming did not affect the progress perception ( $M_{\text{entity}} = 2.88$  vs.  $M_{\text{incremental}} = 3.06$ , NS). As anticipated, implicit self-theories and the perceived progress had a significant interaction ( $b = -.39, t = -2.93, p < .01$ ). Floodlight analysis revealed two significant regions, suggesting that when perceived progress was high (vs. low), those who adopted the entity (vs. incremental) theory were more willing to donate.

In study 4 (n = 118), participants were assigned to either low (20%) or high (80%) campaign progress. Implicit theories and the progress manipulation significantly interacted ( $b = -.43, t = -3.96, p < .001$ ). Spot-light analysis showed that the effect of progress on donation was positive among entity theorists ( $b = .50, t = 2.04, p = .04$ ), but negative among incremental theorists ( $b = -.87, t = -3.59, p < .001$ ). Further, a mediated moderation analysis (Model 8; Hayes 2013) indicated that their primary drivers differ, supporting our theorizing that incremental theorists feel closer to others and thus more committed to help (Fishbach et al. 2011). Specifically, we measured the perceived need for progress (e.g., "my participation is important"), and the perceived value of goal (e.g., "the campaign goal will be reached"). We confirmed that the entity theorists' higher donation intention in the high-progress condition was mediated by the perceived value of goal ( $b = .33, SE = .12, CI_{95\%}: .12 \text{ to } .61$ ), but not by the need for progress ( $b = .26, SE = .16, CI_{95\%}: -.02 \text{ to } .58$ ). By contrast, the incremental theorists' higher charitable intention in the low-progress condition was mediated by the need for progress ( $b = -.36, SE = .15, CI_{95\%}: -.67 \text{ to } -.10$ ), not by the goal value ( $b = .08, SE = .08, CI_{95\%}: -.03 \text{ to } .28$ ).

Through four experiments, we found that incremental theorists are more likely to feel close to the victim and make donations as a result. However, when donation campaign is highly progressed, the entity theory increases charitable giving. Further research replicating our findings in real donation campaign settings is underway. Meanwhile, our findings urge that marketers and policy makers take into account consumers' implicit self-theories when seeking to encourage charitable behavior.

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# Toward Optimal Symbolic Recovery: Comparing “Thank you” and “Sorry” in Addressing Service Delays

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## EXTENDED ABSTRACT

Service delay, or unexpected delay after a service has been scheduled (Taylor 1994), is the most common type of service failure (Goodwin and Ross 1992). Unlike product failure that usually requires utilitarian recovery efforts to alleviate the “financial pain” felt by consumers (Dunn and Dahl 2012) researchers have found that consumers feel better about the product failure after complaining about it. In contrast, the authors show that when consumers are to blame for product failure, complaining has a detrimental effect on consumer reactions to the product. In this context, self-threat from the product failure is shown to motivate defensive processing in both the content of complaints and the subsequent downstream product evaluations. The authors establish the role of self-threat in product failure in two ways: (1), service delay is a typical process failure in which marketers could strategically employ symbolic recovery efforts to ease consumers’ “psychological pain” (e.g., feeling of not being respected). According to the sociometer theory of self-esteem, people’s feelings about themselves are affected by the extent to which they believe other people have accepted or rejected them (Leary et al. 1995, 1998). As consumers perceive an unscheduled delay as a signal of the marketer’s lack of attention to their interest and lack of effort in protecting their welfare (Seiders and Berry 1998) financial institutions, and financial elites gain greater influence over economic policy and economic outcomes. Financialization transforms the functioning of economic systems at both the macro and micro levels. Its principal impacts are to (1, their self-esteem is threatened. Therefore, “*what to say*” to customers after service delays is especially important for marketers to repair consumers’ thwarted self-esteem and restore their satisfaction.

Despite research on speech acts suggesting that apology (e.g., “Sorry about the delay”) and appreciation (e.g., “Thank you for your patience”) are equally logical marketer responses to service delays (Coulmas 1980), prior work has only discussed apology as a symbolic recovery strategy (e.g., Witz and Mattila 2004). Apology has been shown to reduce victims’ unfairness perception, anger and aggression (e.g., Darby and Schlenker 1982) which are often manifestations of the feelings of being disrespected (Dunn 2016; Seiders and Berry 1998). As such, apology is effective in repairing consumers’ thwarted self-esteem (Tyler, DeGoey, and Smith 1996).

Drawing from research on service recovery and the self, we expect that appreciation goes beyond this reparative effect of apology on self-esteem which is through acknowledging marketers’ mistake and accountability. Appreciation shifts the focus from marketers to consumers by placing them in the benefactor position and highlighting their merits and contributions in the service delivery, thereby signaling approval and acceptance. Based on the sociometer theory (Leary and Baumeister 2000), positive approvals and acceptance from others boost self-esteem. The elevation in self-esteem in turn increases customer satisfaction because based on the self-enhancement theory, people are motivated to pursue positive self-views (Heine et al. 1999; Schaumberg and Wiltermuth 2014) and their self-regard is salient, they will be less likely to use the comparison information when judging their standing in the domain. Participants in Study 1 estimated their standing on risk factors for two health problems, and some did

so after their self-regard was made salient. Some received information that challenged participants’ self-serving comparative beliefs. As expected, estimates of personal risk factor standing among high self-regard salience/comparison information participants were less correlated with similar estimates collected 2 months earlier, suggesting the estimates had become less inductive. There was also tentative evidence that, in this condition, self-esteem played a greater role in constructing these estimates. In Study 2, participants were led to believe that their comparative standing on risk factors was better than it actually was, and in this case, they were more likely to use this information when making self-judgments about their personal risk. Evidently, the extent to which people use diagnostic comparison information inductively when making self-inferences depends on the favorability of that information. (PsycINFO Database Record (c and therefore respond positively to those who boost their positive self-views (Colman and Olver 1978). As such, appreciation is more effective in promoting post-recovery satisfaction than apology. Across six studies, we provide support for our theory and its process explanations.

Study 1 examined our hypothesis in a real-world delay situation. After completing lab experiments, participants were promised that they would receive their compensation on the same day. However, they were not contacted by the lab assistant until the following day. Using a mobile payment app, the assistant greeted them with either “*Thank you for waiting for such a long time!*” or “*Sorry for keeping you waiting for such a long time!*” and distributed the compensation. A follow-up survey link was sent to participants to collect feedback. Results revealed a higher response rate (91% vs. 78%) and more satisfaction ( $M_{\text{appreciation}} = 5.52$  vs.  $M_{\text{apology}} = 5.11$ ) in the appreciation condition.

Study 2 measured self-esteem in a one-way (symbolic recovery: appreciation vs. apology vs. control) between-subjects design. Participants first read about a product delivery delay and were told that they either received an apology, an appreciation or nothing from the online store. Recovery satisfaction, overall satisfaction, positive WOM intention, and self-esteem were measured. Results revealed significant effects on recovery satisfaction ( $M_{\text{control}} = 3.03$  vs.  $M_{\text{apology}} = 4.40$  vs.  $M_{\text{appreciation}} = 5.07$ ), overall satisfaction, WOM, and self-esteem ( $M_{\text{control}} = 3.10$  vs.  $M_{\text{apology}} = 4.14$  vs.  $M_{\text{appreciation}} = 4.80$ ). Furthermore, self-esteem mediated the effect of recovery strategy on recovery satisfaction (relative indirect effects:  $b_1 = -.74$ , 95% CI  $-1.16$   $-.31$ ;  $b_2 = .46$ , 95% CI:  $.03$   $.94$ ), overall satisfaction and recommendation intention.

Study 3 utilized in a 2 (self-esteem: low vs. high)  $\times$  2 (recovery strategy: apology vs. appreciation) between-subjects design. Self-esteem was manipulated by informing participants that their performance in an English word generation task was ranked in the bottom (top) 10%. Then they read about a restaurant service delay situation in which the server either apologized for the delay by saying “*I’m sorry for keeping you waiting! I apologize,*” or appreciated their patience by saying “*Thank you for your patience! I appreciated it.*” Participants reported their satisfaction with the server, tipping likelihood and tip amount. Results showed significant interactions of self-esteem and recovery strategy on all dependent variables ( $p$ ’s



< .06). Specifically, in the low self-esteem condition, appreciation led to higher satisfaction, tipping likelihood, and tipping amount ( $p$ 's < .05). However, the superiority of appreciation disappeared in the high self-esteem condition ( $p$ 's > .09).

Study 4 provided triangulating evidence for the underlying mechanism by utilizing narcissism as a moderator because it determines the strength of consumers' desire to be well regarded by others. It featured a 2 (recovery strategy: apology vs. appreciation)  $\times$  narcissism (continuous) design using the restaurant scenario as the context. Narcissism was measured based on Ames et al. (2006). Floodlight analysis revealed that the superiority of appreciation (vs. apology) existed only among participants whose narcissism index was higher than 3.47 (BJN = .59,  $p = .05$ ). Study 5 examined the role of service delay severity and demonstrated that the superiority of appreciation disappeared when the delay was perceived to be minor. Study 6 showed that when consumers' attention was drawn to service providers' fault, apology was more effective than appreciation.

Our research connects research on service recovery, linguistic framing, and self-concept to show how service providers can strategically frame their response to increase customer recovery satisfaction.

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# Promoting Pi Day: Consumer Inferences About Special Day-Themed Promotions

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## EXTENDED ABSTRACT

Using marketing promotions to attract customers is so prevalent that it takes something special for a given promotion to stand out (Kalwani and Yim 1992). In the Internet age, firms can ensure that a promotion is distributed on a specific day and thus offer more promotions around “special days” (e.g., a 31.4% discount for Pi Day on March 14<sup>th</sup>) in addition to typical holiday promotions (e.g., standard Christmas discounts). Are such special day-themed appeals effective? This research explores the effectiveness of special day-themed promotions and outlines important boundary conditions for their effectiveness.

Research on marketplace metacognition demonstrates that consumers often think about and draw inferences from marketers’ actions and intentions (Wright 2002). For example, consumers reward marketers with an increased willingness-to-pay for products when they infer that marketers put extra effort into designing product displays (Morales 2005). Based on the metacognition literature more generally, which shows that people are particularly likely to draw inferences about unexpected/atypical experiences (Schwarz 2004), we argue that consumers are likely to draw inferences about atypical special day-themed promotions compared to standard promotional events. Specifically, we expect consumers to infer that the marketer is creative when they encounter a special day-themed promotion (subject to boundary conditions). Consumers then reward marketers for their creative effort with more positive evaluations of the promotion and increased purchase intentions.

In study 1, we conducted a field study with a small company that sells dog gear. Customers ( $n = 239$ ) received one of two versions of a promotional email. In the special day-themed promotion condition, they saw a 25% discount on dog gear in honor of the anniversary of the day the company rescued its mascot (a dog). The email in the standard promotion condition contained a 25% discount for a standard one-day sale, with no mention of the special day. Customers in the special day-themed promotion condition were significantly more likely to click on the “shop now” button compared to those in the standard promotion condition (19.30% vs. 10.00%;  $\chi^2 = 4.16, p < .05$ ). Sales data showed a similar pattern.

In study 2, participants in all three conditions imagined receiving an email promotion for a clothing retailer on March 14<sup>th</sup> (Pi Day). In the special day-themed promotion condition, participants saw a 31.4% discount for an “Ultimate Pi Day” one-day sale. In the standard smaller [larger] promotion condition, they saw a 30% [35%] discount for a standard one-day sale. Participants then assessed their liking of the promotion. Participants in the special day-themed promotion condition had significantly more positive evaluations of the promotion ( $M = 3.49$ ) compared to participants both in the standard smaller promotion condition ( $M = 2.29; t(168) = 5.30, p < .0001$ ) and standard larger promotion condition ( $M = 2.14, t(186) = 5.88, p < .0001$ ). Thus, consumers appear to even like a special day-themed promotion more than an objectively better promotion not attached to the special day.

Study 3 extends these findings using a different special day and different promotion held constant across conditions. Additionally, we explore an important boundary condition by measuring participants’ familiarity with the holiday. All participants viewed a promotion for Lego valid on May 4<sup>th</sup> only (the study was conducted in real-time on the actual holiday): “Buy any 3 Star Wars Lego items, Get the 4<sup>th</sup>

Star Wars Lego item FREE.” In the special day-themed promotion condition, the promotion was linked to “Star Wars Day” and the accompanying slogan, “May the Fourth Be With You.” In the standard promotion condition, the advertisement included no mention of this holiday or slogan. Participants then evaluated the promotion using the study 1 measure. A significant interaction emerged between the promotion manipulation and participants’ familiarity with the holiday ( $\beta = 0.12, t(148) = 2.44, p < .05$ ). Among participants who were familiar with the holiday (above 6.23; ~38% of participants), those who viewed the special day promotion had significantly more positive evaluations than those who viewed the standard promotion. This pattern was attenuated as familiarity declined and began to reverse at low levels of familiarity. Thus, special day-themed promotions are only effective when consumers can understand the marketer’s creativity and might actually backfire otherwise.

Study 4 establishes direct process evidence that inferences about the marketer’s creativity drive consumers’ liking of special day-themed promotions. We also demonstrate that positive evaluations of these promotions drive increased intentions to use them. All participants viewed a 30% discount for a shoe store valid “today only.” Because the study was run on June 1<sup>st</sup> (i.e., National Go Barefoot Day), participants in the special day-themed promotion condition viewed a National Go Barefoot Day sale with the tagline “You might not need shoes today, but we’ve got you covered for tomorrow!” Participants in the traditional event-themed promotion condition viewed a Start of Summer sale with the same tagline. In the no event promotion condition, participants saw a standard one-day sale not linked to any event at all with the same tagline. Participants reported their evaluations of the promotion, perceptions of the marketer’s creativity, and intentions to use the promotion.

Participants in the special day-themed condition had significantly more positive evaluations of the promotion ( $M = 5.04$ ) than those in the traditional event-themed ( $M = 4.43$ ) and no event promotion conditions ( $M = 4.50, t(297) = 2.82, p = .005$ ). The same pattern resulted for participants’ perceptions of the marketer’s creativity. Finally, serial mediation models revealed that increased perceptions of the marketer’s creativity in the special day-themed promotion condition led to more positive evaluations of the promotion, which then led to higher intentions of using the promotion to make a purchase, compared to both the traditional event-themed promotion condition and no event promotion condition.

Together, these studies provide evidence that special day-themed promotions boost participants’ evaluations and lead to increased usage intentions (study 1) even compared to standard promotions that are more favorable financially (study 2), as long as participants understand the marketer’s creativity (study 3). Ultimately, consumers reward marketers for their creative effort in offering special day promotions (study 4).

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# Predicting Memory-Based Consumer Choices from Recall and Preferences

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## EXTENDED ABSTRACT

Consumers often need to make choices when some or all of the information relevant to the decision is not physically present. To deal with this, they need to retrieve the necessary information from their own memory (Lynch, 1982), e.g. a list of brands within a category, prior experiences with a brand, and knowledge about key attributes of certain products. The processes mediating consumer recall, and their downstream effects on consumer choice, have been subject to intense study by consumer researchers. An extensive literature in consumer research strongly indicates a positive role of memory in consideration and choices. Brands that have higher awareness or accessibility are more likely to be chosen (Hoyer & Brown, 1990; Posavac, Sanbonmatsu, & Fazio, 1997). Furthermore, increasing brand accessibility or strengthening category-brand association boosts the likelihood of consideration and choice for a brand of interest (Nedungadi, 1990; Posavac, Sanbonmatsu, Cronley, & Kardes, 2001).

To date, however, it remains challenging to understand and predict how effects of marketing actions on memory are translated into actual behavior. In particular, what is the nature and force of processes by which stronger brand memory leads to more choices of the brand? Could brand memory be a proxy for preference or a component of preference? Do brand memory and preference operate independently? Without such mechanistic insights, it is difficult for marketers to predict or validate consumer memory measures with actual purchase data, or to estimate the return on investment (ROI) of an advertising campaign that is projected to increase brand awareness (Rust, Lemon, & Zeithaml, 2004).

Accordingly, we sought to take a step toward addressing these questions by building on influential multi-stage decision-making models (Manski, 1977; Manzini & Mariotti, 2014; Roberts & Lattin, 1991) that explicitly capture process-level insights into memory-based choices. Specifically, our model (hereafter called two-stage model) incorporates both recall and evaluation as sequential stages in the decision-making process as follows. Prompted with the category cue, the agent is assumed to first construct a menu by retrieving a set of relevant brands from memory, and the inclusion of a certain brand is determined probabilistically by the strength of the category-brand association. Next the agent makes a choice based on relative preferences for the brands on the menu.

To test this model, we collected independent datasets for brands from two product categories (fast food restaurants and running shoes) in order to define three measures: (1) brand accessibility, the percentage of participants recalling the brand of interest when prompted with a category cue; (2) brand preference, the percentage of participants choosing the brand of interest in stimulus-based choices or SB-C (with a menu listing a large number of brands in a category); and (3) memory-based brand choices or MB-C, the percentage of participants choosing the brand of interest in memory-based choices (category cue only, no menu). We then used these measures as the input to our proposed model to compute predicted memory-based choice probabilities for all brands.

Predictions of MB-C probabilities for brands were generated from the proposed two-stage model, as well as models using preference or memory information alone. These predictions were then compared against the empirically measured MB-C probabilities in our sample (Figures 1A-C). A quantitative examination of predic-

tions from different computational models shows that the two-stage model robustly outperformed models using preference or memory information alone in both categories (Figures 1D) (Fast food: memory + preference  $R^2 = 0.937$ ; preference-only  $R^2 = 0.455$ ; memory-only  $R^2 = 0.803$ ) (Running shoes: memory + preference  $R^2 = 0.993$ ; preference-only  $R^2 = 0.859$ ; memory-only  $R^2 = 0.593$ ). Non-overlapping 95% confidence intervals indicated that the differences in prediction performance between the memory + preference model and the other two models were statistically significant (Figure 1D).

These findings echo and extend the extensive prior literature on the influence of memory on brand choice processes (Coates, Butler, & Berry, 2006; Nedungadi, 1990; Posavac et al., 1997). Importantly, our study proposes and validates a simple mechanism by which higher accessibility of brand memory translates into advantages in memory-based consumer choices, which is independent with preference. In this mechanism, the key component mediating the effect of memory is the intermediate step of internal menu generation in the proposed two-stage model. The higher the accessibility of a brand, the more likely it will be included in the internal menu.

This component in the two-stage model is closely related to the substantial literature on consideration sets (Manzini & Mariotti, 2014; Shocker, Ben-Akiva, Boccara, & Nedungadi, 1991). In particular, the second stage of our two-stage model that expresses the problem as a preference-based choice from a given choice set (menu) resembles previous models in this literature (Manski, 1977; Roberts & Lattin, 1991; Shocker et al., 1991). The key conceptual differences, however, lie in how the intermediate menus are generated. Most extant studies on consideration sets did not focus on memory factors; instead, they modeled the formation of consideration sets in choice problems as a rational, voluntary choice based on a tradeoff between the potential benefit and the cost of considering one more option (Brown & Wildt, 1992; Hauser, 2014; Roberts & Lattin, 1991). In contrast, our models describe menu generation as probabilistic processes governed by the strength of category-brand associations, and hence the composition of the choice set is less of an active choice by the agent. It is worth pointing out that highlighting the role of memory does not necessarily contradict the possible existence of consideration sets generated from voluntary inclusion/exclusion of options; rather, it is much more appropriate to view the two accounts as complementary. It will be fruitful in future work to combine both aspects in a single model of memory-based choices.

By linking brand memory and brand choice in a predictive model, our approach presents both conceptual and methodological advances capable of estimating the impact of changing brand awareness and accessibility on market performance. Furthermore, it also offers a flexible toolkit for brand managers to evaluate marketing campaigns in a wide variety of competitive landscapes.

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# Sizes are Gendered: Impact of Size Cues in Brand Names on Brand Stereotyping

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## EXTENDED ABSTRACT

What comes to your mind when you think of the brand name Mini Cooper or Grand Cherokee? Physical size would probably be among the first few associations that come to mind - Mini Cooper is physically smaller, whereas Grand Cherokee is physically bigger. However, size cues in brand names also evoke other associations?

This research proposes that such size cues would trigger ingrained gender associations. Specifically, we argue that size cues of “smallness” (e.g., little, small) versus “bigness” (e.g., grand, big) in brand names can activate female versus male gender associations, which subsequently affect the warmth and competence perceptions of the brand.

This possibility arises from anecdotal evidence and linguistics research. With some exceptions, men are generally physically bigger in size than women (Touraille and Gouyon 2008). Linguistically, people tend to generate descriptions such as big (vs. little) when they evaluate an object that has a masculine (vs. feminine) grammatical gender in their native language (Aikhenvald 2016; Boroditsky, Schmidt, and Phillips 2003).

These findings lead to the proposition that consumers have a general mental association between size (small vs. big) and gender (female vs. male). As such, brand names involving size cues related to smallness (vs. bigness) would evoke female (vs. male) gender associations, and this has important implications on how consumers perceive a brand. Specifically, it has been well-established that women are stereotyped as warm whereas men are stereotyped as competent (Fiske et al. 2002; White and Gardner 2009). Building on this stream of research, we hypothesize that size cues in brand names can evoke gender associations, which subsequently affect consumers' perceptions of warmth and competence of the target brand.

Further, building on prior research (Aaker, Vohs, and Mogilner 2010; Dubois, Rucker, and Galinsky 2016), we hypothesize that the downstream consequence of size cues in brand names on brand evaluation depends on the relative importance of warmth and competence in the consumption context. We identify two situational factors, consumption goals and brand gender positioning, which interact with size cues in brand names to influence consumers' brand evaluation.

Seven studies were conducted to test the proposed hypotheses. Study 1 used a standard IAT to test the basic premise. In this IAT, participants sorted either size cues (e.g., small, big) or person names (e.g., David, Mary). The results show that the average D-score was positive and significantly greater than zero, supporting our key premise that participants indeed associate smallness with femininity and bigness with masculinity.

Study 2A and 2B examined the effect of size cues on perceptions of warmth and competence of a brand among Chinese and US consumers. In study 2A, Chinese participants were randomly assigned to one of the two size cue (small vs. big) conditions. Specifically, participants were presented with the same brand logo and information, but with different brand names (Kaiyuan Small Pavilion vs. Kaiyuan Big Pavilion). Results showed that brand name with size cue of smallness (vs. bigness) was perceived to be higher in warmth but lower in competence. In study 2B, we replicated these findings among US consumers using different brand names (Little Salon vs. Grand Salon).

Study 3 replicated previous findings by utilizing yet another consumption context (Little Cafe vs. Grand Cafe). Importantly, in this study we also measured the extent to which participants associate the brand names with maleness (vs. femaleness). We showed that participants associated the brand name containing small (vs. big) size cue more strongly with femaleness (vs. maleness), and that such gender association mediated the effect of size cues in brand names on both warmth and competence perceptions.

Study 4 ruled out an alternative explanation related to physical size. This study followed a 2 (semantic size: small vs. big) × 2 (physical size: small vs. big) between-subjects design. To manipulate semantic size, we followed the same method used in previous studies by using different brand names (Small Kitchen vs. Big Kitchen). To manipulate physical size, we manipulated the visual size of the target store on a map as either smaller or bigger than other stores. A two-way ANOVA revealed only a significant main effect of semantic size cues on warmth and competence perceptions. In other words, we found that physical size of the store did not affect warmth and competence perceptions.

Studies 5 and 6 explored the downstream consequence of size cues in brand names on brand evaluation depending the relative importance of warmth and competence in the consumption context. Study 5 examined the role of consumption goals (communal vs. agentic). Participants imagined they were looking for a restaurant at which to meet either an old friend (communal goal) or a business associate (agentic goal). A significant interaction between size cue and consumption goal on purchase intention emerged. Participants indicated greater purchase intentions for the brand name with a size cue of smallness (vs. bigness) when they had a communal goal (i.e., meeting with a friend). Conversely, they indicated greater purchase intentions for the brand name with size cue of bigness (vs. smallness) when they had an agentic goal (i.e., meeting with a business associate).

Study 6 examined the role of brand gender positioning (feminine vs. masculine). Participants were told that the brand was a perfume brand (feminine) or a cologne brand (masculine). A significant interaction between size cue and brand gender positioning on brand evaluation emerged. Specifically, participants indicated more favorable evaluations when a feminine brand (i.e., perfume) incorporated the size cue of smallness versus bigness in the brand name. Conversely, participants indicated less favorable evaluations when a masculine brand (i.e., cologne) incorporated a size cue of smallness versus bigness in the brand name.

Taken together, we show that size cues of smallness (vs. bigness) evoke femininity (vs. masculinity) gender associations and thereby increase the warmth (vs. competence) perceptions of brands. We further show that such gender associations evoked by the size cues have important downstream consequences on consumers' brand evaluation, depending on the salience of consumption goals (communal vs. agentic) and the brand's gender positioning (feminine vs. masculine). Theoretical and managerial implications of this research are discussed.

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# A Phenomenological Examination of Internet Addiction: Insights from Entanglement Theory

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## EXTENDED ABSTRACT

Due to the scale, scope, and complexity of its impact, digital technology has been referred to as the fourth industrial revolution (Schwab, 2017). Researchers have called for a better understanding of such impacts and raised questions about the possible consequences of digital technology use for consumers (Turel, et al., 2017). Emerging research and practice commentary has started to point out the complex and often alarming ways in which digital technology use affects individuals, organizations, and society, forming a field of inquiry referred to as the dark side of digital technology (Rosen et al., 2013; Turel et al., 2017).

Considering that Internet is the most important driver of the digital revolution, it is not surprising that the dark side of digital technology has been studied with reference to Internet and Internet addiction (IA). Similar to other addictions, IA represents a compulsive usage and repetitive engagement in a behavior that leads to undesirable consequences for addicts as well as non-addicts (Lee et al., 2014; Thomee et al., 2011). However, two important aspects of IA make it distinct from other addictions. First, whereas in the case of addictions to drugs or cigarettes, the object of the addiction is relatively concrete and tangible, in the case of IA, it is not clear to what exactly individuals are addicted. This ambiguity has prompted some researchers to distinguish between addiction *to* Internet and addiction *on* Internet (e.g., Griffiths, 2010). While addiction to Internet relates to a generalized use of Internet, addiction on Internet represents specific types of IA such as online gambling, online shopping, and online pornography (Brand et al., 2014; Montag, 2017).

Offering an alternative view, we posit that even specific types of IA represent addictions to underlying physiological, psychological, and social reward systems. Thus, our approach dissolves the duality between being addicted to Internet and being addicted on Internet. We introduce a doubly-mediated model of IA with the first mediation layer consisting of Internet, and the second mediation layer consisting of specific activities (gambling, shopping, social media, etc.) on Internet facilitated by various digital platforms (e.g., smartphones). We examine human-digital technology relationships at the level of lived experiences to provide a better understanding of how IA and its various forms are shaped.

Second, IA is substantially different from other addictions, because due to our reliance on Internet, it becomes increasingly difficult to function without it. Thus, we identify a constant tension between relying on Internet and the risk of becoming addicted to it. We draw on entanglement theory (Hodder, 2012) and explore the entanglement of dependences and dependencies that lead to Internet entrapment (Hodder, 2014). Entanglement theory posits humans in relation to material things and proposes a “dialectical relationship between dependence (the reliance of humans and things on each other) and dependency (the constraints that humans and things place on each other)” which potentially leads to entrapment (Hodder and Mol, 2016, p. 1067). The state of entrapment describes a human condition where individuals are caught in the interplay between the enabling nature of things and their undesired tendency to make individuals dependent users craving for more (Hodder, 2012).

We employ a qualitative research approach based on phenomenological interpretation (Hycner, 1985; Thompson, 1997) to pursue a

more sensitive approach capable of capturing the transitions and nuances of IA at the level of lived experiences. The phenomenological insights came from an interpretive analysis of consumer narratives. The text was developed through in-depth interviews and personal essays in the Southwestern United States. Each narrative was first read as an isolated case to discover its own relevant meanings, and then compared against all other cases so as to identify the pervasive, common, minority, unique, and deviant cases and instances.

The findings juxtapose three enabling themes representing Internet dependence (immediacy, task multiplicity and multi-tasking, and intimacy and self-disclosure) with three themes that depict the perils of Internet dependency (context agnosticity, automaticity, and corporal craving). Undeniably, Internet provides us with ways to find important information instantly (i.e., immediacy), to be more efficient (i.e., multi-tasking), and to easily communicate with others and develop close relationships (i.e., intimacy). However, we identify the fine line between dependence and dependency and the path to entrapment through forming dependences and dependencies. For instance, to some of our participants, Internet has become anthropomorphized and is depicted as a friend who listens to them and someone who can be trusted. Such intimacy could in turn facilitate further Internet use and disclosure to the extent of getting addictive and.

Internet is omnipresent and grabs our attention, no matter if at work, at school, at home, or when being with family or friends; an aspect of Internet dependency that we termed “context agnosticity.” Automaticity refers to the phenomenon that being connected to Internet becomes an automatic process, thus skipping the typical first step of need recognition in decision-making. In other words, we connect to Internet for being connected, rather than for a higher-level goal. Finally, we find multiple accounts of corporal craving which our participants expressed vividly as a “thirst,” “hunger,” or “itch” for Internet. Consistent with entanglement theory, we find that the interplay between the enabling aspects of Internet (dependence) and the factors related to the dark side of digital technology (dependency) results in consumer entrapment. We suggest that the multiple accounts of IA denial are largely motivated by the inherent nature of Internet dependence versus dependency. Specifically, even though many of our informants acknowledged their excessive use of Internet, they frequently neglected the potential harm resulting from compulsive Internet use because they find it easy to point out how Internet improved their lives. Moreover, the widespread use of Internet and changing societal norms as related to use of mobile devices make excessive Internet use seem a generally accepted behavior as opposed to other forms of addiction in which the addict is not proud of his or her compulsive behavior.

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# Time-of-Day Effects on Consumers' Social Media Engagement

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## EXTENDED ABSTRACT

Imagine that it is early in the morning and you have a couple of minutes to spend on Twitter. Which article would you “like” more: an article that guarantees a fun time with its catchy title or one that signals long-term benefits with its profound title? Would your pattern of “likes” change by the evening? Is it possible that the pattern depends on whether the information is perceived to be a virtue (i.e., not tempting, but offering later benefits) or a vice (i.e., tempting, but with few later benefits)? In four studies, including one using data from Twitter, we demonstrate time-of-day effects such that the consumption of vice (relative to virtue) increases as morning turns to evening.

Engagement with social media continues to grow, and US firms are expected to spend \$67 billion on digital advertising by 2021 (Fisher 2017). Consequently, consumer behavior researchers have started to explore the psychology that underlies engagement over social media (Barasch and Berger 2014; Toubia and Stephen 2013; Wilcox and Stephen 2013). What remains unexplored, however, is how social media engagement may change through the day, and if there is any asymmetry in engagement with different types of content. We show that the time of day matters, and matters differently for vices versus virtues.

Our theorizing follows from the literature of self-control. Just as muscles are weakened after physical exertion, self-control weakens after subsequent mental exertions (Muraven and Baumeister 2000). Individuals are faced with multiple self-control challenges through the day, as they try to avoid activities and foods that may be tempting, but are not good for them in the long run. Exerting self-control over and over again is depleting. Consequently, self-control is strongest in the early hours of a day but weakens as the day progresses (Dai et al. 2015; Kouchaki and Smith 2014). What is not yet understood is how self-control depletion may emerge for information consumption. One may simply expect depletion effects of the kind that have been observed earlier. That is, because consumers get tired through the day, they process less information because they are not left with adequate resources to read and understand more information. We reveal a different result.

We argue that the effects of depletion may be different for different types of information. Specifically, we discover an asymmetry in the consumption of vice versus virtue information. A relative virtue represents immediate costs with long-term benefits, but a relative vice reflects an instantaneous pleasure with little delayed benefits and perhaps even negative consequences (Khan, Dhar, and Wertenbroch 2004; Siddiqui, May, and Monga 2017; Wertenbroch 1998). Thus, an article on the financial markets in Forbes could be considered virtue information by many who find it hard to understand, but appreciate the long-term benefit of becoming more knowledgeable on the topic. However, salacious gossip in the Cosmopolitan could be considered vice information by many who are tickled by the instantaneous pleasure, but know that there is no long-term benefit from it. We argue that the self-control depletion arising at the end of the day is likely to reduce the resources to process the Forbes article, but make one more likely to succumb to the immediate gratification from reading the Cosmopolitan article. That is, self-control depletion through the day may shift consumption toward vice information and away from virtue information.

We observe such a pattern across four studies. In study 1, we explored the factors urging Twitter usage and the attractiveness of different topics in the morning and the evening hours. We found initial evidence that individuals are interested in both long-term and short-term benefits on Twitter and this interest may shift towards vice content through the end of the day. In study 2, we manipulated magazine type (vice vs. virtue), and asked participants about their likelihood of reading the articles tweeted by given magazines in the morning and the evening. Likelihood to read vice (vs. virtue) magazines was lower in the morning but preference in the evening shifted toward vice magazines. In study 3, we again manipulated magazine type (vice vs. virtue), but measured the time at which participants responded to the survey (between 10 am and 6 pm). We asked participants about their likelihood of reading the articles tweeted by given magazines, and observed a significant interaction effect. Specifically, the reading likelihood shifts away from virtue towards vice as the day progresses. Finally, in study 4, we collected more than two million tweets over a hundred twenty-five days, and then analyzed the unique tweets (after eliminating retweets and duplicates within a day). While controlling for a variety of factors (e.g., total number of tweets by a magazine), we observed a significant interaction between time-of-day and magazine type. Specifically, social media engagement as measured by “likes” increases overall as the day progresses, but there is a statistically significant shift toward vices rather than virtues.

We add to the self-control literature by revealing not only that depletion during a day influences the consumption of information overall, but that such depletion results in asymmetry for vices versus virtues. Implications also arise for marketers who, depending on the nature of the social media content, may want to release different content at different times during the day in order to maximize the engagement of consumers.

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# Charity Donors' Response to Cause-Related Marketing: The Role of Attachment Styles

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## EXTENDED ABSTRACT

Cause-related marketing (CM) is a type of sponsoring activity whereby firms, for a limited period of time, donate a certain amount of the sales price of the firm's product or revenue to a specific cause. While literature is prolific on how the firm (Mende, Bolton and Bitner 2013), the consumer (e.g., Krishna 2011), or, more marginally, the cause (e.g., Lafferty and Golsmith 2005) benefit from CM, charity donors responses are a neglected area. This topic is however important because the increased need for charitable giving necessitates a large, strong, and stable portfolio of loyal donors who adhere to the charity's strategy. Consequently, the present research focuses on the charity donors and not on consumers who buy CM offers. The research question is thus the following: How do charity donors' respond to CM implemented by their charity?

As the literature is silent on the issue of donors' response to CM, we resort to an exploratory qualitative approach in Study 1 (22 semi-directed interviews). With no surprise, donors' response to CM implementation seemed to be influenced by their history with CM (i.e., general attitude, familiarity). More importantly, the analysis revealed that the style of informant relationship with the charity, called attachment style (AS), seemed to affect their response. Some respondents talked about their charity in a very consistent and emotionally positive way and seemed to have a good level of involvement and commitment toward it. They seemed to consider CM as a possible funding source and even willing to propose adjustments to optimize its implementation for the charity. Another group of respondents seemed to have an unemotional speech. They analyzed the CM with a certain distance, and expressed doubts about the reason that drives charities to participate to CM. Their reactions ranged from indifferent to negative. Finally, some respondents seemed to have high levels of expectations and recognition needs toward the charity. Their speech appeared as very emotional but instable and paradoxical. On the one hand, they seemed highly involved in the charity and desired an exclusive relationship with it. On the other hand, they seemed to feel insecure and unable to explore new ideas of fundraising opportunities by fear of losing or damaging the relationship they entertain with the charity. These respondents expressed rather negative emotions and reactions (e.g., sadness, anger).

Study 1 provides insights into donors' relational profiles likely to accept or reject CM. The key construct that emerged from our analysis in response to CM implementation by the charity is AS. AS are conceptualized by two dimensions: avoidance and anxiety (Fralley, Waller, and Brennan, 2000). A high level of avoidance indicates poor perception and lack of trust in others. A high level of anxiety means lack of self-confidence and high need of reassurance. Based on this view, early research distinguishes between three AS: secure, avoidant and anxious (Collins and Read 1990; Hazan and Shaver 1987; Simpson 1990). In Study 2, we examine how (i.e. the mechanisms under which) AS influence donors' response to CM.

AS are rooted in the first years of life where the emotional effects of relationships with the parental figure are experienced and activated at each interaction with others (Ainsworth et al. 1978; Bowlby, 1969). We thus postulate that depending on their AS, donors will exhibit positive (e.g., happiness and confidence in the charity's decision to resort to CM) or negative (e.g., disappointment by the decision, anger and discontent) emotions toward CM implementation by the charity. As emotions represent motivational intentions

(Frijda 2016), they will result in pro- (i.e., favorable actions such as increasing one's donations) or anti-charity (i.e., harmful actions such as spreading negative word of mouth or revenge) behavioral intentions. We hypothesize that positive emotions mediate the relationship between secure donors and pro-charity behavioral intentions (H1). We also hypothesize that anxious style of attachment is characterized by ambivalence (emotions and behavior) (H2). Finally, as they are devoid of emotions, avoidant donors decrease their loyalty (H3).

262 French donors were asked to choose a particular charity to which they made at least one donation (monetary, time or other). Then, we measured the respondents' AS, their familiarity with CM, and their attitude toward CM in general. In the next phase, we asked respondents to imagine that their charity was about to implement CM. We then measured the mediating and dependant variables (positive emotions, negative emotions, pro-charity and anti-charity behavioral intentions, with items presented randomly) and socio-demographics.

To test the effect of attachment style dimensions on pro- and anti-charity behavior, we used model 4 from the Preacher-Hayes script for bootstrap analyses of indirect effects, with 5.000 resample (Preacher and Hayes 2004). The results provide support for H1 and H2 ( $p < 5\%$ ) and a partial support for H3 ( $p < 10\%$ ).

This research enriches the attachment style literature. First, in line with previous work in marketing (e.g., Mende et al. 2013; Thomson et al. 2012), the findings provide additional empirical support to the predictive power of AS. More precisely, AS have a significant direct and indirect effect on behavioral intentions, even when taking into account the donors' previous history with CM and the type of their donation. The findings also highlight the theoretical relevance of this concept: philanthropic relationships, as commercial (e.g., Mende et al. 2013) and interpersonal relationships (e.g., Collins and Read 1990), are characterized by secure and insecure AS. Second, the present research offers a framework for explaining the attachment process based on emotions. Given the importance of these findings, charity managers are encouraged to embrace a bigger vision of CM impact by balancing its potential benefits in terms of notoriety and image with the potential risk of upsetting and eventually losing donors. In particular, they are encouraged to measure the AS of their donors in order to isolate donors segments that have the potential to be more or less responsive to CM, and tailor CM implementation and communication accordingly. Charity managers should also explain the necessity of resorting to CM in order to build a positive general attitude, especially among donors who volunteer their time. Further research should explore interventions that could blunt the negative impact of CM on the anxious donors and test the generalizability of findings to other contexts of altruism.

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# Videography

## Alternative Worldviews on Human – Nonhuman Relations: The Turkish Case

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Literature foundations: Consumer research studies how we attribute meaning to commodities and bring them into our lives (Belk 1988, Miller 2008). Through singularization, commodities take on meaning and enter the universe of unique objects (Kopytoff 1986). Until they are recommodified, they remain less available for exchange (Epp and Price 2010). Today, in most cultures, the permanent constituents of the universe of singular objects are only humans as it is unthinkable to exchange humans for money (Kopytoff 1986). Humans, however, used to share this particular universe with animals who lived parallel lives to humans and roamed freely without any owner (Berger 2009). Today, animals, even historically the closest to us - cats and dogs - are reduced to a level at which they require humans to pull themselves out of the universe of commodities. For example, a cat is a de facto commodity until one pays its price and brings him or her to the universe of singular objects (Corrigan 1997). Intended contribution and findings: To explore an alternative worldview, we went to Istanbul, Turkey where cats and dogs still roam freely. We questioned the commodity status of animals and talked to the local people. We situated these animals in the universe of singular objects, deserving the same rights as humans. As the presence of animals in the universe of singular objects is a companionship offered to our loneliness as species, we also focused on the implications of the cohabitation with another kind in this conceptual universe. Method: The videography reports our observations of human – nonhuman relations in Istanbul, interviews with the local people, and the secondary sources that we relied on to triangulate our interim findings.

## Augmented Reality, Augmented Trust: How Augmented Reality Enhances Consumer Trust In Online Shopping

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Intended Contribution to Knowledge: Online shopping has become a common practice among consumers worldwide (Nielsen, 2017). Since the transactions over the internet take place without personal contact, consumers are generally concerned about their purchases (Chen & Dhillon, 2003). It is therefore important for brands and companies to generate consumer trust in online contexts. On the other hand, Augmented Reality (AR) has emerged as a relevant interactive technology in the marketing environment. It is the ability to overlay the physical environment with virtual elements that can interact with the physical environment in real time. It consequently holds the potential to alter many consumer activities. Hence, there is a growing need to better understand its impact on consumer behavior (Javornik, 2016). In this research, we aim to study how the technology of AR affects consumer trust in an online shopping context. Literature Foundations: This study builds on consumer trust theory and adoption of new technologies. Research Method: Following an ethnographic approach, participants used AR in their homes as an opportunity to mix their personal spaces with virtual furniture within a mobile app that was developed for this purpose. Findings and implications: This research suggests that AR technology can serve as a coping strategy to either increase or decrease consumer trust in online contexts. We add to the literature by proposing that this new technology increases consumer trust by six motivators (problem-solving, benevolence, reduced psychological distance, interactivity, novelty, and enjoyment) and decreases consumer trust by two demotivators (need for touch concerns and feeling of intrusion). The authors also illustrate a few age differences regarding the adoption and usage of this new technology. Furthermore, it was found that AR also affects both, consumers and brands. Some marketing cases affected by the usage of AR are consumers' expertise and satisfaction, brand evaluations and purchase intention.

## **Crossing Race and Markets: Introducing the Race in the Marketplace Research Network**

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Both research and practice reveal that race plays a key ideological role in the functioning of consumption markets worldwide (Nopper 2011; Thomas 2017; Zerofsky 2016). However, scholarship on race-related issues in the context of marketplaces has generally been limited, overlooked or marginalized in the marketing/consumer research discipline. However, the tangibility, reality, and brutality of racial dynamics are increasingly “front-page news” and marketing scholarship increasingly emphasizes issues of inclusion and exclusion (Henderson and Williams 2013). As a result, the absence of scholarship- and scholars- who prioritize impactful work on race in marketing presents a challenge to move the discipline towards more inclusive scholarship, employment, and pedagogy. This film explains impediments to scholarship at the intersection of race and markets by examining the evolution of the RIM Research Network (RIM). Developed in 2017, RIM is a response to the marginalized status of race-related scholarship and scholars in the marketing domain. While marketing scholars and scholarship that focus on race and racism have long suffered a marginalized status, attempts to attract private sector dollars has resulted in large-scale shifts in institutional cultures and priorities which has served to exaggerate pre-existing hierarchies within research topics, disciplines, and methodologies (Moleworth, Scullion, and Nixon 2010). Areas and methods most deemed able to benefit the bottom line of potential donors and strategic partners garner the most attention and praise, while critical race scholarship and other forms of research perceived as discordant with present-day marketplace functioning are further marginalized. The conceptual equivalent of consumers, these scholars find a dwindling marketplace in which to cultivate community, acquire funding, secure publication outlets, and gain a sense of legitimacy in the broader academic canon. In this marketized environment, research that focuses on diversity and multiculturalism often take precedence over critical examinations of marketplace activities that expressly investigate racism since the former tends to obscure or ignore systemic issues of power, oppression, and privilege, thereby leaving inherent marketplace inequities largely intact and unquestioned (Grier, Thomas, and Johnson 2017). RIM seeks to establish and legitimize a cohesive critical perspective which foregrounds the reality of power, privilege and oppression, question existing marketing strategies and link them to an overall intersectional framework that can promote inclusive, just and liberatory marketplaces. This film chronicles RIM’s quest to counteract the current academic environment by innovating a transdisciplinary approach to the understanding of race in the marketplace that will produce a space within academia wherein RIM-related scholars and scholarship can thrive.

## **Don’t Troll Me Bro: A Study of Griefing in Video Games**

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**Intended Contribution to Knowledge:** The purpose of this study is to examine consumer grieving and toxicity in the context of video games, and seeks to uncover the antecedent, define the process, and discuss the outcomes of the phenomenon. **Literature Foundations:** This videography contributes to research in consumer culture theory by exploring an underexplored but timely topic, consumer grieving and toxicity, in the context of video games. **Research Method:** A combination of videographic, netnographic, and experimental methods were used in this study. Five semi-structured interviews were conducted with gamers and approximately 50 hours of grieving footage was collected via YouTube and Twitch. Additionally, a field experiment was conducted through 46 matches of a popular MOBA game over approximately 20 hours. This research was filmed in accordance with the videography practices set forth by Belk & Kozinets (2005). **Findings and implications:** This research uncovers the antecedents, process, and outcomes of consumer grieving and toxicity in video games, and demonstrates that toxicity has a tangible effect on players win rate in competitive games.

## **From a Culinary Phantasm to an Eudaimonic Well-Being: Exploring The Experience of Amateur Cooking Classes**

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Ophélie Mugel, Chaire SDSC AgroParisTech, Université Paris Est, France

**Intended contribution to knowledge :** This research, Consumer Culture Theory and Grounded Theory driven, focuses on the dimensions of the « learning by doing » experience of amateur cooking classes. **Literature foundations :** This exploration refers, a posteriori, to an eudemonic approach of well-being (an individual fulfillment relating to self-actualization leading to a series of meaningful experiences). It echoes with the three psychological needs of Self-Determination Theory (the needs for competence, autonomy and relatedness) and the optimal experience of flow. **Research Method :** Through an interpretive approach, we conducted ethnographical observations, recorded films, took photographs and interviewed amateur cooks and professional Chefs in five cooking classes, three in France and two in Japan. **Findings and implications :** Thanks to an in depth analysis, we designed a framework for cooking class experience and noticed six dimensions : (1) Expertise, as the desire to reproduce Chef’s technical gestures and collect expert information about products and recipes ; (2) Immersion, as strategies of imitation and roleplay ; (3) Convivialité (and commensality), as the pleasure of sharing ; (4) Identity, as a self pursuit and affirmation and cultural heritage ; (5) Sensoriality, as five senses synesthesia ; (6) « Naturality », concerning authentic, seasonal or healthy products and sustainable practices. Also, in a Transformative Consumer Research perspective, public policy and healthcare stakeholders are encouraged to promote cooking competences in order to improve consumers’ food well-being. These dimensions can also be manipulated to enhance motivation and satisfaction of cooking school trainees as well as for raising cooking classes profitability and for developing cooking class concepts adapted to the new generation of millennials worldwide.



## **Meat the Needs: Ahold Delhaize Sustainable Retailing Model**

Darrell Eugene Bartholomew, Pennsylvania State University, USA  
Maggie M Mehalko, Pennsylvania State University, USA

**Intended Contribution to Knowledge.** Zero waste initiatives are having a real impact on reducing food waste of edible and inedible parts of food. There are good zero waste practices for diverting food away from landfills to be used to generate energy such as in a food digester or to be used as compost. Better practices help to divert food for human consumption. Many grocers do a lot of good things for the food banks and their local community partners such as shelters and soup kitchens to relieve hunger. The purpose of this paper is to illustrate an innovative zero waste food rescue program that can be used as an example of best practices in sustainable retailing. Literature Foundations. Recent research has focused on this intersection of sustainability, marketing and public policy which are all part of green retail strategies (Iyer and Reczek 2017). Food waste prevention is a goal of most grocers, food service companies, farmers, and food manufacturers (Block et al. 2016). Perceived risk to brand (Murray and Schlacter 1990) and challenges of food safety and handling procedures as well as consumer behavior and perception of inventory were all issues that Ahold Delhaize had to address when the program was piloted. Research Method. Using a case methodology Giant Foods meat rescue program will illustrate this innovative program from the perspective of the decision makers that created the 'Meat the Needs' Program. Findings and Implications. The impact of this innovative program has effectively altered the supply chains at six major food banks in the Northeastern U.S. challenging traditional methods of food banking and creating several new opportunities for food rescue programs involving ugly produce, fruit rescue, and milk rescue in addition to the original meat rescue program.

## **Tattoo: A Perspective Beyond Esthetics**

Luana C. Moraes, Universidade de Sao Paulo, Brazil  
Gabriela L. Pinheiro, Universidade de Sao Paulo, Brazil  
Nathalia S. Arthur, Universidade de Sao Paulo, Brazil  
Eliani C. Flores, Universidad Catolica del Peru, Peru  
Jose Mauro C. Hernandez, Centro Universitário FEI, Brazil

Over the past 20 years, tattoos have become extremely popular in Western countries, spreading among several audiences and becoming a very popular form of body modification. Through the centuries, body modification has been an important part of human's life as an expression of the self. Until recently, tattoos were exclusive to marginalized groups such as sailors, prostitutes, and criminals, and portraying a tattoo was motive for being prejudiced. It was not until the 60's that tattoos assumed a new role in our society. First, as an expression of self-identification of youth movements and lately as a cultural phenomenon of body embellishment. Today, tattoos are increasingly seen as a form of art adorning the human canvas and, as such, tattoos compete in the body adornment industry. Our videography sets out to uncover the meanings associated with the tattooing consumption experience. In our journey, we found that the tattooed body is seen by their owners as a canvas or as a media. When the body serves as a canvas, the tattoo is an expression of art whose pure objective is the body embellishment; the symbolic meaning attached to the tattoo can be extremely important or not important at all – in this case, the tattooing is just the art for the art's sake. When the body serves as a media, the tattoo expresses the cultural, religious, philosophic, gender, sociological, and political ideology of the owner and the defining aspect of the tattoo is its meaning. Interestingly, due to its perennality, the tattoo is re-signified as the individual matures and a canvas can be transformed into a media and vice versa – the art becomes an ideology and the ideology becomes an art.

## **Teaching Consumer Resistance in Jamaica: Subvertising in Action**

Michelle Renee Nelson, University of Illinois at Urbana-Champaign, USA  
Yanyun (Mia) Wang, University of Illinois at Urbana-Champaign, USA  
Kathy Tian, University of Illinois at Urbana-Champaign, USA  
Gail Ferguson, University of Illinois at Urbana-Champaign, USA  
Rachel Powell, CDC Foundation, USA  
Candace Wray, University of West Indies, Jamaica

Our videography features a 'subvertising competition' among adolescents and mothers in Jamaica, as part of an intervention to build persuasion knowledge by teaching consumer resistance through creativity. Although all Jamaicans are inundated by U.S. media, those who internalize U.S. culture via "remote acculturation" are especially vulnerable to negative health habits promoted by U.S. advertising (Ferguson et al. 2017). To address this problem, we developed the J(amaican and) U(nited) S(tates) Media? Programme (2-session workshop teaching nutrition and persuasion knowledge). The film allows viewers to see the intervention (Belk et al. 2017); the critiques are performance acts of consumer power. Through art, poetry and song, families give voice to their skepticism. Literature/Contribution. We focus on family as an important consumer socialization force (e.g. Moore, Wilkie and Desrochers 2017) to build persuasion knowledge (PK; Friestad and Wright 1994). Not much is known about PK in developing countries or how to teach consumer resistance. Subvertisements simultaneously allow audiences to critically evaluate media content and to construct subversive narratives, often through parody (Harold 2004). We taught families to ask: What information is missing? What is the ad really saying? Then, families critiqued, created, and competed. Method. 92 teen-mother dyads in Kingston were selected based on higher remote acculturation and unhealthy eating. Dyads were randomly assigned to control or intervention groups. Food intake and media literacy/PK were measured at multiple points. Focus groups about the subvertisements were held. Findings.

Overall, the intervention groups scored higher than control group in media literacy (PK) and fruit consumption. Focus groups revealed knowledge of health consequences and persuasion. This pragmatic, substantive videography (Belk et al. 2017) shows the promise of trans-disciplinary, theory-driven interventions to change real-world behavior (Lynch et al. 2012). The narrative follows a problem-solution format with the 'process' and 'performances' highlighted and findings embedded (Cayla and Arnould 2013).

## **Time and Space for Robots and AI**

Marat Bakpayev, University of Minnesota Duluth, USA

The specific gap in the knowledge our videography seeks to address is the influence of robot/artificial intelligence (AI) technology representation on consumer-level timeflow. We study how robot/AI time-space imaginations are presented in news. We aim to use evocative power of moving images (Hietanen, Rokka, and Schouten 2014). The videography contributes to study of spatial and temporal perspectives in consumer research (Castilhos, Dolbec, and Veresiu 2017; Robinson 2018; Woermann and Rokka 2015). Woermann and Rokka (2015) identified the elements that shape consumer experiences on micro-level. Our study shows how temporality and spatiality are presented by technology chronotopes on meso-level. Drawing from literary theory, we examine discourse on robots and AI. Focusing on representation of time and space in news, we contextualize Bakhtin's theory of chronotope (Bakhtin 1981). Chronotope is "the intrinsic connectedness of temporal and spatial relationships that are artistically expressed in literature" (84). We identify four main chronotopes in the narratives on these technologies: Fantasies of the Past, Present Timeflow, Human-Master Future, and Robot-Master Future. Fantasies of the Past are rich with references to historical mythology of machines and failed expectations of AI. Present Timeflow portrays various relationships that exist now – robots/AI born in research labs and science-fiction films move to our roads, streets, homes, hospitals, schools, offices, restaurants, and so on. Future is the most dominant element of the storytelling. We have Human-Master Future and Robot-Master Future - two central ideological representations of utopia and dystopia. Human-Master may incorporate the use of robots/AI, and this chronotope calls for "robot-enhanced humanity" with robots serving humans. Robot-Master Future is a more predominant rhetoric. That chronotope assumes "robot apocalypse." This is where machines are presented as "demons" and "supervillains" that most likely will "destroy humanity."

# Workshop Summaries

## WORKSHOP

### **Better Marketing for a Better World**

Jonah Berger, University of Pennsylvania, USA  
Jonathan Zev Berman, London Business School, UK  
Darren Dahl, University of British Columbia, Canada  
Markus Giesler, York University, Canada  
Rebecca Hamilton, Georgetown University, USA  
Gita Venkataramani Johar, Columbia University, USA  
John Lynch, University of Colorado, USA  
Andrea Morales, Arizona State University, USA

In this session leading consumer behavior researchers will discuss what research in their area would look like using the lens of “Better Marketing for a Better World.”

## WORKSHOP

### **Trust in Doubt: Co-Chair’s Invited Panel**

Adam Berinsky, Massachusetts Institute of Technology, USA  
John Gray, MentionMapp.com, Canada  
Andre Spicer, City University of London, UK

In a special invited session panel members from political science management and the online research business each provide their perspectives on the post-trust world its effects and that way that they are seeking to understand it. This session intends to provide consumer researchers with alternative perspectives on post-trust phenomena that will help broaden and enrich our collective view of our changing social environment.

## WORKSHOP

### **Conducting Consumer-Relevant Research**

Jeffrey Inman, University of Pittsburgh, USA  
Margaret C. Campbell, University of Colorado, USA  
Amna Kirmani, University of Maryland, USA  
Linda L Price, University of Oregon, USA

This workshop will include perspectives on how to conduct conceptually based consumer-relevant research that offers practical insights.





# Forum Summaries

## FORUM

### Using Multi-Methods in Behavioral Pricing Research

Haipeng Chen, University of Kentucky, USA  
David Hardesty, University of Kentucky, USA  
Akshay Rao, University of Minnesota, USA  
Lisa Bolton, Pennsylvania State University, USA

Behavioral pricing has been shaped by and is helping to shape the nascent trend towards cross-disciplinary multi-method research in consumer behavior. The proposed roundtable aims to bring together a group of scholars in the area of behavioral pricing within and outside of marketing to discuss the unique opportunities and challenges researchers in this area face with the multi-method approach. The roundtable together with the January 2021 JACR special issue and a mini-conference (to be sponsored by the University of Kentucky) aims at spurring additional interest and enthusiasm in research using multi-methods among consumer researchers interested in behavioral pricing and beyond.

## FORUM

### What's Your Construct? Exploring the Different Definitions and Operationalizations of Scarcity

Kelly Goldsmith, Vanderbilt University, USA  
Rebecca Hamilton, Georgetown University, USA  
Caroline Roux, Concordia University, Canada  
Meng Zhu, Johns Hopkins University, USA

This forum aims to encourage constructive discussions around the different definitions and operationalizations of scarcity in order to 1) start delimiting the boundaries of the construct 2) overcome some of the challenges for advancing this literature given the differences between various scarcity-related manipulations and 3) stimulate future collaborations.

## FORUM

### Promoting Well-being and Combating Harassment in the Academy

Ekant Veer, University of Canterbury, New Zealand  
Zeynep Arsel, Concordia University, Canada  
June Cotte, Ivey Business School, Canada  
Jenna Drenten, Loyola University Chicago, USA  
Markus Geisler, York University, Canada  
Lauren Gurrieri, RMIT University, Australia  
Julie L. Ozanne, University of Melbourne, Australia  
Nicholas Pendarvis, California State University Los Angeles, USA  
Andrea Prothero, University College Dublin, Ireland  
Minita Sanghvi, Skidmore College, USA  
Rajiv Vaidyanathan, University of Minnesota Duluth, USA  
Stacy Wood, North Carolina State University, USA

This roundtable has been proposed to address a growing concern over well-being and safety in academia. This roundtable will discuss issues of harassment experienced by academics in order to better advocate for policies systems and a culture that will help protect all members of the academic community whilst carrying out their teaching learning administrative and research duties. This may be in their classrooms in the field at conferences and/or online. The roundtable will offer an opportunity for those attending to discuss broad issues associated with harassment and discuss different means to promote a safe and welcoming academic community free from harassment of any form. The feedback from this roundtable will be later collated by the roundtable organizers and distributed to attendees so as to provide guidance for university administrators (such as participants' Deans department chairs etc). The collated feedback will also be used to help inform ways in which ACR's newly formed anti-harassment working committee can work to support its members. The roundtable aims to bring a sense of empowerment and encouragement to those in attendance to combat these issues. To this end it should be noted that the purpose of the roundtable is to share broad ideas to combat harassment and promote well-being and safety. It is NOT a place to developed finalized policy or an opportunity to air specific grievances or make accusations against individuals. This will be strictly enforced by the roundtable chair.



# Working Papers

## **I8. How Food Images on Social Media Influence Online Reactions**

Annika Abell, University of South Florida, USA  
Dipayan Biswas, University of South Florida, USA

The results of four studies including two field experiments show that an image of a female gets fewer positive online reactions and is evaluated less favorably when she is pictured next to an unhealthy (vs. a healthy) item; these effects get reversed for males.

## **D11. A Hidden Cost of Advocating: Attitude Depolarization After Recommending**

Ravini Savindya Abeywickrama, University of Melbourne, Australia  
Gergely Nyilasy, University of Melbourne, Australia  
Simon M. Laham, University of Melbourne, Australia

The consequences of word-of-mouth recommendations on advocates themselves have largely been neglected in consumer research. The current work demonstrates paradoxical effects of advocacy on consumer attitudes by illustrating reduced-level product evaluations following a consumer word-of-mouth episode. The results demonstrate a self-persuasion theory-based depolarization effect mediated by metacognitive processing.

## **C1. Promoting Subjective Preferences in Simple Choices During Sleep**

Sizhi Ai, First Affiliated Hospital of Xinxiang Medical University, China  
Yunlu Yin, University of Hong Kong, China  
Yu Chen, Peking University, China  
Lin Lu, Peking University, China  
Lusha Zhu, Peking University, China  
Jie Shi, Peking University, China

Combining target memory reactivation method with a food evaluation/choice task we find that presenting verbal cueing during sleep but not wakefulness shifted food preferences and decisions in simple choice pointing to a potential for nudging human behavior with subtle manipulation of memory processing during sleep.

## **R3. In Experiences We Trust: From Brand-centric Experiences to Experience-centric Brands**

Melissa Archpru Akaka, University of Denver, USA  
Ana Babic Rosario, University of Denver, USA  
Gia Nardini, University of Denver, USA

Experiences are replacing brands as the most sought-after market offerings. In the context of American Yoga we investigate the role of brands in the assemblage of extended consumption experiences. We find that consumers' shifting institutional logics influence their polygamous relationships with brands and guide the reassemblage of experiences over time.

## **G8. How Does Pronunciation Difficulty of Brand Names Influence Consumer Responses? The Role of Self-Construal**

Gunben Ceren Aksu, Rutgers University, USA  
Yeni Zhou, Rutgers University, USA  
Alokparna (Sonia) Monga, Rutgers University, USA

We find that when a brand name is difficult-to-pronounce consumers with independent (vs. interdependent) self-construal respond more favorably. However when a brand name is easy-to-pronounce consumers with interdependent (vs. independent) self-construal respond more favorably. Further we show that differences in desire for uniqueness is the underlying mechanism.

## **B8. Factors Influencing Collaborative Consumption Usage in the US market: An Exploratory Study**

Pia Annette Albinsson, Appalachian State University, USA  
B. Yasanthi Perera, Brock University, Canada  
Bidisha Burman, University of Mary Washington, USA  
Lubna Nafees, Appalachian State University, USA

Businesses are increasingly developing collaborative consumption-based (CC) models. To capitalize on opportunities they must understand what drives and deters consumers' CC participation. This research examines how attitudes trust sustainability materialism risk propensity and generosity affect consumers' CC usage. We find that attitude trust sustainability and generosity predict CC usage.

## **A4. Persuasive Messaging in the Modern Media Landscape: Character Assassinations in Social Network's Echo Chambers**

Niek Althuisen, ESSEC Business School, France  
Sourjo Mukherjee, ESSEC Business School, France  
Negin Latifi Kasani, ESSEC Business School, France

In an empirical study we investigated if disinformation from unverified sources through social media affects people's opinions about characters who played a role in the US 2016 presidential election and its aftermath. The results show that opinions are malleable and character boost might be more effective in altering perceived source integrity.

## **R6. The Anatomy of a Rival: The Influence of Inequity and Resentment on Rival Brands**

Diego Alvarado-Karste, University of North Texas, USA  
Blair Kidwell, University of North Texas, USA

The authors examine whether brand rivalries can be formed and why they influence consumer's perceptions of brands and subsequent intentions to purchase. We propose a new model that incorporates the emotional side of rivalries beyond current research to demonstrate that inequity and resentment are the drivers of these unique relationships.

## **A1. Trusting and Acting on Chance Online**

Shivaun Anderberg, University of Sydney, Australia  
Ellen Garbarino, University of Sydney, Australia

Gambling and games of chance have become more common in the online environment present in mobile games advergames and sales promotions. This study explores how the nature of the stimuli used to visually depict probabilistic components online affects people's trust in them being truly random and subsequent engagement behavior.

## **K10. The Acronym Effect: Acronym and Buzzword Use Lowers Consumer Persuasion**

Sumitra Auschaitrakul, University of the Thai Chamber of Commerce, Thailand  
Dan King, University of Texas Rio Grande Valley, USA  
Ashesh Mukherjee, McGill University, Canada

Many organizations use well-known acronyms such as CSR to represent full referents such as corporate social responsibility which itself is a shortened referent to represent performing actions that benefit the community. We show that shortening referents has the surprising consequence of lowering perceptions of genuine emotions underpinning social responsibility.



## **J14. You Reflect Me: Narcissistic Consumers Prefer Anthropomorphized Arrogant Brands**

Norah Awad, Hongik University, South Korea  
Nara Youn, Hongik University, South Korea

Narcissism is a trait commonly associated with arrogance and impacts people's interactions with others; prior research has shown that narcissists love other narcissists like they love their own reflections. Our research examines narcissists' attitudes toward anthropomorphized brands that have arrogant personalities and the role of self-congruence in this interaction.

## **E11. Influence of Ethical Beliefs and Trust on Purchase Decisions: The Moderating Effect of Involvement**

Marija Banovic, Aarhus University, Denmark  
Athanasios Krystallis, Athens University of Economics and Business, Greece

We test the moderating effect of involvement on the relationship between ethical beliefs, trust, and purchase decisions. The higher the ethical beliefs and trust in a product's ability to deliver the value, the higher the likelihood of the product being bought and vice-versa. Trust holds more relevance for high- than low-involved consumers.

## **Q11. The Effect of Message Ephemerality on Information Processing**

Uri Barnea, University of Pennsylvania, USA  
Robert Meyer, University of Pennsylvania, USA  
Gideon Nave, University of Pennsylvania, USA

Ephemeral communication - the transmission of messages which can be accessed only a limited number of times - is ubiquitous in social interactions (e.g. verbal conversations, Snapchat messaging). In three studies we find that message ephemerality increases attention, improves memory recall, and leads to longer observation time.

## **P13. Self-Selected versus Fixed Price Bundling: The Effect of Bundle Type on Perceived Quality**

Burcak Bas, Bocconi University, Italy  
Gulen Sarial Abi, Bocconi University, Italy

This research explores the effect of bundle type on perceived quality. A lab experiment shows that self-selected (versus fixed) price bundling increases perceived quality and psychological ownership is the mechanism underlying this effect.

## **Q5. Conceptualizing the Digital Experience in Luxury**

Wided Batat, American University Beirut, Lebanon

This research introduces a theory of digital luxury experience, conceptualizing what it is and identifying its drivers. This is of importance to luxury consumption as it offers a conceptual framework to understand digital luxury, an empirical phenomenon which has gained prominence in the last 10 years and has remained poorly understood.

## **F5. Alternative Food Consumption (AFC) Adoption and Low SES Youth Food Well-Being: From Precontemplation to Maintenance**

Wided Batat, American University Beirut, Lebanon

This research will exemplify the overall mission of marketing and public policy researchers in four ways. First, we empirically show how allocentric and idiocentric factors of AFC adoption affect low SES young consumer well-being according to different stages of change.

## **J15. The Deliberation Effect on the Judgment and Choice of Anthropomorphized Products**

Juliana M. Batista, EAESP Fundação Getúlio Vargas, Brazil  
Jose Mauro C. Hernandez, Centro Universitário FEI, Brazil

The study investigated the anthropomorphized products' effect on purchase intention and choice and the moderating role of deliberation and rational personality. The first study demonstrates that personifying a product leads to higher purchase intention through product's anthropomorphization. Studies two and three show that deliberating inhibits the anthropomorphization process.

## **N10. How Does It Make You Feel? Emotional Reasoning and Consumer Decisions**

Andrea Rochelle Bennett, University of North Texas, USA  
Blair Kidwell, University of North Texas, USA  
Jonathan Hasford, University of Central Florida, USA  
David Hardesty, University of Kentucky, USA  
Molly Burchett, University of Kentucky, USA

The authors examine how consumers' think about their emotions and the favorable outcomes that result. The conscious contemplation of emotions in decision making (emotional reasoning) was found to improve consumer choice quality beyond the effects of other types of emotional processing including trust-in-feelings and affect-as-information.

## **I4. Pink Tax: Are Some Marketing Practices Discriminatory?**

Andrea Rochelle Bennett, University of North Texas, USA  
Audhesh Paswan, University of North Texas, USA  
Kate Goins, University of North Texas, USA

Are some marketing mix elements inherently unethical? For example via the "pink tax" products aimed at women are priced higher than similar products aimed at men. While segmentation targeting and differentiation are legal can they become unethical? This study explores this phenomenon using the pink tax as the research context.

## **L13. The Recipient Effect on Consumers' Preference for Products Displayed in Different Horizontal Locations**

Sheng Bi, Washington State University, USA  
Nik Nikolov, Washington State University, USA  
Julio Sevilla, University of Georgia, USA

This research proposes a recipient effect on products displayed in different horizontal locations. The congruence between recipient and product position increases information processing fluency leading to favorable product attitudes. This effect is mitigated by making consumers conceptualize time vertically or by changing purchasing scenarios from buying for others to selves.

## **F2. Can Stricter Ethical Standards Increase Tolerance for Ethical Misconduct?**

Olya Bullard, University of Winnipeg, Canada  
Sara Penner, University of Manitoba, Canada  
Kelley Main, University of Manitoba, Canada

Can stricter ethical standards increase tolerance for ethical misconduct? The current research begins to answer this question. Relying on the anchoring and adjustment heuristic we demonstrate that stricter ethical standards can increase tolerance for ethical misconduct by lowering the category mean on which judgments of transgression severity are anchored.

## **L4. Attentional Breadth Moderates the Effect of Store Environments on Product Evaluation**

Oliver B. Büttner, University of Duisburg-Essen, Germany  
Benjamin G. Serfas, University of Duisburg-Essen, Germany  
Daria Euler, University of Duisburg-Essen, Germany  
Mathias Clemens Streicher, University of Innsbruck, Austria

In an eye-tracking experiment we primed attentional breadth (broad vs. narrow) and assessed the influence of context valence (attractive vs. unattractive store environments) on product evaluation. Participants liked products more when they were presented in attractive (vs. unattractive) store environments. This difference was more pronounced with broad (vs. narrow) attention.

## **B6. A Study About the Moderator Effect of the Information Trust in the Relationships Between the Users' Participation in Virtual Communities and the Benefits Obtained**

Sara Campo, Autonomous University of Madrid, Spain  
Jano Jiménez, Autonomous University of Madrid, Spain  
Natalia Rubio, Universidad Autónoma of Madrid, Spain  
Nieves Villaseñor, Universidad Autónoma of Madrid, Spain  
M<sup>ª</sup>Jesus Yague, Universidad Autónoma of Madrid, Spain

This study compares the role of information trust in virtual communities domain. The participants' level of trust in the community contents reinforces their hedonic and social benefits. Those who trust to a lesser extent in the information shared feel more expert as a result of their participation in the virtual community.

## **N9. Effects of Awe on Consumers' Preferences for Bounded Brand Logos**

Fei Cao, Renmin University of China, China  
Xia Wang, Renmin University of China, China

Two studies probe and demonstrate that experiencing awe a positive emotion characterized by perceived vastness and need for accommodation compared with neutral emotion enhances consumers' preferences for bounded brand logos and this effect is probably driven by loss of control. The effect is stronger for chronic promotion-focused (versus prevention-focused) consumers.

## **D3. Social Exclusion and WOM about Past versus Future Experiences**

Melis Ceylan, Koc University, Turkey  
Ezgi Akpınar, Koc University, Turkey  
Selin Atalay, Frankfurt School of Finance and Management, Germany

This research explores how social exclusion affects WOM. The authors demonstrate that socially excluded individuals compared to their non-excluded counterparts are more likely to talk about personal events that happened in the past to help others be prepared for a similar experience and consequently strengthen their social connections with them.

## **K4. Movie Reviews and their Sentiments: Evidence of a Bandwagon Effect in Individualistic Cultures**

Subimal Chatterjee, SUNY Binghamton, USA  
Ning Fu, SUNY Binghamton, USA  
Qi Wang, SUNY Binghamton, USA

We analyze how the Chinese and American audience rate a common set of 173 movies released in both countries and find a bandwagon effect in the American audience in that their ratings mimic the positive sentiments of the review they read last before posting their own.

## **H11. Not for Me: Identity Needs and Consumer Interest in Different Types of Co-creation**

Lagnajita Chatterjee, University of Illinois at Chicago, USA  
David Gal, University of Illinois at Chicago, USA

This research investigates the influence of identity needs on choices between different product designing routes (e.g. self-customization crowdsourcing). Two experimental studies explore the influence of uniqueness and assimilation needs of individual consumers on selection of different product-designing formats. In future the role of moderating factors like expertise will be explored.

## **H6. The Influence of Anthropomorphized Service Toolkit on Consumer Satisfaction in Service Coproduction**

Rocky Peng Chen, Hong Kong Baptist University, China  
Kimmy Chan, Hong Kong Baptist University, China

As technology evolves anthropomorphized entities become increasingly pervasive in the service context like service coproduction. This research finds that anthropomorphized service toolkit can have either positive or negative impacts on consumer satisfaction in service coproduction depending on whether the coproduction task is self-expressive or not.

## **N14. The Bright Side of Sadness: How Mood Affects Goal Initiation**

Yunqing Chen, Chinese University of Hong Kong, China  
Leilei Gao, Chinese University of Hong Kong, China

How does mood affect people's likelihood to initiate a long-term goal pursuit? Two studies show that compared to happy individuals sad individuals have stronger preference for self-discontinuity which leads to greater motivation to start pursuing a long-term goal.

## **P9. Gift Budget Adherence and Price Discounts**

Yuna Choe, Texas A&M University, USA  
Christina Kan, Texas A&M University, USA

This research suggests that people are more likely to spend extra money to adhere to their budgets when the budgeted purchase is sold at a discount if that budget is for a gift than if it is for the self.

## **J1. The Effect of Identity Abstractness on Information Processing Styles**

Woojin Choi, University of Seoul, South Korea  
Min Jung Kim, Manhattan College, USA  
HyukJin Kwon, University of Seoul, South Korea  
Jiyun Kang, Texas State University, USA

This study suggests that how a social identity is construed (i.e. identity abstractness) would influence one's information processing style. Specifically we predict that when a social identity with high (vs. low) identity abstractness is activated a person is likely to process information more abstractly (vs. concretely).

## **I7. Male Spokespeople: Antecedents and Consequences of Social Comparison**

Hsuan-Yi Chou, National Sun Yat-sen University, Taiwan  
Xing-Yu (Marcos) Chu, Nanjing University, China  
Chieh-Wen Cheng, National Sun Yat-sen University, Taiwan

This study demonstrated that highly attractive male spokespeople revealing muscles or gazing directly at viewers evoked upward comparisons and stronger envy emotions from male consumers. Stronger relative benign envy facilitates advertising effects. Female image and beauty type moderate the formation of envy. Results contribute to social comparison and envy theories.



## **O1. Choice, Rejection, and Context Effects**

Shih-Chieh Chuang, National Chung Cheng University, Taiwan  
Yin-Hui Cheng, National Taichung University of Education, Taiwan

Most research on the context effect (compromise effect and attraction effect) has focused on choice-making tasks rather than rejection tasks. The data reported for two experiments show that the context effect is alleviated when decision-making tasks are performed in a selection scenario rather than a rejection scenario.

## **P4. Consistent Price Endings Increase Consumers Perceptions of Cheapness**

Shih-Chieh Chuang, National Chung Cheng University, Taiwan  
Yin-Hui Cheng, National Taichung University of Education, Taiwan

Should marketers make the last digit of a sale price consistent with the last digit of the original price? Across multiple studies including field studies and a variety of product categories this research shows price perception and purchase intention are related to consistency between the sale price and original price

## **Q9. Free or Fee? Consumers' Decision to Pay for the Premium Version of a Music Streaming Service Rather than Using its Free Version**

Sebastian Danckwerts, Heinrich-Heine-University, Germany  
Peter Kenning, Heinrich-Heine-University, Germany

This research examines factors that influence consumers' likelihood of subscribing to the chargeable premium version of a music streaming service rather than using its free basic version. The results show that both the similarity between the two versions' functionality and the perceived quality of personalized content significantly affect consumers' decision.

## **A5. Trusting the Tweeting President: Inside the Donald's reality: Gaslighting, psychometrics and social media**

Dianne Dean, University of Hull, UK  
Fiona Walkley, Hull University Business School, UK  
Robin Croft, Brunel University, UK

Research examines how Donald Trump's unconventional campaign. Using cultural branding theory this research critically evaluates Donald Trump's propagandist narrative. For success it needed to be believable erode the credibility of opposing candidates; create a reality that emphasizes the lost values of the American Dream and apportion blame to a significant 'other'.

## **F3. The Dark Side of Happy Brands: A Case Study of Newport Cigarette Advertising**

Timothy Dewhirst, University of Guelph, Canada  
Wonkyong Beth Lee, Western University, Canada

This qualitative study uses the tobacco industry's consumer research made public from litigation to examine how happiness appears particularly applicable to hedonic consumption such as smoking even though products and brands pertaining to hedonic consumption may not ultimately be beneficial or healthy to consumers.

## **D4. How the Product Positioning Affect the Influence of Online Consumer Reviews on Consumer Intentions**

Helison Bertoli Alves Dias, Federal University of Paraná, Brazil  
José Carlos Korelo, Federal University of Paraná, Brazil  
Danielle Mantovani, Federal University of Paraná, Brazil  
Cecilia Souto Maior, Federal University of Paraná, Brazil  
Paulo Henrique Muller Prado, Federal University of Paraná, Brazil

Research in marketing indicates that different review types lead consumers to distinct intentions. However an important element of this relationship has not received enough attention: the reviewed product positioning. This paper shows that product positioning influences such relationship. Further this interaction between products and reviews is explained by reviews diagnosticity.

## **F7. Mere Packaging and Consumer Choice**

Tim Philipp Doering, University of Michigan, USA  
Katherine Burson, University of Michigan, USA  
Andrew D Gershoff, University of Texas at Austin, USA

Despite retailer and consumer efforts packaging still makes up the biggest proportion of municipal solid waste. Two studies show that though consumers prefer packaged goods they are willing to buy unpackaged goods significantly more often if they are in control of unpackaging the product.

## **I6. How Does Runner's World Shape a Runner's World? Understanding Representations of the "Ideal" Female Body in Fitness Advertising**

Carly Drake, University of Calgary, Canada  
Scott Radford, University of Calgary, Canada

The female body is salient at the intersection of sport the marketplace and media. In this critical review we interpret representations of the female body in fitness advertisements targeting female recreational endurance runners. We argue that they offer conflicting – and often unhealthy – directives on how to achieve the "ideal" body.

## **O7. Helpful Mental Shortcuts or a Shortcut to Bias? Two Perspectives on Heuristics and One New Direction for Consumer Research**

Carly Drake, University of Calgary, Canada  
Mehdi Mourali, University of Calgary, Canada

Consumer research tends to follow a perspective on heuristics that argues heuristics bias and mislead those who use them. However a second perspective posits that heuristics may be more efficient and accurate than complex computations despite using less information. We explore what this perspective can offer future consumer research.

## **Q6. Online Social Status Predicts Subjective Well-being: a Two Population Study**

Rui Du, University of Hawaii, USA  
Miao Hu, University of Hawaii, USA

Through three studies across two populations we identified a novel construct: online social status. Online social status is positively related to consumers' subjective well-being (Study 1 and Study 2). Additionally only when online and offline identities were highly overlapped online social status is related to subjective well-being (Study 3).

## **L14. Christmas Decorations in September – What Happened to Halloween? The Effect of Prospective Event Markers on Time Perceptions and Attitudes Towards Promotions**

Chaumanix Dutton, University of Southern California, USA  
Kristin Diehl, University of Southern California, USA

We propose that reminders of future events such as holiday promotions trigger prospective event markers which affect time perceptions and attitudes towards the promotion. In three studies we show that event-related markers decrease time perceptions rendering early holiday promotions more acceptable while unrelated event markers have opposing effects.

## **G5. The Phenomenon of Brand Noise and Related Consumer Preferences in the Luxury Industry**

Daria Erkhova, University of Bern, Switzerland  
Elena Ehrensperger, University of Bern, Switzerland  
Harley Krohmer, University of Bern, Switzerland  
Wayne Hoyer, University of Texas at Austin, USA  
John Zhang, University of Pennsylvania, USA

This paper introduces the concept of brand noise as a new comprehensive approach to “loud” and “quiet” luxury branding. Further we empirically show that consumer preferences toward loud and quiet goods are not always driven by social status but also by personality traits such as extraversion and openness to experience.

## **M13. Keep Consistency in Good Old Days: The Effect of Nostalgia on Consumers’ Consistency Seeking Behavior**

Yafeng Fan, Tsinghua University, China  
Jing Jiang, Renmin University of China

The present research explored how nostalgia affects consumer’s consistency seeking behavior. Three studies demonstrated that nostalgic feelings increase consumers’ consistency seeking behavior in consumption. The results showed that nostalgia (vs. control) condition participants higher self-continuity preference which increases their consistency seeking behavior in subsequent consumption situation.

## **M9. Exploring Historical Nostalgia and its Relevance to Consumer Research**

Matthew Farmer, University of Arizona, USA  
Caleb Warren, University of Arizona, USA

Historical nostalgia a sentimental longing for a time outside of one’s own personal past appears to draw a comparison between present-day values and past values making it a potentially distinct construct from personal nostalgia. We report a pilot study that supports this claim and develop a program of promising research.

## **I5. Take That Mirror Away From me! Clothing Consumption by the Elderly and the Self-identity of the Young**

Daniela Ferreira, Federal University of Rio de Janeiro, Brazil

This study focuses on the impact of elderly’s clothing consumption on the self-identity of the young in the Brazilian context. Using netnography and interviews and building from Terror Management Theory we found that moral condemnation of the elderly represents youngers’ fear to challenge their self-identity and privileged status in society.

## **N12. Untangling Different Envy Episodes and their Effects on Brand Attitude**

Kirla C Ferreira, EAESP-FGV, Brazil & City University of London, UK  
Delane Botelho, EAESP-FGV, Brazil  
Suzana Valente Battistella-Lima, EAESP-FGV, Brazil

An envy episode develops in various directions depending on individual and contextual factors and its effect on brand attitude varies accordingly. Based on three studies we suggest that brand attitude decreases linearly across envy episodes (from no envy benign envy malicious envy by luck to malicious envy by deceit).

## **H3. Does the Style Looks More Expensive? The Effect of Visual Complexity on Luxury Perception of Art Infused Products**

Cheng Gao, Nanjing University, China  
Chunqu Xiao, Nanjing University, China  
Kaiyuan Xi, Nanjing University, China  
Hong Zhu, Nanjing University, China

Experiments results demonstrate that consumers perceive products infused with complex visual arts are more luxury. This is because complex arts tend to capture consumers' attention and broaden their pupil size which in return is explained by arousal of that stimuli. Stimuli's artistic level is found to moderate the mechanism.

## **B9. The Power of Self-Effacing Brand Messages: Building Trust and Increasing Brand Attitudes**

Tessa Garcia-Collart, Florida International University, USA  
Jessica Rixom, University of Nevada, Reno, USA

Self-enhancing messages convey information in a boastful and arrogant manner while self-effacing messages do so in a more modest and humble way. We propose that compared to self-enhancing self-effacing marketing appeals will increase consumers' brand attitudes by lowering consumer skepticism and increasing brand trust.

## **M2. Of Expectations and Experiences: The Moderating Effect of Valanced Expectations on Enjoyment of a Positive versus Negative Experience**

Brian Gillespie, University of New Mexico, USA  
Molly McGehee, University of New Mexico, USA

Some extant literature argues that expectations drive enjoyment of experiences while other literature argues that expectations only comparatively influence enjoyment. The current work addresses this discrepancy and demonstrates that while positive expectations do result in favorable enjoyment of experiences negative expectations result in the comparative process suggested by others.

## **A7. Credible Critters: Source and Message Expectancy Violation and Influence on Perceived Trustworthiness and Credibility**

Justin Graeber, University of Texas at Austin, USA

Trustworthiness and credibility are essential traits of effective leaders journalists and spokespersons. This paper explores whether pairing formal and informal messages with different sources can yield a positive expectancy violation that builds trust reinforces credibility and challenges previous biases against traditionally formal sources.



## **H7. Too Risky to Be Luxurious: Stigmatized Luxury Product Attributes Can Weaken or Increase Social Risk to Determine Conspicuous Consumption**

Jerry Lewis Grimes, Grenoble Ecole de Management, France  
Yan Meng, Grenoble Ecole de Management, France

There are circumstances when conspicuous luxury consumption becomes socially stigmatized and this overt display of luxury is actually harmful to the consumer. Two studies show that stigmatized product attributes (i.e. antisocial or distasteful) generally reduce purchase intentions however low social visibility can undermine social stigma increasing luxury product purchase intentions.

## **L2. Wish List Thinking: The Role of Psychological Ownership in Consumer Likelihood to Purchase or Remove a Product from an Online Wish List**

Christopher Groening, Kent State University, USA  
Jennifer Wiggins, Kent State University, USA  
Iman Raoofpanah, Kent State University, USA

Psychological ownership of products on a consumer's wish list increases the likelihood of purchase and decreases the likelihood of removal from the wish list. This effect becomes curvilinear when the product has been on the wish list a long time or the wish list is publicly viewable.

## **C4. The role of Attachment to a Human Brand in Improving Eating Habits**

Amélie Guèvremont, Université du Québec à Montréal, Canada

This research studies behavioural change by demonstrating the power of a human brand in influencing eating habits (through a culinary blog). A netnography and eleven interviews identify four categories of behavioural changes and substantiate the role of attachment. Two attachment antecedents are identified: brand-self connection and satisfaction of individual needs.

## **L7. The Joy of Shopping: Reconciling Mixed Effects of Positive Emotions on Shopping Behavior**

Kelley Gullo, Duke University, USA  
Duncan Simester, Massachusetts Institute of Technology, USA  
Gavan Fitzsimons, Duke University, USA

The current work develops a framework to identify when positive emotions lead to increased shopping behavior. A field experiment with over a million transactions and a controlled lab study provide initial evidence that the environment in which a positive emotion is felt shapes the behavioral outcomes of that emotion.

## **E6. The Effect of Crowding Perception on Helping Behavior —Is Squeeze Warmer than Isolation?**

Qingqing Guo, Shanghai Jiao Tong University, China

Based on 7 studies (991 participants) we investigated crowding perception on helping behavior. Consumers in crowds have a stronger willingness to help others as they tend to experience a self-other overlap and stronger social connection as well as empathy in serial in crowds. The composition of crowds moderated the effect.

## **N1. The Experiential Advantage in Eudaimonic Well-being – An Experimental Assessment**

Aditya Gupta, University of Nebraska-Lincoln, USA  
James Gentry, University of Nebraska-Lincoln, USA

Despite the documented hedonic superiority of experiential purchases to material purchases a focus on their relative well-being implications remains unexplored. Given that the very idea of well-being is changing the authors report results from two experimental studies that evaluate the experiential advantage in terms of a new framework – eudaimonic well-being.

## **N2. The Devil Wears FAKE Prada: Dual Envy Theory Explains Why Consumers Intend to Purchase Non-Deceptive Luxury Counterfeits**

Tanvi Gupta, Indian Institute of Management Bangalore, India  
Preeti Krishnan Lyndem, Indian Institute of Management Bangalore, India

Applying the dual envy theory to understand why consumers deliberately intend to purchase non-deceptive luxury counterfeits we posit that benign envious intend to purchase such counterfeits when they cannot afford the original whereas malicious envious are driven to purchase such counterfeits by a desire to punish the unfair original brand.

## **J8. Exchange with The Rich, Concern with The Poor: The Effects of Social Class on Consumer Response to Brand Relationship**

Bing Han, Shanghai Jiao Tong University, China  
Liangyan Wang, Shanghai Jiao Tong University, China

This article proposes that consumer-brand relationship position (exchange vs. communal) should be built in accordance with the social class of consumers. Through three experiments in manufacturing and service industries the authors find that a matching effect between brand relationship and social class can enhance brand evaluation and brand attitude.

## **R13. Brand Humanization: Applying Two Dimensions of Humanness to Brand**

Myciah L Harrold, Washington State University, USA  
Andrew Perkins, Washington State University, USA

We create a measure of brand humanness that unlike past measures of anthropomorphism is easily applied to a variety of study paradigms. We situate brand humanness along two independent dimensions: characteristics descriptive of basic human nature and characteristics that identify ways in which humans are unique from other species.

## **H1. How Anthropomorphized Roles Influence Consumers' Attitude Towards Innovative Products**

Yuanqiong He, Huazhong University of Science and Technology, China  
Zhou Qi, Huazhong University of Science and Technology, China

This research explores effects of anthropomorphism strategy for innovative products. The results indicated that friend role is more suitable for ergonomic innovative product while servant role is more suitable for feature innovative product. Meanwhile perceived product innovativeness by consumers will moderate this effects. This study enriches the field of anthropomorphism.

## **K12. Use Language to Change People's Mind: The Persuasive Power of Online Marketing Communications**

Xun He, Katholieke University Leuven, Belgium  
Barbara Briers, Vlerick Business School, Belgium  
Luk Warlop, Norwegian School of Management, Norway

Marketing and economics depend mainly on persuasive success. This study investigates which and how linguistic features influence a target's actual persuasiveness of messages in the setting of online marketing communications.

## **N6. Not Myself: The Impact of Secret-Keeping on Consumer Choice Regret**

Dongjin He, Hong Kong Polytechnic University, China  
Yuwei Jiang, Hong Kong Polytechnic University, China

This research investigates how the experience of secret-keeping affects consumers' perception of their previous choice. Three studies reveal that the experience of secret-keeping increases consumers' regret for the consumption choices they made previously and show that this effect is driven by the perceived low intrinsic motivation for the chosen option.

## **C3. Using Goal Theory to Promote Habit Formation During and After a Bike-to-Work Campaign**

Bettina Rebekka Höchli, University of Bern, Switzerland  
Claude Messner, University of Bern, Switzerland  
Adrian Brügger, University of Bern, Switzerland

Health interventions are often ineffective because people discontinue the targeted behavior after the intervention period. Forming habits could maintain the behavior beyond the intervention. We show that combining a superordinate goal with a subordinate goal can produce stronger habits than focusing on a subordinate goal alone.

## **Q13. Liquid Consumption From Another Perspective: The Case of "Investomers"**

Carina Hoffmann, Heinrich-Heine-University, Germany  
Lasse Meißner, Heinrich-Heine-University, Germany  
Peter Kenning, Heinrich-Heine-University, Germany

To extend recent theorizing on liquid consumption and to add a new perspective to this field we investigate the case of investors turning into consumers or reverse ("investomer"). We assume commitment and trust as "coupling" factors between these two categories and find support for this assumption.

## **O12. When do People Waste Time? Testing a Mechanism for Parkinson's Law.**

Holly S Howe, Duke University, USA  
Tanya Chartrand, Duke University, USA

Parkinson's law states that work expands to fill the time available for its completion. In a series of studies we demonstrate this law and identify a possible mechanism. Specifically we demonstrate that people who allot too much time to complete a task fail to use time-saving strategies.

## **Q8. Avatars, Consumers and Possession in Online Gaming**

Feihong Hu, Lancaster University, UK  
Xin Zhao, Lancaster University, UK  
Chihling Liu, Lancaster University, UK

This study seeks to re-examine the relationship between consumers and their possessions. We observed online gamer interactions and conducted depth-interviews with Chinese online gamers. Initial findings have generated rich insights into how consumers experience and manage the relationships between their sense of self avatars and virtual possessions.

## **O10. Individual Differences in Consumers' Need For Cognition and Affect: A Neuromarketing Study Using Voxel-Based Morphometry**

Jianping Huang, Tsinghua University, China  
Yang Sun, Tsinghua University, China  
Jie Sui, University of Bath, UK  
Xiaoang Wan, Tsinghua University, China

We revealed the anatomical variations in consumers' need for cognition (NFC) and need for affect (NFA) in a neuromarketing study. The right lingual gyrus was associated with NFC whereas the right inferior occipital gyrus was linked to NFA.

## **L8. Recover the Unrecoverable: How Co-Recovery Shifts Consumers 'Attribution Following a Failed Recovery**

Bo Huang, HEC Montreal, Canada  
Yany Grégoire, HEC Montreal, Canada  
Matthew Philp, HEC Montreal, Canada

Exploring the impact of co-recovery on consumers' attribution the present research finds that when consumers are highly participative in a failed recovery episode (i.e. co-recovery) they blame themselves more than the firm. However this effect is reversed when they participate less and disappeared when they do not participate at all.

## **M7. The Mixed Effects of Nostalgia on Consumer Switching Behavior**

Zhongqiang (Tak) Huang, University of Hong Kong, China  
Xun (Irene) Huang, Nanyang Technological University, Singapore  
Yuwei Jiang, Hong Kong Polytechnic University, China

This research shows that contrary to conventional wisdom nostalgia can increase consumer switching behavior. However this effect only occurs when consumers focus on the consumption outcome and it is reversed when consumers are led to focus on the process of consumption. These findings provide a nuanced understanding of nostalgia marketing.

## **D5. Bragging about Effort? Personal Effort Decreases Word-of-Mouth**

Jiexian (Chloe) Huang, Hong Kong Polytechnic University, China  
Yuwei Jiang, Hong Kong Polytechnic University, China

Three experiments revealed consumers were less likely to share a positive achievement to others through word-of-mouth if they spent personal effort in pursuing it than if no effort was involved in the pursuit. We further found the effect was dismissed when consumers' interpersonal warmth was assured by other contextual cues.

## **O9. The Role of Numerical Identification in Customer Reaction toward Service Failure**

Jiexian (Chloe) Huang, Hong Kong Polytechnic University, China  
Yuwei Jiang, Hong Kong Polytechnic University, China

This research investigates the consequence of assigning numbers to customers (e.g. room numbers) in a service context. Two experiments show that after being identified by a number customers would be more tolerant of service failure. This effect is found to be driven by the self-dehumanization process triggered by numerical identification.

## **A3. Why People Still Do Not Trust Algorithmic Advice in Decision Making**

Jaewon Hwang, Sejong University, South Korea  
Dong Il Lee, Sejong University, South Korea

The current research examines why people don't trust on algorithmic advice in decision making and verifies the underlying mechanism of this effect. The present study shows that people trust advice from algorithms less than advice from people and low trust in the algorithm is caused by the low attribution externality.



## **C2. The Bad Taste of Healthy Food Discounts**

Iina Ikonen, Vrije Universiteit Amsterdam, The Netherlands  
Aylin Aydinli, Vrije Universiteit Amsterdam, The Netherlands  
Peeter Verlegh, Vrije Universiteit Amsterdam, The Netherlands

Price promotions have often been suggested as a way to increase healthy consumption but research suggests they may be less effective in healthy food categories. Through four experiments we offer a potential explanation: they lower the pre-purchase tastiness perceptions of healthy foods by increasing reliance on the unhealthy=tasty intuition.

## **K8. Framing Matters. How Comparisons to Ideal and Anti-Ideal Reference Points Affect Brand Evaluations**

Magdalena Zyta Jablonska, SWPS University of Social Sciences and Humanities, Poland  
Andrzej Falkowski, SWPS University of Social Sciences and Humanities, Poland

We test how comparisons to ideal and anti-ideal reference points affect brand evaluations in political and consumer context. The results support the negativity effect showing that negative comparisons have a stronger effect than their positive counterparts.

## **R14. Are Lonely Consumers Loyal Consumers? Loneliness Breadth and Depth**

Eunyoung Jang, Oklahoma State University, USA  
Zachary Arens, Oklahoma State University, USA

People feel loneliness either due to inadequate closeness in their relationships or inadequate number of relationships. Across two studies we show that lonely people who lack deep relationship exhibit higher brand loyalty whereas lonely people who lack broad relationships choose a larger variety of brands.

## **G10. The Effects of Self-Construal on Evaluations of Brand Logo Colors**

Eunmi Jeon, Sungkyunkwan University, South Korea  
Myungwoo Nam, Georgia Tech, USA

The present research investigates the effectiveness of different types of color combinations on brand evaluations. In this research we propose that consumers' self-view influences the effectiveness of analogous versus complementary color combinations. We suggest that consumers' self-views would influence effectiveness of analogous versus complementary color combinations used in brand logos.

## **G3. Warm or Cold? The Effect of Color Temperature of Logo on Evaluation of For-Profits and Nonprofits**

Eunmi Jeon, Sungkyunkwan University, South Korea  
Myungwoo Nam, Sungkyunkwan University, South Korea

The current research examines the fit effect between color temperature and organization type and how it influences product evaluations. We suggest that product evaluations of for-profits were higher when the logo color was in cooler colors compared to nonprofits.

## **J12. The Influence of Pet-Ownership on Consumer Behavior**

Lei Jia, Ohio State University, USA  
Xiaojing Yang, University of Wisconsin - Milwaukee, USA  
Yuwei Jiang, Hong Kong Polytechnic University, China

Across four studies we show that pet ownership influence consumers' regulatory focus such that dog (vs. cat) owners are more promotion- (vs. prevention-) oriented. Their different regulatory orientations can carry over to influence their financial decisions attitudes toward ads and purchase intentions.

## **Q7. Desire in Performed Consumption: Examining the Case of Korean Beauty Vlogging**

Marie-Eve Jodoin, HEC Montreal, Canada  
Marie-Agnès Parmentier, HEC Montreal, Canada

This research project examines the processes of territorializing and sustaining desire on YouTube in the context of Korean beauty vlogging. It finds that in consuming the performed consumption of vloggers material desire social desire and desire for otherness are territorialized on the network and are sustained outside of bodily-reality.

## **E9. “Power Distance, Social Aspiration, and Fair Trade Products” – the Interaction Effect of Power Distance Belief and Status Motivation on Fair Trade Product Consumption**

Sunghee Jun, Seoul National University, South Korea  
Libby Youngjin Chun, Seoul National University, South Korea  
Kiwon Park, Seoul National University, South Korea

Research on power distance belief shows that people with high (vs. low) PDB engage in prosocial behaviors more. Marrying these research results we conducted one preliminary field study and lab experiments to demonstrate that when PDB is high high status motive individuals are more likely to purchase fair-trade products.

## **M12. From the Occult to Mainstream – Tracing Commodification of the Spiritual in the Context of Alternative Spiritualities**

Richard Kedzior, Bucknell University, USA

In this paper we focus on examining various institutional logics that facilitated the evolution of a sacred object into a marketplace phenomenon.

## **G12. The Effect of (Non-)appetizing Ambient Scents on Consumers’ Affinity Toward Vices and Virtues in the Retail Environment**

Corinne M Kelley, Florida State University, USA  
Anders Gustafsson, Karlstad University, Sweden  
Poja Shams, Karlstad University, Sweden  
Martin Mende, Florida State University, USA  
Maura Scott, Florida State University, USA

Appetizing (non-appetizing) ambient scents decrease consumers’ personal control and increase their affinity toward vice (virtuous) offerings. Appetizing scents increase affinity toward vice offerings via increased visual attention enhancing recall of vice products desire for vice products and store attitude. Effects are tested in three field studies at three different retailers.

## **F6. Can CSR Save a Firm From a Crisis? A Role of Gratitude in the Buffering Effect of CSR on Consumer Vindictive Behavior.**

Junghyun Kim, NEOMA Business School, France  
Taehoon Park, University of South Carolina, USA  
Myungsuh Lim, Sangji University, South Korea

This research examines the buffering effect of corporate social responsibility (CSR) on consumers vindictive behaviors during a product-harm crisis. Three studies demonstrate how CSR plays a critical role in reducing consumers intention to engage in vindictive behaviors (e.g. negative word-of-mouth) and propose a mediating role of consumer gratitude.

## **R8. Brand Perceptions and Consumer Support in the Face of a Transgression: Warmth Over Competence**

Summer Hyoyeon Kim, University of Kansas, USA  
Jessica Li, University of Kansas, USA  
Jenny Olson, Indiana University, USA  
Shailendra Pratap Jain, University of Washington, USA

We examined the role of brand perception in consumer judgment and support following a brand transgression. Consumers blame warm brands less for the same product failure. They are also more likely to support warm brands following a moral transgression. We explain this link through the process of moral decoupling.

## **B3. The Effect of Temporal Distance on Online Reviews' Recommendation Power: The Role of Spontaneous Retrieval and Perceived Trust**

Kyu Ree Kim, Seoul National University, South Korea  
Wujin Chu, Seoul National University, South Korea

We challenge lay belief that reviews on recent experience are more powerful. We examined that reviews written on the experiences of distant past have stronger perceived recommendation power. We also examined the mediation effect of perceived trust and the effect of retrieval process (spontaneous vs. deliberate) on perceived trust.

## **P7. Consumer Evaluations of Sale Prices: The Role of the Spatial Representation of Time**

Yaeun Kim, Temple University, USA  
Joydeep Srivastava, Temple University, USA

Based on the ease of the subtraction task we tested whether value perception is influenced by the interaction between sale price displays and temporal information. The findings revealed that participants perceived the price offer as more valuable with time information. The studies contribute to the pricing and fluency literature streams.

## **P5. Can(Can't) Control, thus Try to Save (Earn): The Joint Effect of Perceived Control and Financial Deprivation on Financial Decisions**

Min Jung Kim, Manhattan College, USA

This research suggests that one's preference for earning vs. saving will depend on their personal control and financial deprivation. We predict that individuals who perceive low personal control are more likely to prefer earning to saving but such a tendency can be reversed when their financial deprivation is considered.

## **I12. The Effect of Susceptibility-Induced Threat in the Preventative Communication**

Moon-Yong Kim, Hankuk University of Foreign Studies, South Korea

This research investigates gender differences in responding to the preventative communication by varying the level of susceptibility-induced threat. Specifically it is predicted that higher level of susceptibility is more likely to have a negative effect on persuasion for females (vs. males) due to their maladaptive responses to the threatening message.

## **G11. Sensory Placebo Effects: The Role of Sensory Signaling in Enhancing Marketing Placebos and Consumer Outcomes**

Dan King, University of Texas Rio Grande Valley, USA  
Sumitra Auschaitrakul, University of the Thai Chamber of Commerce, Thailand

Pairing a placebo expectation with a sensory stimulus ("sensory placebo") elicits significantly stronger placebo effects in both cognitive and physical domains. Participants given a sensory placebo solved more word puzzles and were better at lifting weights and the outperformance over standard placebos was mediated by phantom sensations of placebo energization.

## **L11. Consumer Search Mode Produces Unintended Marketing Consequences**

Dan King, University of Texas Rio Grande Valley, USA  
Sumitra Auschaitrakul, University of the Thai Chamber of Commerce, Thailand

Recently marketers have migrated consumers from written to voice search assuming that this produces positive outcomes. We show that this elicits unintended negative outcomes such as delays in willingness to purchase products and lowered spending. We show that differences in mindsets when people use their voice account for this effect.

## **D10. It's Meant for Me: When Serendipity Increases Word-of-Mouth**

Colleen Patricia Kirk, New York Institute of Technology, USA  
Joann Peck, University of Wisconsin - Madison, USA  
Claire Hart, University of South Hampton, UK  
Constantine Sedikides, University of South Hampton, UK

High narcissistic consumers are more likely than low to spread word-of-mouth about serendipitous events. We explain this effect in terms of two distinct paths motivated by narcissistic admiration and narcissistic rivalry. We further offer empirical evidence for the role of psychological ownership motivation in driving word-of-mouth.

## **J3. You Think I'm Yours but, Trust Me, I'm Not: How Consumers Value Dogs and Cats**

Colleen Patricia Kirk, New York Institute of Technology, USA  
Samantha Renee Kirk, Boston College, USA

Two experiments reveal that dog owners are willing to pay more for life-saving surgery and related expenses than cat owners. This effect is sequentially mediated by perceived behavioral control psychological ownership and emotional attachment. This first examination of psychological ownership of living creatures offers implications for pet owners and marketers.

## **J13. The Good and Bad of a Delayed Indulgence: Effects on Self-Perceptions and Purchase Satisfaction**

Argiro Kliamenakis, Concordia University, Canada  
Kamila Sobol, Concordia University, Canada

We show that the mere act of delaying an indulgent purchase can evoke the same level of perceived self-control as not indulging at all—a level that is higher than in instances of immediate indulgence. Paradoxically the bolstered perceptions of self-control resulting from a delayed indulgence subsequently reduce purchase satisfaction.

## **K5. Advertising Organizational Culture as a Selling Tactic for For-Profit Organizations**

Dejun Tony Kong, University of Houston, USA  
Maria Ng, University of Houston, USA

By conducting four experiments we found that advertising organizational culture can be an effective selling tactic for for-profit organizations particularly in a stereotypically fun industry. Specifically advertising fun (vs. neutral) organizational culture appeared to enhance consumers' perception of organizational warmth which elevated their positive anticipated emotions and subsequent purchase intention.

## **O11. Have Less, Compromise Less: How the Perception of Resource Scarcity Influences Compromise Decisions**

Kate Kooi, University of Miami, USA  
Caglar Irmak, University of Miami, USA

The compromise effect has been shown to be robust however the current research seeks to illuminate a circumstance under which it is less predictive by demonstrating that under the perception of resource scarcity consumers are less susceptible to the compromise effect because of their proclivity for status-seeking and risky choices.



## **R1. How Consumers Deal With Brand Failure-An Individual Differences Approach**

Melika Kordrostami, California State University-San Bernardino, USA  
Elika Kordrostami, Rowan University, USA

The impact of individual differences (regulatory focus and attachment style) on consumers' reactions at the time of brand failure is studied. Our three studies showed that higher promotion leads to higher positive and lower negative behaviors. Furthermore this effect is moderated by individuals' attachment styles.

## **E8. Perceptions of Out-Group Members: The Effects of Language Abstraction**

Afra Koulaei, University of South-Eastern Norway, Norway  
Daniela Cristian, City University of London, UK

One way to reduce the discrimination towards the members of stigmatized groups is to describe their situations or behaviors in a more concrete (vs. abstract) form. Concrete descriptions lead people to attribute the homelessness to the situational cause (as opposed to individual) which in turn leads to greater helping behavior.

## **J11. The Myth of Return – Success or Failure? Consumer Identity and Belonging in the Case of Repatriate Migrants**

Sonja N. Kralj, University of Augsburg, Germany  
Michael Paul, University of Augsburg, Germany

This poster introduces a new migration pattern into research on consumer migration and acculturation. Investigating structural individual and relational factors we stress the dynamic nature of how consumption identity and belonging are related in the case of consumers having returned from the diaspora to the ancestral homeland after generations.

## **K11. Effects of Emotional vs. Rational Thinking on Consumer Responses to Verbal Precision**

Ann Kronrod, University of Massachusetts, USA  
Guang-Xin Xie, University of Massachusetts Boston, USA  
Shai Danziger, Tel Aviv University, Israel

We define verbal precision and examine consumer responses to more and less verbally precise communication. Results suggest that emotionally (vs. rationally) oriented recipients are more sensitive to verbally precise messages. For these consumers higher verbal precision increases perceived conversational cooperativeness of the source and results in more positive product attitudes.

## **Q4. The Notion of Self-Optimization in Context of Self-Tracking and Beyond**

Agnieszka Krzeminska, Leuphana University Lüneburg, Germany  
Dorthe Brogård Kristensen, University of Southern Denmark, Denmark

The aim of this paper is to analyse the metaphors and ideologies of optimization with a special consideration of the notion of self-optimization which is being prevalently used in descriptions of goals of people using self tracking devices or apps (e.g. Lupton 2014 Ruckenstein 2014 Selke 2016).

## **I11. Self-Presentation in the Mating Market: The Influence of Gender and Sexual Orientation on Profiles on Tinder and Grindr**

Chaim Kuhnreich, Concordia University, Canada  
Lilian Carvalho, FGV/EAESP, Brazil  
Gad Saad, Concordia University, Canada

Examining how people signal potential mates on Tinder and Grindr males are more likely to use conspicuous consumption in their profiles when compared to women. However in the homosexual community males are actually more likely to display sexually suggestive pictures and signs of physical fitness as opposed to conspicuous consumption.

## **N4. Induction of Construal-Level Mindset via Surprise and the Follow-up Effect on Consumer Evaluations and Judgments**

Atul A Kulkarni, University of Missouri, USA  
Joëlle Vanhamme, EDHEC Business School, France

We find that an experience of surprise may influence response to subsequently presented stimuli in the same fashion as abstract/concrete processing would do. Three studies show that when primed with positive (negative) surprise participants evaluated promotionally (preventionally) framed ad messages more favorably and leaned toward desirability (feasibility) laden shopping options.

## **F4. Social Support First, Money Later: Perceived Economic Mobility Increases Happiness When Perceived Social Support Opens the Door**

Yong Ju Kwon, Seoul National University, South Korea  
Sara Kim, University of Hong Kong, China  
Youjae Yi, Seoul National University, South Korea

Our research shows that perceived economic mobility (PEM) has a positive effect on happiness. More importantly perceived social support moderates the effect of PEM on happiness: people with high PEM are happier than those with low PEM only when they meet a certain level of perceived social support.

## **B4. Prestige is the Truth: Luxury Branding Drives for Fairness Perception of Non-physical Attribute Based Dynamic Pricing**

Edward Yuhang Lai, Virginia Tech, USA  
Cindy Yoonjoung Heo, Ecole hôtelière de Lausanne, Switzerland

Dynamic pricing is widely adopted in experience products. However consumers may not perceive different pricing policies as equally fair. An experiment finds evidence that consumers feel ambiguity in judging differential pricing policy based on non-physical (vs. physical) attribute and perceive such policy as fairer for luxury brands (vs. economy brands).

## **M8. Nostalgia Increases Healthy Attitudes and Behaviors**

Jannine Lasaleta, Yeshiva University, USA  
Carolina O. C. Werle, Grenoble Ecole de Management, France  
Amanda Pruski Yamim, Grenoble Ecole de Management, France

This research tests nostalgia as a motivation force in healthful food consumption. Across three studies we find support for the hypothesis that nostalgia increases positive attitudes and behaviors toward healthy food but decreases them toward unhealthy food. Moderated mediation evidence demonstrated this effect is driven by nostalgia-evoked social support.

## **C9. Filling the Expectations: How Packaging Sustainability Influences Consumers' Inference of Product Attributes**

Olga Lavrusheva, Aalto University, Finland  
Alexei Gloukhovtsev, Aalto University, Finland  
Kristina Wittkowski, Aalto University, Finland  
Tomas Falk, Aalto University, Finland  
Pekka Mattila, Aalto University, Finland

Our study aims to investigate the effect of sustainable packaging materials on the perceptions of taste quality and health-related benefits of food products and whether this effect would then facilitate consumers' purchase intention.

## **C10. Beyond Self-control: A Field Exploration of the Interactive Effect between Cue-induced and Prospective Decision Making on Long-term Weight Loss**

Wanyu Li, McGill University, Canada  
Laurette Dube, McGill University, Canada  
Yu Ma, McGill University, Canada

This research goes beyond the episode-level self-control and examines how the cue-driven tendency interacts with the endophenotype underlying prospective judgment in shaping the longer-term dynamics of weight management.

## **N13. Smaller Self but Larger Tips? The Effect of Awe on Consumers' Tipping Intention**

Ran Li, Chinese University of Hong Kong, China

Two experiments showed that feeling awe can systematically affect consumers' tipping intention. Specifically this awe-tipping relationship is driven by two countervailing processes: feeling awe makes consumers feel closer to the server (which increases the tendency of tipping) but simultaneously decrease their power distance belief (which decreases the tendency of tipping).

## **H2. Influencing Consumer Response to Products with High Styling: The Role of Mindsets**

Ying-Ching Lin, National Chengchi University, Taiwan  
Angela Chang, Northeastern University, USA

This research investigates the conditions under which consumer response to products with a high level of styling will more likely be positive. Empirical studies demonstrate that consumers evaluate a high-styling (vs. low-styling) product more favorably when they are in an abstract rather than a concrete mindset.

## **L10. How Physical Distance and Power Distance Belief Affect Salesperson Evaluations and Purchase Intentions**

Chia-Wei Joy Lin, University of Tennessee at Chattanooga, USA  
Saerom Lee, University of Texas at San Antonio, USA  
Bingxuan Guo, University of Texas at San Antonio, USA

Consumers with lower (vs. higher) PDB report lower evaluations of the salesperson who stays physically close to (vs. far from) them and subsequently have lower purchase intentions in the shopping context. This is because lower PDB consumers are more likely to infer disrespect from the physical closeness of the salesperson.

## **K9. Measuring Internet Slang Style in Advertisement: Scale Development and Validation**

Shixiong Liu, Shenzhen University, China  
Yi Wu, Tsinghua University, China  
Wu Gong, Shenzhen University, China

Drawing on linguistics and stylistics theories this paper introduces and conceptualizes the construct of Internet slang style (ISS) to describe characteristics of Internet slang. A dimensional ISS framework consisting of four dimensions (amiability overtness candor and harshness) is proposed. The corresponding scale was developed and validated across five studies.

## **A6. “Alexa, let’s make a trade”: Search Behavior, Trust, and Privacy with Voice-Activated Assistants**

Weizi Liu, University of Illinois at Urbana-Champaign, USA  
David William Ross, University of Illinois at Urbana-Champaign, USA  
Kieshana M. Williams-Beeler, University of Illinois at Urbana-Champaign, USA  
Yoonah Lee, University of Illinois at Urbana-Champaign, USA  
Michelle Renee Nelson, University of Illinois at Urbana-Champaign, USA

Through 16 interviews with owners of voice-activated assistants (VAA) we explore user trust and search practices as they occur in voice interactions with their device. We uncover preferences for visual elements and less cognitive search tasks when seeking information as well as cautious trust in the device’s maintenance of privacy.

## **J7. Alienation from Ourselves, Alienation from Our Products: A Carry-over Effect of Self-alienation on Self-possession Connection**

(Joyce) Jingshi Liu, Hong Kong University of Science and Technology, China  
Amy Dalton, Hong Kong University of Science and Technology, China

When consumers feel alienated from the self they also feel alienated from their products which is an important part of the self. Moreover this effect only applies to products that are relevant to the self and is attenuated among consumers with an interdependent (vs. independent) mindset.

## **E3. Having Power, Giving More? The Effect of Psychological Power on Consumers’ Charitable Giving of Time**

Wumei Liu, Lanzhou University, China

Will high power increase consumers’ charitable giving of time? Existing research has not addressed this research question yet. We propose that high (vs. low) power will increase consumers’ illusory control over time and consequently their readiness to donate when encountering volunteering appears. The boundary condition is also examined.

## **J4. A Large Pack of Toilet Paper is Bad for Me: Self-control and Consumers’ Responses to Product Quantity**

(Joyce) Jingshi Liu, Hong Kong University of Science and Technology, China  
Keith Wilcox, Columbia University, USA  
Amy Dalton, Hong Kong University of Science and Technology, China

We examine the association between product quantity and self-control using utilitarian products a product domain that does not generally threaten self-control. We find a bidirectional effect between product quantity and self-control whereby exposures to large product quantity decrease self-control and activation of self-control decreases evaluation of product quantity.

## **G13. Odor Priming and Product Preferences: When Smells Regulate Preferences for Semantically-Congruent Products and Brands**

Ramona De Luca, EAESP-FGV, Brazil  
Delane Botelho, EAESP-FGV, Brazil

This article extends the idea that olfactory stimuli influence consumer preferences even when they are perceived unconsciously. Two laboratory experiments demonstrate that incidental exposure to odors unconsciously activate a mental representation when they are matched for valence and when are related to the intended semantic category thus regulating product preferences.



## **D1. When Intention to Share on Social Media Increases Variety-Seeking: The Role of Self-Enhancement**

Jingjing Ma, Peking University, China  
David Dubois, INSEAD, France  
Fei Jin, Peking University, China

This research investigates how calls to sharing online affect decisions. It shows that consumers would seek variety to self-enhance when they intent to share with others. This effect is stronger when the consumption is non-conspicuous and when consumers are non-experts. Six studies using lab and field data support these effects.

## **I10. Can Body Size Influence the Judgments of Warmth and Competence?**

Trang Thanh Mai, University of Manitoba, Canada  
Olya Bullard, University of Winnipeg, Canada  
Luming Wang, University of Manitoba, Canada

We propose that the effect of body size on social evaluation extends beyond the association between thinness and beauty. Specifically we posit that body size has implications for warmth and competence judgments made by observers: a thin (vs. heavy) body signals competence whereas a heavy (vs. thin) body signals warmth.

## **I2. Can Skinnier Body Figure Signal Higher Self-Control, Integrity, and Social Status?**

Trang Thanh Mai, University of Manitoba, Canada  
Luming Wang, University of Manitoba, Canada  
Olya Bullard, University of Winnipeg, Canada

Currently conventional wisdom as well as much of social psychology literature equates thinness with beauty and attractiveness in Western societies. We propose that a thin body signals valuable characteristics—self-control and integrity—that lead to the perception of social status because they represent social capital in a Western society.

## **E12. Green versus Premium Choice and Feelings of Pride**

Cecilia Souto Maior, Federal University of Paraná, Brazil  
Danielle Mantovani, Federal University of Paraná, Brazil  
Rafael Demczuk, Federal University of Paraná, Brazil

We showed that choosing a green product over a premium option increases (vs. decreases) authentic (vs. hubristic) pride perceptions. These same effects are found when participants need to justify their choice in public. When participants are aware that their decision is private the choice does not differently impact pride facets.

## **F12. Matching Green Advertising Strategies and Brand Positioning to Improve Brand Evaluation**

Danielle Mantovani, Federal University of Paraná, Brazil  
Victoria Vilasanti, Federal University of Paraná, Brazil  
Marcelo Vinhal Nepomuceno, HEC Montreal, Canada  
Cecilia Souto Maior, Federal University of Paraná, Brazil

This study shows that brand evaluations are highest when luxury positioning is used with green demarketing and when fast fashion is used with environmentalism. Ad believability mediated this effect. Environmentalism and demarketing have an equal positive effect on self-brand connection and brand attitudes of notoriously green brands.

## **G1. Enchantment through Retro Product Consumption in a Digital World**

Varala Maraj, City University of London, UK  
Fleura Bardhi, City University of London, UK  
Caroline Wiertz, City University of London, UK

This study examines the role of materiality in how consumers are managing the experience of disenchantment resulting from dematerialized digital consumption practices. We show that consumption of retro products revivals of outdated technology objects complements digital consumption by providing historical atmospheric value nostalgic time value and a greater perceived authenticity.

## **G2. You Run When Time Flies: Time Metaphors Affect Inferences from the Speed of Time**

N. Alican Mecit, HEC Paris, France  
L. J. Shrum, HEC Paris, France  
Tina M. Lowrey, HEC Paris, France

In two lab experiments we show that the subjective experience of time serves as a cue that people use to infer their speed. When time is perceived to have passed quickly depending on the time perspective people speed up and suffer from cognitive trade-offs such as accuracy problems and impulsivity.

## **G9. The Voice From Afar: How Reverberation Affects Consumer Cognition**

Johann Melzner, New York University, USA  
Jochim Hansen, University of Salzburg, Austria

How do acoustic parameters in the human voice affect consumers? Drawing on literature in acoustics and construal level theory this research proposes that reverberation an intuitive cue in auditory distance perception affects consumers' inferences about both spatial and non-spatial distances and increases construal level with consequences for judgments and decision-making.

## **E13. Rooting for Rocky or Apollo? Underdog Narratives and Crowdfunding Success**

Hua (Meg) Meng, Longwood University, USA  
César Zamudio, Kent State University, USA  
Yiru Wang, Kent State University, USA

This research investigates how underdog narratives in crowdfunding pitches influence crowdfunding success. Results show that backers are more willing to pledge when reading underdog (vs. top dog and neutral) narratives because they are more narratively transported and activate a higher level of empathy and altruism.

## **F9. Protection against Deception: The Moderating Effects of Knowledge Calibration on Consumer Responses to Ambiguous Advertisement Information**

Joel Alan Mohr, Queens University, Canada  
Peter A. Dacin, Queens University, Canada

A common characteristic of deceptive persuasion tactics is information ambiguity. This research demonstrates that whether consumers perceive high (vs. low) ambiguity advertisements as more deceptive depends on whether their topic knowledge is sufficiently calibrated. While calibrated knowledge provides a safeguard against deception miscalibrated knowledge biases persuasive information elaboration.

## **F13. A Story of Waste: Trust, Symbolic Adoption & Sustainable Disposal**

Marwa Gad Mohsen, Babson College, USA

This working paper reflects on behavioral challenges in relation to pro-environmental waste management. A proposed combined theorization of symbolic adoption and Construal Level Theory (CLT) with the mediating effect of consumer trust aims at building a potential model exploring consumer likelihood to adopt ethical disposal practices.

## **B7. Conceptualizing Brand Arrogance and Its Impact on Consumer Trust**

Sampoorna Nandi, University of Connecticut, USA  
Robin A. Coulter, University of Connecticut, USA

Our research addresses the under-researched construct of brand arrogance. We conceptualize and define brand arrogance and explicate brand-related factors that feed consumer perceptions of brand arrogance. We explore the impact of brand arrogance on consumer trust and propose that perceived product quality brand use and consumer arrogance moderate this relationship.

## **M4. How Consumption Experiences Create Value**

Gia Nardini, University of Denver, USA  
Melissa Archpru Akaka, University of Denver, USA  
Deborah MacInnis, University of Southern California, USA  
Richard J Lutz, University of Florida, USA

Consumption experiences are the heart of consumer behavior. However research in this area varies widely. We integrate prior literature to develop a conceptual framework of consumption experience. Our framework organizes the fragmented literature on consumption experience and identifies avenues for future research in investigating how consumption experiences drive value creation.

## **J6. Cozying up to the Kardashians: A Theory for Consumers' Affinity towards Celebrity Gossip**

Jayant Nasa, Indian School of Business, India  
Tanuka Ghoshal, Baruch College, USA  
Raj Raghunathan, University of Texas at Austin, USA

The present research examines celebrity gossip consumption using the lens of compensatory consumption. Two experiments show that people exhibit an increased propensity to consume celebrity gossip after experiencing a psychological threat and such consumption has a restorative effect on their self-worth. These effects are moderated by the consumers' trait self-esteem.

## **I3. Hormonal Effects on Materialism and the Moderating Role of Intrasexual Competition**

Marcelo Vinhal Nepomuceno, HEC Montreal, Canada  
Cristina Maria de Aguiar Pastore, Pontifical Catholic University of Paraná - PUCPR, Brazil  
Eric Stenstrom, Miami University, Ohio, USA

Across two studies we demonstrate how digit ratio (2D:4D) an indicator of prenatal exposure to estrogen and testosterone is predictive of materialism. Furthermore we show how intrasexual competition the rivalry with same-sex others over access to romantic partners moderates the association between digit ratio and materialistic tendencies.

## **A8. Do You Accept The Terms And Conditions? The Role Of Trust And Hedonic Content On Self-Disclosure To Apps**

Carla Freitas Silveira Netto, Federal University of Rio Grande do Sul, Brazil  
Simoni F Rohden, Federal University of Rio Grande do Sul, Brazil  
Marina de Wallau Lugocho, Federal University of Rio Grande do Sul, Brazil  
Natalia Englert, Federal University of Rio Grande do Sul, Brazil  
Valentina Ortiz Ubal, Federal University of Rio Grande do Sul, Brazil

Online consumers disclose personal data in exchange for mobile apps. The role of trust endorsement familiarity risk perception privacy concerns and hedonic content of the app were analyzed in this working paper. Results from three different experiments suggested the positive effect of trust and negative effect of hedonic content.

## **K2. Influence of Attentional Breadth on Processing and Memory of Brand Advertisements**

Nicolas Noack, University of Duisburg-Essen, Germany  
Lynn Brinkmann, University of Duisburg-Essen, Germany  
Oliver B. Büttner, University of Duisburg-Essen, Germany

This research examined the influence of attentional breadth on ad perception and brand recall. Eye-tracking data reveals increased gaze towards the ad background for broad attention. Additionally broad attention enhanced brand recall. The findings suggest that ad background acts as an additional memory cue.

## **P1. Constructed Preferences in Time-Money Tradeoffs: Evidence for Greater Violation of Procedural Invariance for Time as Opposed to Money Elicitations**

Nazli Gurdamar Okutur, London Business School, UK  
Jonathan Zev Berman, London Business School, UK

When are preferences for time-money tradeoffs likely to be constructed? We argue that due to the ambiguous value of time consumers tend to construct their preferences and exhibit failures of procedural invariance more when their preferences are elicited based on the time (vs. money) dimension of the tradeoff.

## **A10. Opting Opt-in or Out? Effects of Defaults on Perceived Control and Valuation of Personal Data**

Iris van Ooijen, University of Twente, The Netherlands

This work hypothesizes and finds that opt-in (compared opt-out) choice designs with regards to online data disclosure requests enhance individuals' experienced control over personal data and their data valuation in turn. By doing so it emphasizes the importance of 'privacy by design'. Follow-up studies are currently being conducted.

## **K7. Responses to Online Behavioral Advertising Disclosures: Effects of Disclosure Source Trustworthiness and Message Type on Advertising Outcomes**

Iris van Ooijen, University of Twente, The Netherlands

This work demonstrates that for a less trusted online platform (Facebook) the source of online behavioral advertising (OBA) disclosures affects consumer responses to personalized ads. Specifically OBA disclosures only increase advertising effectiveness when the source is a trusted third party and when the message is framed as a notice (vs. warning).

## **D7. 'That's (Not) My Business': Examining Behavior, Interactions and Implications of Consumer Brand Advocates and Brand Adversaries in Social Media**

Marcus Opitz, University of Vienna, Austria  
Sabine Einwiller, University of Vienna, Austria

Word-of-mouth and related advocacy and adversary behavior disseminated by consumers in an online environment are among the most trusted forms of brand communication. This study offers a first systematic content analysis of the communicative behavior of advocates and adversaries and the factors influencing it within the context of brands' Facebook profiles.

## **G7. The Presence of Dividing Line Decrease Perceived Quantity**

Jun Ouyang, Xiamen University, China  
Yanli Jia, Xiamen University, China  
Zhaoyang Guo, Xiamen University, China

Three studies showed that participants reported smaller quantity estimates when shown a set of items separated with a dividing line than when shown them as a whole. We attributed the results to that the dividing line might attract participants' attentions from the items thus leading them to underestimate items' quantity.



## **M5. The More Expensive a Gift Is, the More It Is Appreciated? The Effect of Gift Price on Recipients' Appreciation**

Jooyoung Park, Peking University, China  
Mengshu Chen, Tencent Holdings Limited, China

Two studies show that a gift with a higher or lower price than the recipient expects decreases their appreciation. Our findings suggest that recipients perceive givers as being less thoughtful when the gift price is lower than expected whereas they feel burden to repay when the gift price is higher.

## **P10. Omission Bias in the Gain vs. Loss Domain**

Jen H. Park, Stanford University, USA

This paper examines whether individuals exhibit greater omission bias in a loss-framed risky choice (lose \$10000 or lose \$0) compared to the gain frame (earn \$0 or earn \$10000). While prior studies reveal mixed results this research introduces anticipated regret as a moderator and uses the Monty Hall problem.

## **P14. Financial Behavior Among Young Adult Consumers: The Influence of Self-determination and Financial Psychology**

Heejung Park, University of Wyoming, USA

Research of the consumer financial behavior has been investigated in various ways. Better financial behaviors are essential for improving quality of life. Specifically young adult consumers have particular difficulty making decisions involving accruing debt. Therefore this paper deals with the financial behavior of young adult consumers through self-determination theory.

## **N8. Effect of Awe on Collectable Consumer Experience**

Eujin Park, Washington State University, USA  
Andrew Perkins, Washington State University, USA  
Betsy Howlett, Washington State University, USA

It has been known that awe is caused by encountering an unexpected event and stimulates explanation-seeking via a need for cognitive accommodation (Valdesolo Shtulman and Baron 2017). Collectable experiences are often unusual and unconventional (Keinan and Kivetz 2010). Hence we hypothesize that awe increases individual's preference for collectable consumer experience.

## **P12. Disclosure of Project Risk in Crowdfunding**

Jooyoung Park, Peking University, China  
Keongtae Kim, Chinese University of Hong Kong, China

This research examines whether and how risk disclosure of crowdfunding projects influences crowdfunders' project perceptions and funding decisions with a particular focus on the contrast between technology and non-technology projects. We find that crowdfunders respond to the risk disclosure of projects but differently between technology projects and non-technology projects.

## **R9. The Asymmetric Effects Of Attitude Toward The Brand (Symbolic Vs. Functional) Upon Recommendation System (Artificial Intelligence Vs. Human)**

Kiwan Park, Seoul National University, South Korea  
Yaeri Kim, Seoul National University, South Korea  
Seojin Stacey Lee, Seoul National University, South Korea

We investigated how the recommendation system types (AI vs. Human) affect brand attitude depending on the brand image (Symbolic vs. Functional). We found consumers are reluctant to accept a recommendation from AI where in symbolic brand (Study1). This effect was further explained by uncanny-feeling toward the AI recommendation system (Study2).

## **D2. When a Negative Review Can Help the Company: The Role of the Unfairness and Empathy**

Maria Alice Pasdiora, Federal University of Rio Grande do Sul, Brazil  
Cristiane Pizzutti, Federal University of Rio Grande do Sul, Brazil  
Natalia Englert, Federal University of Rio Grande do Sul, Brazil

This work extends literature on the influence of justice perception on consumer behavior by showing that consumers sensitized with injustice perpetrated on companies by other consumers. We demonstrate that injustice episodes trigger feelings of empathy and consequently lead witnesses to present favorable attitudes and more purchase intention towards the company.

## **Q10. Social Media Agency: Exploring the Role of Social Media Structures in Shaping Consumers' Identity Projects**

Gabrielle Patry-Beaudoin, Queens University, Canada  
Jay Handelman, Queens University, Canada

Drawing on the mediatization theory (Hjarvard 2008) this study analyzes the role of social media in shaping consumers' online identity projects. Our qualitative empirical investigation contributes to the consumer identity literature by examining how three YouTube structures create unique tensions for consumers that affect their identity projects.

## **J5. Buy Better, Buy Less: Future Self-Continuity and Construal Level Affect Investment in Sustainable Consumer Products**

Rebecca Peng, Northeastern University, USA  
Daniele Mathras, Northeastern University, USA  
Katherine Loveland, Xavier University, USA

Results of three studies reveal that consumers who believe their future selves will be similar (vs. dissimilar) to their current selves are most likely to embrace a "buy it for life" mindset. Specifically higher future self-continuity promotes higher level construal and ultimately ratings for brands that sell long-lasting products.

## **Q3. Academic Branding on Social Media: Examining the Influence of Personal Brands on the Professor-Student Relationships**

Edita Petrylaite, Northumbria University, UK  
Darija Aleksic, University of Ljubljana, Slovenia

With the increasing interaction on social media and its proliferated impact on personal image professionals including university lecturers communicate on digital channels for work and personal purposes. This research aims to find out how personal branding using the same social media account influences professors' relationships with students as university clients.

## **P6. Marginal Cost Consideration**

Ethan Pew, Stony Brook University, USA  
Hyunhwan Lee, University of Miami, USA

A large-scale study (N=12003) examines how price presentation influences choice. Six experimental conditions present absolute and marginal prices (across 30 price levels) for a flight selection task. Highlighting savings accruing from choosing the lower price option results in greater choice share for the higher priced option particularly as prices increase.

## **K6. Persuading the Moral Consumer: Matching Messages to Attitude Basis**

Aviva Philipp-Muller, Ohio State University, USA  
Andrew Luttrell, Ball State University, USA  
Richard Petty, Ohio State University, USA

We explored the persuasive effects of moral versus practical counter-attitudinal messages on individuals with varying levels of moral conviction toward recycling. Across two studies when pro-recycling moral conviction was high the moral (vs. practical) anti-recycling message was more persuasive but the effects reversed when moral conviction was low.

## **F10. Food Waste: On the Normalization of Structural Violence**

Andreas Plank, Privatuniversität Schloss Seeburg, Austria

While more than one billion tons of palatable food are thrown away every year (FAO 2013b) about 900 million people are undernourished worldwide (FAO 2013b). This article tries to answer the research question: How do international organizations (i.e. organizations dealing with the phenomenon food waste institutionally) frame food waste?

## **B1. Dynamic Pricing in Stationary Retailing - The Role of Consumer's Trust**

Maximilian Clemens Pohst, Heinrich-Heine-University, Germany  
Caspar Krampe, Heinrich-Heine-University, Germany  
Peter Kenning, Heinrich-Heine-University, Germany

The integration and application of electronic shelf labels (ESL) enables retailers to implement dynamic pricing practices. Therefore this research work investigates how the use of ESL is perceived by consumers. Preliminary findings revealed that consumer's trust positively affects the perception of ESL as well as perceived price fairness and loyalty.

## **R4. Human Brands and Their Consumers: How Consumers Reform Brand Understandings Following Critical Incidents**

Kimberley Mosher Preiksaitis, Siena College, USA

Human brands offer consumers cultural material that differs from traditional brands. When human brands encounter critical incidents consumers face the tension of separating the celebrity from the person to understand their relationship with the brand. This paper offers insights of three ways consumers reform brand understandings following critical incidents.

## **19. From Childhood Toys to Grownup Choices: Understanding the Gendered Appeal of Violent Media**

Martin A. Pyle, Ryerson University, Canada

Why do men seem to enjoy violent media more than women? This research addresses this question by examining how childhood toys influence perceptions of media as adults. This research contributes to our understanding of the appeal of violent media by demonstrating a cohesive link between socialized values and media choice.

## **R5. Autonomy or Enjoyment? The Contingent Nature of Brand Ritual**

Yaxuan Ran, Zhongnan University of Economics and Law, Vietnam  
Echo Wen Wan, University of Hong Kong, China

Brand rituals can affect consumers' feelings and experience. Adding to this literature the present research demonstrates the contingent nature of brand ritual by showing that brand ritualization can increase enjoyment but simultaneously decrease autonomy both of which increase WTP. Furthermore brand personality moderates the relative salience of the two perception-processes.

## **G4. That's So Sweet: Baby Cuteness Semantically Activates Sweetness to Increase Sweet Food Preference**

Shaheer Ahmed Rizvi, University of Alberta, Canada  
Sarah G Moore, University of Alberta, Canada  
Paul Richard Messinger, University of Alberta, Canada

We examine the semantic association between baby (kindchenschema) cuteness and sweetness and how kindchenschema cuteness increases preference for sweet foods. Kindchenschema cuteness semantically activates the construct of sweetness thereby increasing preference for sweeter foods. Through moderation we show that kindchenschema and not whimsical cuteness produces this increased desire for sweets.

## **L5. Understanding the Components and Effects of the Omnichannel Seamless Experience**

Paula Rodríguez-Torrico, Universidad de Burgos, Spain  
Lauren Trabold, Manhattan College, USA  
Sonia San-Martín, University of Burgos, Spain  
Rebeca San José, University of Valladolid, Spain

This paper aims to investigate empirically the concept of Omnichannel Seamless Experience (OSE) and its impact on Social Media Engagement (SME). Results confirm the multidimensionality of the OSE namely consistency freedom in channel selection and synchronization which directly impact on consumer satisfaction with the omnichannel interaction and indirectly on SME.

## **M1. How Rewarding is Your Rewards Program? Experiential vs. Material Rewards**

Ayalla Ruvio, Michigan State University, USA  
Farnoosh Khodakarami, Michigan State University, USA  
Clay Voorhees, Michigan State University, USA

The research on loyalty rewards programs focuses on material rewards. In four studies we explore consumers' preference for experiential (vs. material) rewards. They view experiential (vs. material) rewards as having greater expected utility which in turn increases their behavioral intentions and engagement with the loyalty program.

## **D9. Consumption Closure as a Driver of Positive Word of Mouth**

Christina Saenger, Youngstown State University, USA  
Veronica Thomas, Towson University, USA

Consumption closure affects consumers' cognitive processing and WOM. Manipulating closure through packaging consumers who experience closure (single-serving package) as opposed to those who do not (equivalent amount from multi-serving package) provide more positive WOM due to increased attitude certainty. Marketers may benefit by encouraging reviews of single-serve packages.

## **E10. Sustainable Initiatives: Cultural Identity, Regulatory Focus, and Construal Perspective**

Ekaterina Salnikova, Aarhus University, Denmark  
Yuliya Strizhakova, Rutgers University, USA  
Klaus G Grunert, Aarhus University, Denmark

We integrate cultural identity regulatory focus and construal theory perspectives to examine effectiveness of sustainable product initiatives. Across five studies we demonstrate strong moderating effects of cultural identity in consumer responses to sustainability framing. Globally-oriented consumers are more engaged with sustainability framed in promotion and more distant terms.



## **P8. Understanding Financial Literacy: A Meta-Analysis of the Antecedents, Consequents and Moderators**

Fernando De Oliveira Santini, Universidade Do Vale Do Rio Dos Sinos, Brazil  
Frederike Monika Budiner Mette, ESPM, Brazil  
Mateus Canniatti Ponchio, ESPM, Brazil  
Wagner Junior Ladeira, Universidade Do Vale Do Rio Dos Sinos, Brazil

A meta-analysis was conducted to evaluate the antecedents consequents and moderators of financial literacy. We obtained 13 significant antecedents of the financial literacy construct and four significant consequent constructs. The observations reflected the moderating effect of culture and the level of economic development of the country of origin.

## **E5. Volunteer Motivations for Direct versus Indirect Service**

Abigail Schneider, Regis University, USA  
Eric Hamerman, Iona College, USA

Nonprofit organizations rely heavily on volunteers yet recruitment and retention of volunteers is a major challenge. We explore the different motivations for volunteer tasks finding that different drivers of behavior (categorized by the Volunteer Functions Inventory) correspond differently to indirect and direct service activities that require differing levels of skill.

## **N3. Emotion Regulation and Memory for Negative Emotion Ads**

Sandra Segal, Ben Gurion University, Israel  
Hila Riemer, Ben Gurion University, Israel  
Shai Danziger, Tel Aviv University, Israel  
Gal Sheppes, Tel Aviv University, Israel

People may employ emotion regulation to process negative emotion stimuli. We find that when people use emotion regulation they regulate high-arousal negative ads using distraction and low-arousal negative ads using reappraisal resulting in better memory for low-arousal ads. When they do not use emotion regulation people better remember high-arousal ads.

## **E7. Pronouns in Fundraising Appeals – The Impact of I vs. S/He on Donations**

Amir Sepehri, Western University, Canada  
Rod Duclos, Western University, Canada  
Hamid Elahi, Western University, Canada

Donors evaluate online fundraisings partly on their linguistic characteristics. Extending prior research showing negative (positive) emotions increase (decrease) donations we show 1) self-related (other-related) pronouns result in lower (higher) donations and 2) the negative (positive) effect of self-related (other-related) pronouns is stronger when negative (positive) emotions increase.

## **E2. Donation versus Adoption: How the Mode of Helping Moderates the Effect of Emotions on Helping**

Ziqi Shang, Renmin University of China, China  
Xiuping Li, National University of Singapore, Singapore  
Aradhna Krishna, University of Michigan, USA

Ads asking for donations depict help-recipients' sad or happy emotions. We examine if the effect of help-recipients' emotion on observers' helping intention varies depending on the helping mode. We find that the decision to adopt(donate) makes people more self-focused(oth-er-focused) and more(less) likely to help when seeing happy (vs. sad) help-recipients.

## **J10. Transnational Consumer Lifestyle**

zahra Sharifonnasabi, Queen Mary University of London, UK  
Fleura Bardhi, City University of London, UK

In a world of increasing global mobilities this study investigates the nature of consumption when individuals inhabit multiple countries simultaneously. First four meanings of place have emerged in our findings each representing specific meanings relationships and consumption practices. Second we introduce the notion of transnational consumption.

## **M6. Approaching Negative Experience**

Liang Shen, Shanghai Jiao Tong University, China  
Fengyan Cai, Shanghai Jiao Tong University, China  
Ying Yu, Huazhong Agricultural University, China

Because approaching unfamiliar negative experiences could dissipate one's uncertainty of the environment we propose that people are more curious about and hence more likely to choose a negative experience over a positive experience. Three experiments provide preliminary evidence for this effect.

## **M10. I Need a Hero: How Loneliness Interacts with the Symbolic Meaning of Products to Affect Consumer Attitude**

Sirajul Arefin Shibly, SUNY Binghamton, USA  
Jinfeng Jiao, SUNY Binghamton, USA

While extensive literature exists on symbolic meaning of products and on loneliness how the interaction of these two concepts can affect attitude development towards a product has not been assessed. The current paper demonstrated that lonely people have a more positive attitude towards products that bear a superhero symbolic meaning.

## **Q12. Exploring Effects of Perceived Authenticity of Instagram Models on Aad and Buying Intentions**

Heather Shoenberger, University of Oregon, USA  
Eunjin Kim, Southern Methodist University, USA

This study suggests that consumers' ad evaluations and purchase intention are highest when a plus size not-airbrushed model is featured on a brand's Instagram account. More importantly this study confirms that perceived authenticity plays a significant mediating role for the effects of model-image modification and body size on ad evaluations.

## **A11. When Political Neutrality Backfires**

Ike Silver, University of Pennsylvania, USA  
Alex Shaw, University of Chicago, USA  
Rob Kurzban, University of Pennsylvania, USA

Politicians and public figures often refrain from taking sides on hot-button social issues to avoid alienating potential supporters. Two studies (n=751) find that this strategy can backfire: Neutrality is sometimes interpreted as indicating a strong strategically concealed opinion and can lead to diminished trustworthiness and voting support in such cases.

## **E4. Doing Good for Nothing: Motive Inferences from the Probabilistic Profits of Prosociality**

Ike Silver, University of Pennsylvania, USA  
Jackie Silverman, University of Pennsylvania, USA

We explore how the probability of profiting from prosocial behavior impacts perceived motive. Eight studies (N=3557) demonstrate that agents whose prosocial actions may return large rewards but may also return nothing are evaluated more positively than those whose prosocial actions yield small certain rewards of equal expected value.

### **M3. #FOMO: How the Fear of Missing Out Drives Consumer Purchase Decisions**

Michelle van Solt, Florida International University, USA  
Jessica Rixom, University of Nevada, Reno, USA  
Kimberly Taylor, Florida International University, USA

This research focuses on consumers' purchase decisions motivated by FOMO. Two studies demonstrate that purchase intent is higher when participants' imagine that their close social groups will attend an event mediated by FOMO. Furthermore the type of experience (ordinary extraordinary) moderates the relationship of social groups (close distant) on FOMO.

### **N5. Mixed Feelings, Mixed Baskets: How Emotions of Pride and Guilt Drive the Relative Healthiness of Sequential Food Choices**

Julia Storch, University of Groningen, The Netherlands  
Koert van Ittersum, University of Groningen, The Netherlands  
Jing Wan, University of Groningen, The Netherlands

Although healthy diets start with healthy shopping baskets previous research primarily investigated factors influencing the healthiness of isolated food purchases. Instead we propose that dependencies exist between the healthiness of shoppers' sequential choices. We address this research gap and investigate whether emotions experienced while shopping underlie these dependencies.

### **R7. How and Why Life Transition Influences Brand Extension Evaluation**

Lei Su, Hong Kong Baptist University, China  
Alokparna (Sonia) Monga, Rutgers University, USA  
Yuwei Jiang, Hong Kong Polytechnic University, China

Life transition is a ubiquitous aspect of life and occurs as people transcend various life stages. Four studies showed that life transition resulted in higher perceived fit and more favorable brand extension evaluation. This effect is mediated by self-concept ambiguity and consequently dialectical thinking.

### **I13. Ambient Light, Gender, and Creativity**

Courtney Szocs, Louisiana State University, USA  
Franziska Metz, EBS, USA  
Dipayan Biswas, University of South Florida, USA

The findings of our experiment demonstrate that females are more creative with bright (vs. dim) ambient light while males are more creative with dim (vs. bright) ambient light. The findings of our research also help in resolving the inconsistency in the prior literature for effects of ambient light on creativity.

### **O8. Valuation and Allocation of Bought Time**

Eisa Sahabeh Tabrizi, University of Southeast Norway  
Marit Engeset, University of Southeast Norway  
Luk Warlop, Norwegian School of Management, Norway

We show when consumers buy time by outsourcing their tasks they may be willing to pay less for the service and are more likely to find the price unfair. We propose this is driven by higher domain self-efficacy. We also document consumers' tendency for allocating bought time more to hedonic activities.

## **C11. More of a Bad Thing: How Consumers Ignore Pollutant Levels in Healthiness Assessment**

Aner Tal, Ono Academic College, Israel  
Yaniv Gvili, Ono Academic College, Israel  
Moty Amar, Ono Academic College, Israel

Consumers appear to consider only the presence rather than the quantity of pollutants in food in assessing healthiness. The current studies demonstrate this with assessment of healthiness of food containing pesticides as well as demonstrate effective debiasing by providing a standard of assessment.

## **O13. Pain of Loss: How Losing in a Promotional Competition Influences Consumer Attitude**

Arash Talebi, ESSEC Business School, France  
Sonja Prokopec, ESSEC Business School, France  
Ayse Onculer, ESSEC Business School, France

This research shows that the increase in brand attitude of the winners of an uncertain promotion comes at the cost of a greater decrease in the attitude of the losers; in turn that leads to an overall decrease in brand attitude. We show that the solution lies in unresolved uncertainty.

## **L6. The Influence of Social Exclusion on Consumers' Perceptions of and Responses to Consumer-Dense Retail Environments**

Veronica Thomas, Towson University, USA  
Christina Saenger, Youngstown State University, USA

Social exclusion affects consumers' perceptions of and responses to consumer-dense retail environments. Socially excluded (v. included) consumers exhibit increased crowd-size estimates perceive higher neutral and positive (but equal negative) crowding and prefer crowded retailers. Socially excluded consumers' heightened affiliation motivation increases crowding perceptions enhancing intentions to spend time and money.

## **C5. Krabby Patties, Kelp Chips, or KitKats?: Exploring the Depictions of Food Featured in Children's Television Shows**

Kathy Tian, University of Illinois at Urbana-Champaign, USA  
Regina Ahn, University of Illinois at Urbana-Champaign, USA  
Michelle Renee Nelson, University of Illinois at Urbana-Champaign, USA

Time spent watching TV may contribute to unhealthy eating yet most studies only review food advertising. We examine food and beverage references within 64.5 hours of children's television programs. Our results show prevalence of un-branded and less healthy food and beverages primarily as snacks. Ramifications for child obesity are discussed.

## **C8. Can Packaging Imagery Fill Your Stomach? Effects of Product Image Location on Flavor Richness, Consumption Quantity, and Subsequent Choice**

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

Through three studies we found that an image placed at the bottom of a food package increased consumers' perception of flavor richness (Study 1) decelerated their food consumption (Study 2) and led them to choose a healthy snack after consumption (Study 3).



## **F11. Anti-Consumption for Sustainability: The Environmental Impact of Anti-Consumption Lifestyles, Environmentally Concerned Individuals and Ethical Consumers**

Laurie Touchette, HEC Montreal, Canada  
Marcelo Vinhal Nepomuceno, HEC Montreal, Canada

We compare the environmental impact of anti-consumption lifestyles ethical consumption and environmental concern. Environmental impact is lowest for tightwadism (i.e. an anti-consumption lifestyle) unrelated with environmental concern and highest for ethical consumption. Such findings suggest that resisting consumption offers a viable and effective way towards sustainable consumption.

## **Q2. Why do Kids Love Watching Unboxing Videos? Understanding The Motivations of Children to Consume Unboxing Toy Videos**

Teresa Trevino, Universidad de Monterrey, Mexico  
Mariela Coronel, Universidad de Monterrey, Mexico  
Valeria Martínez, Universidad de Monterrey, Mexico  
Ivanna Martínez, Universidad de Monterrey, Mexico  
Daniela Kuri, Universidad de Monterrey, Mexico

Unboxing videos are videos that shows the opening gathering and exhibit of products across social media platforms such as YouTube. This paper contributes to the literature of consumer behavior by shedding light on the motivations of children to consume unboxing videos and its effects on brand engagement with toy brands.

## **A2. A Window to the Brand's Soul: How Models' Eyes Affect Consumers' Attitudes**

Maria Giulia Trupia, IESE Business School, Spain  
Martina Cossu, Bocconi University, Italy  
Zachary Estes, Bocconi University, Italy

Three studies tested the impact of pupil dilation on consumers' ad attitudes. Models whose pupils are constricted (versus dilated) improved ad attitudes (Study 1). Models' perceived attractiveness and trustworthiness mediate the effect (Study 2). Moreover evidence of pupil mimicry was found but it did not affect ads' evaluations (Study 3).

## **B5. Money Doesn't Buy Happiness, But What About Buying Trust? The Effectiveness of Financial Compensation in Restoring Trust After Double Deviation**

Valentina Ortiz Ubal, Federal University of Rio Grande do Sul, Brazil  
Cristiane Pizzutti, Federal University of Rio Grande do Sul, Brazil  
Katja Gelbrich, Catholic University Eichstätt-Ingolstadt, Germany

Situations in which a financial compensation is effective to rebuild trust after a double deviation have been neglected by marketing literature. We show that financial compensation could be more effective than non-financial tactics (apology promise) in recovering trust after double deviation when the initial failure causes a financial loss.

## **O6. Be Aware of Your Suspicion: When "Being Suspicious" Ironically Leads to Suboptimal Judgment- and Decision-Making**

Julie Verstraeten, Ghent University, Belgium  
Tina Tessitore, INSEEC Business School, France  
Maggie Geuens, Ghent University, Belgium

Contrary to the belief that "being suspicious" benefits judgment- and decision-making four studies demonstrate the opposite to hold true. Suspicion rendered judgments and decisions suboptimal for money and food in an unrelated context. As suspicion is ever-prevailing in nowadays' marketplace these findings highlight relevant and important consequences for consumer welfare.

## **O2. The Streaking Star Effect: Why People Want Individual Winning Streaks to Continue More than Group Streaks**

Jesse Walker, Cornell University, USA  
Thomas Gilovich, Cornell University, USA

In seven studies participants exhibited a greater desire for streaks of individual success to continue than identical streaks of success by groups. Fairness or concern about the other competitors and the experience of awe inspired by an individual streak mediate this effect. This phenomenon has downstream consequences for consumer behavior.

## **P2. The Upside of Myopic Loss Aversion**

Daniel Wall, Carnegie Mellon University, USA  
Gretchen Chapman, Carnegie Mellon University, USA

Broad brackets lead to increased risk taking which is normative without reinvestment but can be disastrous with reinvestment. In our study narrow bracketed participants are more loss averse—a better decision—yielding higher expected log wealth. Myopia can be good.

## **R12. Brand Primes Can Satisfy (Important) Consumer Goals**

Darlene Walsh, Concordia University, Canada  
Chunxiang Huang, Concordia University, Canada

In Study 1 we show that exposure to a brand can satiate a previously primed brand-related goal. However the satiating effect only occurs when the goal is important to the individual. In Study 2 we show that perceived goal progress can in part explain this effect.

## **E1. Effects of Recipients' Emotional Expressions on Donors' Preference for Helping with Development versus Survival**

Xue Wang, University of Hong Kong, China  
He (Michael) Jia, University of Hong Kong, China  
Sara Kim, University of Hong Kong, China

Across three studies the current research shows that emotional expressions of recipients influence donors' relative preference for developmental helping versus survival helping to the recipients through altering donors' optimistic belief about the recipients.

## **J9. The Beautified Me is Me: How Interdependence Increase Usage of Beauty App**

Qin Wang, Arizona State University, USA  
Andrea Morales, Arizona State University, USA  
Adriana Samper, Arizona State University, USA

This research investigates when people are more likely to use photo-editing beauty apps and why. Two studies show that people with an interdependent (vs. independent) self-construal have higher intentions to use beauty apps because they see larger overlaps between their beautified selves and their true selves.

## **D6. How to Boast Appropriately When Word of Mouth Flows Internationally?**

Xingyu Wang, Huazhong University of Science and Technology, China  
Yaping Chang, Huazhong University of Science and Technology, China  
Jun Yan, Huazhong University of Science and Technology, China

The current research explores the interaction effect between “Prophase Word-of-Mouth” and “Boastful Communication Strategy” on consumers' purchase intention. Through two experiments we found when PWOM valence is high managers should use a high-level “Boastful Communication Strategy” when PWOM valence is low managers should use a low-level boasting strategy.

## **C7. The Visually Simple = Healthy Intuition and Its Effects on Food Choices**

Yan Wang, Renmin University of China, China  
Jing Jiang, Renmin University of China, China

This research proposes an outcome discounting relationship between visual simplicity of packages and food healthiness perception. Across three experiments we find that consumers tend to perceive the food healthier when it is packed visually simple (vs. complex) and thereby more likely to choose the food.

## **F1. Reach out in the Darkness: How Unfair Treatments Shape Social Connection Motivation**

Yijie Wang, Hong Kong Polytechnic University, China  
Yuwei Jiang, Hong Kong Polytechnic University, China  
Mandy Mantian Hu, Chinese University of Hong Kong, China  
Ninghua Zhong, Tongji University, China

Individuals who were unfairly treated exhibited a higher need to belong and exert more effort to connect with acquaintances and strangers than fairly treated peers. Furthermore this effect was mediated by the feeling of resource deprivation after experiencing injustice and was more salient among individuals with relatively low self-esteem.

## **C6. How Does Unsatisfied Curiosity Stir Our Craving For Food?**

Chen Wang, Drexel University, USA

Curiosity cues abound where consumers make their food choices. However little is known about how curiosity influences consumers' subsequent food decisions. This research explores the impact of incidental curiosity on consumers' food choice. We propose multiple outcomes determined by the food options available and the nature of curiosity.

## **H9. Market Emergence: the Alignment Process of Entrepreneurs' Socio Cognition and Consumers' Perception of the Market**

Hao Wang, University of South Florida, USA

Drawing on social constructive perspective this study bridges entrepreneurial decision-making and legitimacy underlying the micro-foundation of the market creation. I argue that the extent to which the market is legitimate depends on the alignment between entrepreneur's socio cognition of the market and consumers' perception of the market.

## **L9. To Save Face or Follow My Heart: Salesperson's Inquiries of In-Group Identity on Consumers' Purchase**

Lingru Wei, Tencent Holdings Limited, China  
Jooyoung Park, Peking University, China

This research shows that the salience of in-group identity (e.g. a student of a prestigious school) leads to purchase due to enhanced self-presentation concern especially when customers sense the possibility of violating social norms. Our finding suggests that simple conversation between salespersons and consumers can change sales.

## **N7. Emotion Or Information? Effects of Online Social Support on Customer Engagement**

Chuang Wei, Tsinghua University, China  
Maggie Wenjing Liu, Tsinghua University, China  
Qichao Zhu, Tsinghua University, China

Short Abstract: This paper investigates the interactive effect and the underlying mechanism of social support and source on customer engagement. We conducted a study to show that consumer engagement in online brand communities is affected by the support type (informational vs. emotional) and the effect is moderated by source of support.

## **O4. Will Winning Always Encourage Risk Taking? The Effect of Competition Results and the Closeness of These Results**

Beixi Wen, Renmin University of China, China  
En-Chung Chang, Renmin University of China, China  
Chunya Xie, Renmin University of China, China

In this research we found that winning a competition or hearing news that a familiar team has won a game will increase people's risk preference. However a close result can reverse this effect; that is compared with narrow-winners narrow-losers will be more willing to take risks.

## **B2. The Prevention Oriented Chameleon: Mimicry in a Prevention Orientation Leads to More Brand Trust**

Judith Willberger, Technical University of Munich, Germany  
Gavan Fitzsimons, Duke University, USA

Will customers trust a brand and its products more when their trust and security needs are fulfilled? This study shows that customers trust a brand and its products more when their trust need is fulfilled by being mimicked and their security need by being aware of the brand's prevention orientation.

## **L1. The Effects of Cultural Syndromes on Customers' Responses to Service Failures: A Perspective-Flexibility-Based Mechanism**

Vincent Chi Wong, Lingnan University, China  
Robert Wyer Jr., University of Cincinnati, USA

Customers with a collectivistic (vs. individualistic) orientation or a long-term (vs. short-term) orientation are likely to attribute a service failure more to the service provider's contextual factors and less to the service provider's dispositional factors. These effects are mediated by the flexibility of perspectives customers take when making a judgment.

## **H8. The Beneficial Side of Haze: Air Pollution Promotes Innovation and Creativity**

Yi Wu, Tsinghua University, China  
Yifan Chen, Tsinghua University, China  
Yuhuang Zheng, Tsinghua University, China

a counterintuitive hypothesis that air pollution promotes innovation and creativity. Two archival studies (Study 1-2) found that air pollution predicted innovation at country- and company-level. Study 3a-3b experimentally established causal connection between air pollution and creativity. Study 4 replicated hypothesis in real weather context and proved arousal's mediating role.

## **P11. A Price Premium on A Trivial but Weak Preferred Attribute Increase Choice: The Roles of Scarcity, Arousal and Perceived Risk**

Yueyan Wu, Hunan University, China  
Chunyan Xie, Western Norway University of Applied Sciences, Norway  
Zhi Yang, Hunan University, China  
Luluo Peng, Hunan University, China

We add to extant research on trivial attribute by addressing a "small price premium effect" on choice and providing a psychological mechanism. Results showed that a small price premium on a trivial attribute increases choice share of weak preferred options. Large price premium eliminates this kind of effect. Underlying mechanisms were explored.



## **F8. Dual Routes for Consumer Responses to Corporate Social Responsibility: The Role of Positive Moral Emotions, Attitudes, and Empathy**

Chunyan Xie, Western Norway University of Applied Sciences, Norway  
Richard P. Bagozzi, University of Michigan, USA

We add to extant CSR research by investigating both cognitive and affective processes underlying consumer reactions to CSR. Results showed that both positive moral emotions and positive attitudes mediate the impact of CSR actions on consumer positive responses toward the company. Further empathy regulates the elicitation of positive moral emotions.

## **K1. The Impact of Moral Violation and Advertising Appeals on Brand Attitude**

Chunya Xie, Renmin University of China, China  
En-Chung Chang, Renmin University of China, China  
Beixi Wen, Renmin University of China, China

This study found that moral violators possess a more positive attitude towards brand advertised in two-sided (versus one-sided) message appeals while moral violation witness possess a more positive attitude towards brand advertised in one-sided (versus two-sided) appeals.

## **B10. Wearing V Neck, Getting More Trust: An Evolutionary Psychology Approach to Examine the Effect of Collar Style on Trust**

Jialiang Xu, University of Manitoba, Canada  
Fang Wan, University of Manitoba, Canada  
Chenbo Zhong, University of Toronto, Canada

“What a strange power there is in clothing” — Isaac Bashevis Singer. Three experiments findings show that one’s collar styles (V neck vs. turtleneck) can affect others’ trust of him or her.

## **H5. Being Looked Up or Being Looked Down? The Divergent Effects of Camera Angle on Nonanthropomorphized and Anthropomorphized Product in Ads**

Changchun Xuan, Xiamen University, China  
Rui Chen, Xiamen University, China  
Jing Jiang, Suzhou Broadcasting System, China  
Bin Yu, Tsingtao Brewery Company Limited, China  
Jingjia Peng, Icartoon Culture & Media Corporation Ltd, China  
Shengdong Lin, Xiamen University, China

This paper finds that for anthropomorphized product being presented in the downward-looking angle lead to higher product evaluation compared with being presented in upward-looking angle. On contrast for nonanthropomorphized product the effect of camera angle is reversed. The two different mechanisms underlying the effect of camera angle were also tested.

## **Algorithm Attraction versus Aversion: The Role of the Perceived Self-Efficacy of the Decision Maker**

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

Nowadays algorithms are used to generate recommendations in numerous areas including ones that are pure matter of taste. Across four studies we demonstrate that consumers value the same recommendation differently depending on the framing of its source—an algorithm versus human expert—and their own perceived level of self-efficacy.

## **G6. Brightness Increases More Positive Views of Humanity and Prosocial Behavior of People Low in Moral Identity Internalization**

Jun Yan, University of Manitoba, Canada  
Luke Zhu, University of Manitoba, Canada  
Fang Wan, University of Manitoba, Canada

This paper tests an interactive effect of ambient lighting and Moral Identity Internalization (MII) on prosocial behavior. Individuals low (vs. high) in MII are more likely to help others in bright than dark environment because the brightness increases their positive views of humanity.

## **A9. I know It's not real, but I like it!**

Junxian Yang, Singapore University of Social Sciences, Singapore  
Yue Wang, Singapore University of Social Sciences, Singapore  
Jufinnie Lim, Singapore University of Social Sciences, Singapore  
Yu-chen Hung, Singapore University of Social Sciences, Singapore

Questionable practices in online advertising have triggered cautiousness among consumers when they encountered information on social media. While consumers do not completely trust it our studies demonstrate that they remain influenced. We further explore why people fail to discount information on social media even when they question its authenticity.

## **O3. The Effect of Numeric Information on Product Evaluation**

Zhen Yang, Drexel University, USA  
Yanliu Huang, Drexel University, USA  
Dengfeng Yan, University of Texas at San Antonio, USA

This research proposes that precise number will polarize product evaluation making the judgment of positive product information more positive and negative information more negative. It happens because processing precise number is more arousing and the heightened arousal leads to evaluative extremity. Three studies were conducted to test our predictions.

## **O5. The Effect of Synchrony on Non-Human Objects Involved in the Synchronous Performance**

Xiaoyin Ye, Xiamen University, China  
Jun Ye, Xiamen University, China

Drawing from an embodied cognition framework this study examines the main effect and the mediating mechanism of synchrony on product evaluation. Four experiments were conducted and our findings indicate that exposure to synchrony experience activates the concept of harmony which has a spillover effect that positive product evaluation.

## **K13. When Does Humor Increase Sharing?**

John Yi, University of Arizona, USA  
Caleb Warren, University of Arizona, USA

Are consumers more likely to share content (stories social media posts etc.) when it is humorous? Not always. Although adding humor increases the likelihood that consumers share negative content (e.g. embarrassing stories complaints etc.) adding humor does not increase the likelihood of sharing positive content (e.g. happy stories praise etc.).

## **L12. Should I Stay or Should I Go: When Our Companies Have Eyes for Other Consumers**

Na Ri Yoon, Indiana University, USA  
Jenny Olson, Indiana University, USA  
Adam Duhachek, Indiana University, USA

To attract new customers companies may lose existing customers. Our research examines how consumers' attachment styles influence the likelihood of switching companies. When new customers receive exclusive benefits existing customers' attachment anxiety predicts switching. Attachment avoidance predicts greater switching regardless of benefit recipient. Perceived betrayal and firm commitment underlie switching.

## **H10. No Pain, No Out-of-Box Thinking: An Examination of the Effects of Self-Threat on Creativity**

Huan You, University of Manitoba, Canada  
Fang Wan, University of Manitoba, Canada  
Luke Zhu, University of Manitoba, Canada  
Haiyang Yang, Johns Hopkins University, USA

Two experiments examined the effect of self threat on creativity. Findings suggest that type of threat matters; a threat from a dynamic domain enhances divergent creativity and a threat from fixed domain enhances convergent creativity.

## **D12. Future Decisions and Temporal Contiguity Cues: When Absence of Temporal Contiguity Cues Increases Online Reviews' Persuasiveness.**

Francesco Zanibellato, Ca' Foscari University, Venice, Italy

Past research shows that temporal contiguity cues make online reviews more persuasive. However rooting in Construal Level Theory we show that when consumers face a distant-future consumption timeframe they are more persuaded by online reviews without temporal contiguity cues.

## **L3. Categorizing Engagement Behaviors from the Perspective of Customer Resources**

Xianfang Zeng, University of Calgary, Canada  
James Agarwal, University of Calgary, Canada  
Mehdi Mourali, University of Calgary, Canada

From the perspective of customer resources the authors propose a typology of customer engagement behaviors (CEBs). This perspective well aligns with the service-dominant (S-D) logic (Vargo and Lusch 2004) that has evolved into an important paradigm in the marketing area.

## **P3. Cash Costs You: The Pain of Holding**

J Zenkic, University of Melbourne, Australia  
Kobe Millet, Vrije Universiteit Amsterdam, The Netherlands  
Nicole Mead, University of Melbourne, Australia

Cash can have an associated psychological cost: the pain of holding. This pain is aversive varies with the physical properties of money – such as the differences in weight and bulk between coins and notes - and may in turn encourage needless spending.

## **H12. Does Economic Development Influence Consumer Innovativeness?**

Fuchun Zhan, University of Wisconsin - Madison, USA  
Nancy Wong, University of Wisconsin - Madison, USA  
Julie Anne Lee, University of Western Australia, Australia

This research explores the relationship between income frugality and consumer innovativeness. Results show that income positively affects innate innovativeness but only for the higher income countries while an indirect effect through frugality is found in lower income countries. Frugality has no direct effect on intention of innovative behavior.

## **I1. Blaming Him or Them? A Study on Attribution Behavior**

Chun Zhang, University of Dayton, USA  
Michel Laroche, Concordia University, Canada  
Yaoqi Li, Sun Yat-Sen University, China

The current work examines the gender difference in attribution behavior. Results show that males are more likely to blame individuals while females are more likely to blame groups which can be explained by relational and collective interdependent self-construal. Furthermore similarity and service failure magnitude moderate the gender effect.

## **D8. Why Employees Communicate Positive eWOM on Social Networking Sites: Motivations and Moderators**

Jing Zhang, Huazhong University of Science and Technology School of Management, China  
Ya Zhang, Huazhong University of Science and Technology School of Management, China

This paper aims at exploring what motivate employees to voluntarily create positive eWOM on SNS. Its theoretical contributions and managerial implications are connecting eWOM and OCB literature from perspective of internal employees distinguishing from employees' knowledge sharing research elaborating the way to motivate employees to create positive eWOM for managers.

## **M11. Motivated to Be Moral: The Effect of Nostalgia on Consumers' Recycling Behavior**

Xiadan Zhang, Renmin University of China, China  
Xiushuang Gong, Jiangnan University, China  
Jing Jiang, Renmin University of China, China

Prior research on nostalgia has primarily focused on its psychological and social functions. However little has been done about whether and how nostalgia affects individuals' pro-environmental behaviors. Through two studies we demonstrate that nostalgia can increase consumers' intention to recycle and this effect is mediated by moral purity.

## **J2. Consistence vs. Variety: The Effect of Temporal Orientation on Variety Seeking**

Yuan Zhang, Xiamen University, China  
Shaoqing Zhang, Quanzhou Normal University, China

The research examines the effect of temporal orientation on variety seeking and demonstrates that people in past orientation chose less variety than those in future orientation (Study 1) and preference for consistence was the underlying mechanism (Study 2). However the effect disappeared in self-irrelatively condition (Study 3).

## **K3. Goal or Knowledge? Exploring the Nature of Culture and its Consequential Effect**

Xiaohua Zhao, Tsinghua University, China  
Fang Wan, University of Manitoba, Canada  
Antonios Stamatogiannakis, IE Business School, IE University, Spain  
Haiyang Yang, Johns Hopkins University, USA

Prior research has largely focused on how cultural values get activated but has not distinguished whether cultural values are semantic knowledge or goals. As the salience of them tends to fluctuate and subsequently impact judgments and behaviors we proposed an approach to distinguish culture values between semantic knowledge and goals.

## **R11. The Influence of Brand Rituals on Perceived Brand Authenticity**

Lijing Zheng, University of Hong Kong, China  
Echo Wen Wan, University of Hong Kong, China  
Zhongqiang (Tak) Huang, University of Hong Kong, China

Built on literature of ritual and brand authenticity we predicted that consumers will perceive greater brand authenticity from brand rituals and that this effect is driven by perceived symbolism in the brand. Three studies provide initial evidences for our hypotheses. This research provides new insights into the influence of brand rituals.



## **R10. Emotional-Transference or Exclusivity? an Emotional Attachment Approach to Brand Extension for Cultural and Creative Products**

Wu Zhiyan, Shanghai University of International Business and Economics, China  
Luo Jifeng, Shanghai Jiao Tong University, China  
Liu Xin, Shanghai University of International Business and Economics, China

This research uses three studies to examine how brand fit and self-construal moderate the relationship between brand attachment (emotional-transference versus exclusive) and the brand extension effect and how online social interaction moderates the moderating effect of self-construal on the relationship between brand attachment and the brand extension effect.

## **H4. Anthropomorphism Moderates the Effect of Ownership on Self Perceptions**

Qiang Zhou, University of Texas at San Antonio, USA  
Dengfeng Yan, University of Texas at San Antonio, USA

Previous literature has shown that consumers often perceive themselves to have the characteristics of the products that they own. We proposed and found that this effect is mitigated by anthropomorphism because individuals are less likely to include a product into the self-category once it is anthropomorphized.

## **R2. Brand-to-Brand Communications: How Consumers React to Flattery Between Brands**

Lingrui Zhou, Duke University, USA  
Katherine Crain, Duke University, USA  
Keisha Cutright, Duke University, USA

Should brands go out of their way to talk positively about their competitors? We find that brand-to-brand flattery changes the consumer's perception of how a brand values its relationships globally which influences brand trust and subsequently brand evaluations.



# **DataBlitz**

## **Always Trust in Your Friends? Cross-cultural Effects of Review Source and Incentives on Trustworthiness**

Dionysius Ang, Leeds University Business School, UK

Will culture affect how consumers perceive incentivized reviews from friends? Amongst Taiwanese participants incentivized reviews were deemed as breach of trust. Thus incentivized reviews from friends were deemed less trustworthy than incentivized reviews from strangers. Amongst Americans reviews from friends were more trustworthy than reviews from strangers regardless of incentive.

## **Consuming Time-Space Imaginations: Bakhtin's Chronotope on Robots and Artificial Intelligence**

Marat Bakpayev, University of Minnesota Duluth, USA  
Alima Yesmukanova, KIMEP University, Kazakhstan

We examine developing discourse on two controversial phenomena - robots and Artificial Intelligence. Drawing from literary theory we focus on the representation of time-space in news articles. We contextualize Bakhtin's theory of chronotope identifying how temporality and spatiality presented by technology narratives.

## **Teaching Old Dog New Tricks... and Old Bottles New Jeans. The Role of Implicit Theories in the Evaluation of Recycled Products**

Alessandro Biraglia, University of Leeds, UK  
J. Josko Brakus, University of Leeds, UK  
Lucia Mannetti, Sapienza University of Rome, Italy  
Ambra Brizi, Sapienza University of Rome, Italy

Across three studies involving real choice implicit associations and purchase intention we show how incremental theorists prefer recycled products more than entity theorists. Entity theorists can nevertheless be persuaded in buying more recycled products if they attribute the merit of the transformation to the internal characteristics of the materials.

## **Understanding the Role of Gifts in Managing Marriage and Family Relations: The Case of the Male Phoenix in China**

Jia Cong, Lancaster University, UK  
Xin Zhao, Lancaster University, UK  
Chihling Liu, Lancaster University, UK

This paper seeks to understand the role of gifts in managing an inter-class marriage from the perspective of the-male-phoenix in contemporary China. Through fieldwork our initial findings show that gift plays a significant role for male-rural-migrants to manage class disparity and maintain harmonious relationships with urban families they marry into.

## **What a Waste: Effects of Food Consumption Choices and Traffic Light Labelling on Disposal**

Marit Drijfhout, University of Groningen, The Netherlands  
Jenny van Doorn, University of Groningen, The Netherlands  
Koert van Ittersum, University of Groningen, The Netherlands

The large amount of food wasted by consumers suggests a mismatch between consumers' planned consumption decisions and their actual consumption behavior. We show that food waste occurs when consumers impulsively prefer unhealthy vice foods over healthy virtue foods initially chosen and that traffic lights aggravate rather than mitigate food waste.

## **Associative versus Relational Processing: The Role of Elaboration in Evaluative Conditioning**

Xiaomeng Fan, Northwestern University, USA  
Galen V. Bodenhausen, Northwestern University, USA

This research shows that evaluative conditioning involves both associative and relational processing. Relational processing can be promoted when people can allocate their cognitive resources in evaluations.

## **“It’s Not You, It’s Me”: How Corporate Social Responsibility Decreases Customer Citizenship Behavior**

Sofia Batista Ferraz, EAESP-FGV, Brazil  
Andres Rodriguez Veloso, University of São Paulo, Brazil  
Diogo Hildebrand, Baruch College, USA

This paper analyzes how CSR activities influence helping behaviors among customers. Across two studies we demonstrate that participants faced with an opportunity to satiate self-defining goals through CSR had a reduced propensity to help other customers. Besides we propose entitlement as a driver of customer helping behavior.

## **‘Family Tech-Support’: Consequences for Family Assemblages and Non-Purchase Decision Technology Adoption**

Pao Franco, University of Melbourne, Australia

Consumer technology adoption research frames tech products entering into consumers’ lives as purchase decisions (e.g. computers wearables). What about situations that are not purchase decisions? This research explores technology adoption in non-decision situations (e.g. shared-at-home gifts) through a qualitative investigation of families and ‘family tech-support’ – utilizing an assemblage approach.

## **Is CSR for Sale? Investigating the Effects of Acquisition of Socially Responsible Brands on CSR Perceptions**

Bianca Grohmann, Concordia University, Canada  
Argiro Kliamenakis, Concordia University, Canada  
H. Onur Bodur, Concordia University, Canada

This research examines whether firms can increase consumers’ CSR perceptions by acquiring socially responsible brands. Two experiments demonstrate that (1) firms are more likely to increase CSR perceptions through acquisition of a functional (vs. symbolic) brand and (2) for symbolic brands new brand development (vs. acquisition) enhances CSR perceptions.

## **A Penny for Self-disgust: The Effects of Favorable Review Reward on Consumers Behavior**

Qingqing Guo, Shanghai Jiao Tong University, China  
Liangyan Wang, Shanghai Jiao Tong University, China  
Bing Han, Shanghai Jiao Tong University, China

Through three experiments this study shows that a monetary reward has a backfire effect on consumer behavior because it leads receiving consumers to self-disgust for the referral. This effect is attenuated for consumer who has an exchange relationship norm while sharpened for consumers who has a communal relationship norm.

## **Less Time, More Procrastination? The Impact of Time Pressure on Task Initiation**

Jing Jiang, Renmin University of China, China  
Alisa Yinghao Wu, Columbia University, USA

When under time pressure individuals are more likely to postpone the initiation of tasks—whether these are routine errands or consumption tasks. The rationale is that time pressure impairs an individual’s momentary ability to focus on tasks and leads to subsequent postponement of task initiation.



## **The Effects of Glossy Versus Matte Imagery on Consumers' Decision Making**

Yoonho Jin, INSEAD, Singapore  
Amitava Chattopadhyay, INSEAD, Singapore

Three studies collectively suggest that the use of glossy imagery in advertising because of its embodied meaning of easygoingness could increase consumers' optimistic perception of target consumption thereby enhancing purchase intention. The studies also show that priming either the danger of slipperiness or optimistic orientation may attenuate the effects.

## **When Humans Consume Humanlike Animals: Anthropomorphism, Power, and Cruelty-free Consumption**

Ji Myoung Danny Kim, University at Buffalo, USA  
Sunyee Yoon, University at Buffalo, USA

The interaction of anthropomorphism of animals and consumers' sense of power explains preference and attitude towards cruelty-free products. The research suggests low-power individuals engage in prosocial behavior selectively depending on perceived similarity with the beneficiary.

## **When CSR Becomes a Liability for Firms in Crises: Effects on Perceived Hypocrisy and Consumer Forgiveness**

Argiro Kliamenakis, Concordia University, Canada  
H. Onur Bodur, Concordia University, Canada

This research examines circumstances under which positive CSR reputation amplifies negative consumer responses to firm crises. Although a positive CSR reputation becomes a liability for firms experiencing values-related crises it may still offer a shielding effect but only for ambiguous crises (i.e. crises that may or may not constitute transgressions).

## **Morality Matters in the Marketplace: The Influence of Morally Based Attitudes on Consumer Purchase Intentions**

Andrew Luttrell, Ball State University, USA  
Jacob Teeny, Ohio State University, USA  
Richard Petty, Ohio State University, USA

In social psychology morally based attitudes have been shown to strongly predict attitude-consistent behaviors. However whether this basis predicts equally well in consumer research remains unanswered. Across five studies we show that morally based attitudes are indeed a reliable predictor of consumer purchase intentions even above other important factors.

## **Tackling Over-Consumption: How Proximal Depictions of Unhealthy Food Products Influence the Consumption Behavior**

Sumit Malik, IE Business School, IE University, Spain  
Eda Sayin, IE Business School, IE University, Spain  
Kriti Jain, IE Business School, IE University, Spain

Do spatially proximal depictions of unhealthy (but not healthy) food products within an advertisement image increase the desire to eat? Across a pilot and three main studies we find support for the influence of proximal ad depictions on food consumption outcomes. These results have implications for the phenomena of over-eating.

## **Stating the Obvious: How “Ugly” Labels Can Increase the Desirability of Odd-Shaped Produce**

Siddhanth Mookerjee, University of British Columbia, Canada  
Yann Cornil, University of British Columbia, Canada  
Joey Hoegg, University of British Columbia, Canada

Food producers and retailers throw away large amounts of food that fail to meet beauty standards. Our research demonstrates that using the words “ugly” as part of an advertising message increases the desirability of odd-shaped produce that would otherwise go to waste. Perceived brand credibility mediates this effect.

## **The Influence of Goal Specificity on Planning Effectiveness: A Meta-Analysis**

Ekaterina Napolova, University of Technology Sydney, Australia  
Francois Carrillat, University of Technology Sydney, Australia  
Leona Tam, University of Technology Sydney, Australia

This meta-analytic study aims to investigate the effectiveness of various planning strategies depending on the level of goal specificity. The paper presents the largest meta-analysis on the implementation intentions (planning) effectiveness in the health domain and provides important insights for researchers consumers practitioners and policy makers.

## **Thank You = Trust Me: When Gratitude Expressions Help Promote New Products**

Maria Ng, University of Houston, USA  
Dejun Tony Kong, University of Houston, USA  
Vanessa Patrick, University of Houston, USA

Drawing upon risk and trust theories we find in four experiments that in one-off (transactional) new product promotion interactions a salesperson’s gratitude (vs. neutral) expression could elicit consumers’ felt appreciation and then influence their product evaluation via enhanced trust and reduced psychological risk. These positive reactions drive consumers’ purchase intentions.

## **How Matte Product Surface Enhances Perceived Durability**

Taehoon Park, University of South Carolina, USA  
Junghan Kim, Singapore Management University, Singapore

Prior literature has shown that different perceptual qualities can be inferred from object surface features. Extending prior work we propose reflected light on surface (glossy vs. matte) as an inferential cue that can shape product quality. Across three studies we show that matte (vs. glossy) product surface enhances perceived durability.

## **Influence of Visual Crowding and Space Between Products on Consumer Choice**

Ana Scekkic, HEC Paris, France  
Selin Atalay, Frankfurt School of Finance and Management, Germany  
Cathy Liu Yang, HEC Paris, France  
Peter Ebbes, HEC Paris, France

We investigate the effect of assortment size and of spacing between products on consumer choice. We provide initial evidence that in large (i.e. crowded) assortments distancing the products on the shelf from one another leads to greater perceived variety in the assortment and to a choice experience perceived as easier.

## **The Interaction Effect of Food Variety and Simulation of Eating on Consumers' Calorie Estimation**

Liang Shen, Shanghai Jiao Tong University, China  
Fengyan Cai, Shanghai Jiao Tong University, China  
Ying Yu, Huazhong Agricultural University, China

Given the inconsistent findings about the relationship between food variety and calorie estimation this research proposes simulation of eating as one moderator. Specifically we propose that when a simulation of eating is (not) stimulated food variety decreases (increases) consumers' calorie estimation. Three experiments demonstrated this proposition and its underlying mechanism.

## **Gaze Reflects Loss Aversion**

Feng Sheng, University of Pennsylvania, USA  
Arjun Ramakrishnan, University of Pennsylvania, USA  
Darsol Seok, University of Pennsylvania, USA  
Puti Cen, University of Pennsylvania, USA  
Michael Platt, University of Pennsylvania, USA

By modeling individuals' gaze traces on potential gains and losses while they decided whether to accept or reject gambles in an eye-tracking experiment we demonstrated that loss aversion reflected the overweighting of information about potential losses relative to potential gains sampled during visual inspection of gambles.

## **Memory-Based Models of Predicting Inferences about Brand Quality**

Yvetta Simonyan, University of Bath, UK  
Dan Goldstein, Microsoft Research, USA

How are consumers' inferences about product quality related to information in memory? By modelling inferences as well as confidence in inferences via belief distributions this paper aims at explaining some unsolved phenomena regarding the relationship between quality perceptions on one side and recognition and other memory information on the other.

## **Digital Storytelling and Post-Trust Online Sperm Marketing**

Jennifer Takhar, Institut Supérieur de Gestion, Paris, France  
Laetitia Mimoun, HEC Paris, France

This paper examines extended sperm donor profiles and blogs from two international sperm bank websites and reveals the post-trust digital storytelling strategies they use to convince prospective buyers. We also identify three dimensions of post-trust digital marketing: over-determined authenticity consumer fantasy and loss of distinction.

## **When Waste Costs: The Influence of Price on Consumers' Perceived Waste and Purchase Intention of an Excessive Amount of Product**

Tao Tao, Hong Kong Baptist University, China  
Robert Wyer Jr., University of Cincinnati, USA

This paper suggests that price can serve as an indicator of waste perception and help to decrease excessive purchase behavior. Two studies supported our proposition that controlling the price as the same consumer's purchase intention of an excessive offer over an adequate one is lower when the price is higher.

## **Paper Box or Plastic bag? Structural Package Design Elements Affect Health Perception and Consumption.**

Joyce De Temmerman, Ghent University, Belgium  
Iris Vermeir, Ghent University, Belgium  
Hendrik Slabbinck, Ghent University, Belgium

This paper explores whether structural package design elements bias health perception and consumption. We propose that material (paper vs. plastic) and format (box vs. bag) can lead to higher health perceptions of the package and the packaged product and hence increase consumption.

## **Prices in Red: When a Red Price Becomes a Stop Sign**

Hongjun Ye, Drexel University, USA  
Siddharth Bhatt, Drexel University, USA  
Rajneesh Suri, Drexel University, USA

“Sale” and “stop” are both referential meanings attached to the color red. This study shows that prices presented in red in store flyers influence consumers memory of prices and their evaluation of the deal of not just the focal product but also the products surrounding the red price.

## **Safety or Luxury: The Effect of Competitiveness on Consumer Preference in Social Crowding**

Lijun Zhang, Nanyang Technological University, Singapore  
Yee Ling, Elaine Chan, Nanyang Technological University, Singapore

Prior research suggests that people prefer safety products in crowded environments. This research contributes to the literature by examining the moderating effect of competitiveness. While people low in competitiveness prefer safety products people high in competitiveness prefer status consumption over safety consumption in crowded environments.



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